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EVALUATION
MFM/FFH
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Self-Help for a Hungry World®

MEALS FOR MILLIONS FOUNDATION

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INTRODUCTION

In the interests of brevity and conciseness, this report/evaluation of the Meals for Millions/Freedom from Hunger Foundation's objectives, structure, personnel, administration and field programs has been restricted to the eight items outlined in the scope of work. Printed or xeroxed materials from which statements or descriptions were taken; information gathered in the four countries visited; trip reports on these visits; and more detailed bases for the conclusions and recommendations reached are all included as attachments for those offices or individuals desiring additional information.

ACRONYMS USED:

MFM/FFH - Meals for Millions/Freedom from Hunger Foundation
MPF - Multi-Purpose Food (the soya-based vitamin and mineral-enriched product originally distributed by Meals for Millions)
ANP - Applied Nutrition Project(s)
FNI - Food and Nutrition Institute (of MFM/FFH) in Santa Monica

I. Brief History of MFM/FFH

The Meals for Millions Foundation began in 1946 as the outgrowth of an effort by Clifford Clinton, a local cafeteria owner, to provide the hungry of Los Angeles with free nutritious meals. Clinton had grown up in China, with his missionary parents, and had seen much poverty and malnutrition during his boyhood; he had long ago resolved to do something to alleviate such hunger when he grew up. The long lines of needy queuing up outside his restaurant during the depression led him to open a second cafeteria where he served full-course meals for a nickel and vitamin-fortified bowls of soup for a penny. But Clinton hadn't forgotten the starving people he had seen in China. In 1945 he gave \$5,000 to Dr. Henry Borsook of the California Institute of Technology to develop a "multi-purpose food" which would be low cost, highly nutritious and have a long shelf-life; it thus could serve to alleviate hunger in poverty areas throughout the world. By 1946, when the Foundation was established, the multi-purpose food (MPF) was already being shipped to many countries. This product was based on vitamin and mineral-enriched soybean flour; it undoubtedly was a forerunner of the protein supplements being used by many people of higher economic status today, as well as of some of the commodities later incorporated into the Food for Peace program. The shipments continued for some 20 years, although both Clinton and Borsook knew that MPF was not the ultimate answer to conquering malnutrition but rather a stop-gap measure to meet a basic human need on a temporary basis until ways could be found for the recipients to develop their own self-help programs.

In the late 1960's, Meals for Millions gradually was transformed from a relief agency to an organization dedicated to helping populations develop their own capabilities to use the resources around them to improve their nutritional status. This philosophy continues to underlie the MFM programs. Today MFM provides technical, material and educational assistance in community development and nutrition to people in developing countries in Asia, Latin America, Africa and the Caribbean, as well as in depressed

areas of the United States. It teaches nutritional improvement to village workers who then teach local families to improve their food production, preservation, processing and consumption.

In March of 1979 the Foundation further broadened its base of support by incorporating with the former American Foundation for Freedom from Hunger (FFH). This merger provided Meals for Millions with new contacts and further enhanced its reputation. Since each country has its particular needs and problems, the programs vary from nutrition education at village level to demonstrations on how to make solar cookers from scrap materials; from improving basic food preparation to the development of weaning foods from locally available grains, beans, vegetables, nuts and fruits. Meals for Millions/Freedom from Hunger is probably the only voluntary agency today which offers food technology assistance to all stages from planting and harvesting, to processing, avoiding post-harvest losses, improving distribution and utilization at the family level.

II. Overview of Current Program

MFM/FFH's current program objectives are:

- 1) To strengthen the capabilities of communities in the developing nations to solve their own food and nutrition problems.
- 2) To do so within the framework of their existing economy and culture.
- 3) To give special emphasis to the nutritional needs of infants, children, pregnant and lactating women, and the elderly; and
- 4) To advance and perfect the participatory or self-help approach to achieving lasting development.

To achieve success in development programs, MFM believes that an integrated approach is essential, since the problems of hunger and malnutrition cannot be separated from the problems of poverty, overpopulation, unemployment, poor sanitation, lack of potable water, lack of health services, and low agricultural production. To break the cycle of poverty and to improve the quality of life, a participatory and self-help approach is required, which is sensitive to the social, cultural and economic realities of the developing communities. Therefore, MFM/FFH programs are conducted in association with indigenous organizations (private, church, state, local or national). Recognition and approval of the governments involved is sought at all levels for integration and long-term support of current and future programs (especially after MFM inputs are phased out), but the programs are not necessarily dependent upon such support. MFM/FFH's goal is "to stimulate change rather than simply to transfer technology or knowledge."

Operationally, MFM/FFH has two primary programs: The Food and Nutrition Institute and its Applied Nutrition Programs.

A) The Food and Nutrition Institute (FNI)

The Food and Nutrition Institute, located in Santa Monica, California, is a multi-disciplinary training center for community-level workers, food technicians and nutritionists from the less-developed nations. It provides training, technical assistance and information on simple, small-scale food processing and preservation technologies and on improving nutrition and health practices, primarily among

semi-literate and illiterate populations. The Institute consists of a well-equipped pilot food plant, food science laboratory, kitchen, classroom and library. Intensive training programs of 5 to 8 weeks duration are conducted once or twice each year on: home and village food processing and preservation, weaning foods for small children, formulation of multi-mixes, reducing post-harvest grain losses, solar drying, simple food storage, implementing the use of the village texturizer and other appropriate village technologies; also included are such basics as assessing nutritional status. The fundamental objective underlying the training is to help those working in developing communities to improve the nutritional status of the inhabitants through better utilization of readily available food resources and hitherto unutilized materials. Participants from the developing countries bring to the training course the problems that are of high priority in their own food-short areas, and they are helped to solve them, on an individual basis, before returning home. The initial training usually takes place at MFM/FFH's Santa Monica training center; if requested, there is subsequent on-site training and technical assistance as the participants begin to implement in their own countries and institutions what they have learned. Thus the training is followed up by technical assistance in a unique support process which may then be further extended by application of the technology in integrated community development projects.

In addition to training and follow-up, the Food and Nutrition Institute has the in-house staff to provide information and technical assistance on ways to apply, test, adapt and transfer food processing, preservation and related technologies to overseas developing communities. Its resource center collects and disseminates information on these and related subjects; it also produces publications and provides materials for the training and technical assistance functions.

Equally important is the area of nutrition education. The Institute offers seminars, workshops and conferences to meet the practical,

field-focused needs of nutrition education workers, both at home and abroad. These training activities are multi-faceted, but emphasize non-formal and non-traditional approaches. Specialized technical assistance is provided to community groups and agencies in nutrition education, including help in developing strategies to implement programs and assistance in the design and evaluation of nutrition education programs.

B) Applied Nutrition Programs (ANP)

MFM/FFH recognizes that improving a community's quality of life through an integrated program is not new; but perfecting the participatory approach is! This approach is based on the premise that to achieve a lasting impact, those they are trying to assist must become involved, must identify their own needs and then be helped to realize that they have it within themselves to improve their own quality of life. The next step in the self-help process is often overlooked: Once a community has identified its needs and has decided that it can change - and only then - can the development agency provide technical and material assistance effectively. Resources must come from the community itself through its commitment to change the old ways of doing things.

Nutritionally-oriented integrated ANP's are comprehensive and interrelated educational activities designed to improve local food production, storage, distribution and consumption for the benefit of local communities, particularly of mothers and children in rural areas. MFM/FFH's skills support the nutritional and food improvement components of such integrated development projects, usually in rural but occasionally in urban areas. For this reason, close cooperation with other national and international development agencies is promoted whenever feasible. MFM/FFH recognizes the synergistic results of broad-spectrum multi-sectoral efforts.

On the domestic scene, MFM/FFH is applying the same participatory and self-help approaches to programs within the U.S.: a small pilot project in Santa Monica called "Healthy Lifestyle for Seniors" and a collaborative effort with Papago Nuts Improvement Program

(Indian Health Service Tribal Program) to improve the health and nutrition of Indians on the Papago reservation near Tucson, Arizona.

III. Review of the Food and Nutrition Institute

The Food and Nutrition Institute is a multi-disciplinary institution providing services to projects of both MFM/FFH and other agencies. These services cover a broad range of activities within the areas of training, transfer of technology, and the collection and dissemination of information through the resource center.

A) The Training School

As stated in the overview, the objective of the Food and Nutrition Institute is to help those working in developing communities to improve nutrition status through better utilization of readily available food resources and other non-traditional materials. Participants are nominated by A.I.D. missions, national or state institutions, church organizations and other voluntary agencies, or individually respond to flyers or published announcements of upcoming training courses. Selection is based upon the participants' current work needs or the potential impact upon their return home. They bring to the courses specific problems of their food-short countries and are helped to resolve them prior to their departure. The nutritional values of locally available commodities are analyzed, guidelines for the manufacture of appropriate mixes for target groups are developed and practice in the actual processing of the best nutritional mixes is then acquired. Consequently, by the time the participants return to their homes, they are well prepared to develop the foods which may help solve the problems of their communities. In addition, continuing technical assistance is provided by MFM/FFH through follow-up correspondence and wherever possible by personal visits from the staff for specific technical assistance or by those traveling to nearby areas on other business.

During 1979, the United Nations "Year of the Child," MFM/FFH conducted two 5-week training sessions on "Foods for Small Children." Statistics collected by FAO, the World Bank, and other international organizations have shown that the most vulnerable period for small

children, after they are weaned from breast-feeding, is that period when they no longer receive mother's milk and do not yet have the capacity to digest (or eat large enough quantities) of foods from the family pot. Therefore the preparation of appropriate weaning foods from locally available commodities is perhaps the most important factor in reducing infant mortality world-wide. The lives of millions of small children can be spared by simple home manufacture of weaning foods, and it is this "appropriate technology" which MFH/FFH imparts to the participants in its training courses. (See sample course announcement, Attachment 1)

Eight participants from six countries - Korea, Sierra Leone, Sudan, Dominica, and the Papago Indian reservation in Arizona - attended the training session (list of participants, Attachment 2). In accordance with the recommendations of previous participants, this course was extended to five weeks, incorporated more information on community development and allowed for more small group discussions and practical assignments. In order to provide as much practical experience as possible, different methods and approaches were utilized to meet the needs and interests of the varied group. In addition to classroom studies of nutrition and community development, the participants utilized the experimental kitchen, food laboratory and pilot plant to get practical "hands on" experience, actually developing products that will be not only nutritious but also acceptable in their own countries. Throughout the training period, the group was encouraged to participate in the design and format of the course, to make it as responsive as possible to their felt needs, and to use each other as learning resources. Instruction by the staff was supplemented by the expertise of guest lecturers, and both staff and lecturers were available to assist participants with individual problems. Participants had expressed the need for skills in food preservation, weaning food preparation and nutrition education. An evaluation questionnaire administered during the final week indicated that these needs had been met (Attachment 3). Several participants commented on the unexpected benefits they acquired, including new methods of food production and preservation, new ideas for project

activities, and awareness of possibilities for collaboration and sharing with others in developing countries.

Each student had brought a problem from home to work on individually. The resultant activities led to the following accomplishments:

- construction of solar dryer for use in teaching drying of local foods
- construction of a solar cooker that could bake a fish in 45 minutes
- development of an instant soya-rice weaning food that can be produced at community kitchen level
- development of a weaning food mixture of sorghum, fava beans, groundnuts and sweet potatoe
- use of salting, sulphuring and canning as methods for preservation of local foods

Nutritional Value of Foods Promoted

The scope of work for this report calls for an evaluation of the nutritional value of the foods promoted by the FNI. There are NO foods promoted (except in Korea, where a nutritious snack food is manufactured and sold commercially). As perviously explained, the participants bring their own food and nutrition problems to the training course and are helped individually to produce foods or food mixes to meet their local or regional needs, based on locally available grains, beans, vegetables, roots, fruits and nuts. Since the range of combinations is so wide, they are taught how to calculate the nutritional values of the mixes they produce (based on internationally accepted food value charts). Guidelines to the participants for this task are shown in Attachment 4.

Evaluation of Curriculum and Methods

The curriculum of the FNI courses was modified in 1978 from training for LCD food technologists and nutritionists to teaching nutrition and basic food technology to community-level workers. The training now provides practical skills that these workers need to help their respective communities improve nutritional

status through better utilization of local food resources. More specifically, the participants learned, in 1979, how to:

- Assess nutritional needs
- Assess the nutritional value, feasibility and acceptability of locally available raw materials and their formulation into nutritious low-cost foods by processing at home or in village-level facilities
- Basic principles of small-scale business and theory of rural and community development

At the end of each training course at the FNI, the participants are asked to evaluate the course and to make suggestions for future training. These suggestions have, in the main part, been incorporated into the subsequent courses. Some of the recommendations made in the Spring 1979 course were:

- Present small-scale business principles and resources for financial help earlier in the course
- Devote more course time to preparation of low-cost multi-mixes
- Offer a separate course on appropriate technology and food preservation.
- Conduct a training course in a developing country where the environment and facilities are more related to participants' backgrounds
- Include field visits to child care centers and pre-schools that have feeding programs
- Increase emphasis on practical experience vs. theoretical techniques

These were incorporated into the Fall 1979 course on "Foods for Small Children," which included 15 participants from 11 nations of Asia, Africa, the Pacific and the Caribbean. The diversity of cultural, educational and professional backgrounds enhanced both the success of the course and each participant's personal experience. Based on a participatory approach, the course provided a forum in which participants could explore and share both the unity and the diversity of the realities that face them. Participants, staff members and guest lecturers interacted as both teachers and learners, and worked cooperatively to identify problems and develop solutions. Learning activities were structured to provide as much "hands on" experience as possible and to capitalize on the rich variety of skills and resources that were available. In their final

evaluations, the participants felt, in general, that the range of subjects covered was so wide that there was not enough time for in-depth discussions, and therefore in certain areas their expectations were not adequately met. Their recommendations were that by omitting extrusion cooking from the agenda and by stressing home canning rather than Ball (or community) canning, the usefulness of the course for their needs would have been improved. They also requested additional information on fermented foods, basic food chemistry and food processing, as well as on food preservation techniques. A major criticism was the under-utilization of the foods brought by the participants, despite the time, money and effort spent in purchasing, packaging and bringing the foods requested. (See booklet on Fall 1979 training course, Attachment 5)

The most recent course, April 14 - May 18, 1980, was modified to incorporate most of these recommendations: The time on extrusion cooking was cut down by 75%; Ball canning was omitted or mentioned but briefly; there was more emphasis on fermentation of foods; and every effort was made towards better utilization of the foods brought by the participants. Feedback after this course, though not yet tabulated, was highly favorable. For example, Adizatou Maiga of Dori, Upper Volta (West Africa) stated:

How the course helped me: Solar Dryer: I knew already how to dry some vegetables, but we dry them just on a mat; first we cut the vegetables and then put them on a piece of clean cloth and find another one to cover it. We put some stones on the sides so that flies can't get inside or the wind can't blow it. But with this system someone has to stay there and watch it until it gets dry. So, the solar dryer will be a helpful project for me, the field coordinators and my community ladies. Because it's easy to build and easy to dry food inside this way, I am glad to know how. MFM/FFH, I can tell you that we didn't have any ideas about the solar dryer, so this will be our first appropriate technology in my village and for my field coordinators.

She added on multi-mixes:

For multi-mixes also, we made some demonstrations on how to prepare children's porridge, but I didn't have any idea on how to calculate it. For the first days it was hard for me to understand it, but now I understand and know how to do it by myself.

Estelle Requena of Curozal Town, Belize (Central America) described her problems as a need of guidance in : Developing an income-generating project, piloting a program in nutrition, and starting a vegetable garden. After the course, she stated:

With my problems in mind, I can say that this course was ideal because there were resource people who really tried to help me. In the past I had done food preservation, but only using wet methods, e.g. making jams and jellies. I had also done mixed peel, and dried them in the sun, but not using a solar dryer. I have really gained a lot . . . and I know that if the solar dryer can work so well in America, it will be just dynamic for Belize.

After commenting on the making of weaning foods as a good beginning for her planned nutrition program, her project for a vegetable garden and plans for training mothers, she added that

. . . the course was a massive help. This was just the motivation I needed. The work will begin when I reach Belize, so MFM/FFH who started the ball rolling will hopefully roll down there too.

Ruth Spencer of St. Johns, Antigue (who was our guide on the visit to that island) wrote:

I came with two problems in mind: To learn methods of preserving fruits and vegetables available locally (relating directly to my project) and to learn to develop some multi-mix formulas for the weaning age group to be used by a community clinic (from spinach, pumpkin seeds and cornmeal.

Under her accomplishments at the course, she stated:

I was able

1. To try my hand at drying pineapple, mango, banana, in a variety of ways and seeing which method was most appropriate. My awareness of the nutritional values of foods like okra seeds, tamarind seeds, pumpkinpod was much increased and I hope to do further work on these when I return.

2. To make jam of a 2-fruit mixture, banana and mango.
3. To do something in fish salting, drying and smoking.
4. To obtain literature on cheese making and vinegar making.
5. To see and use some low-cost packaging materials for the products dried, through the two field trips.
6. To see sprouting and germination take place - new to me.
7. To try my hand on building a low-cost solar dryer.
8. To learn management strategies in project development and reporting techniques.
9. To see many technologies at work: hand grinder, extruder, village texturizer, grain mills, etc.

She concluded that:

Seeing and participating in most of the above helped me to acquire confidence in myself and, even though the amount of practice was limited, I feel that in my country I'll be more at ease and have the things at my disposal to do further work on them. The drying technologies will be very important for me as we have sunshine 365 days per year and it's a technology to be developed. The solar dryer and oven will definitely be welcome - they will cut down on the use of cooking gas which is costly.

During the trip to the field just completed, former participants in Antigua, Ecuador and Honduras were questioned as to the quality and usefulness of the training they had received as seen after their return to their homes. Ruth Spencer and Juanita James in Antigua, Lautaro Andrade in Ecuador and Zoila Alvarez in Honduras all reiterated the applicability of what they had learned, with the few reservations already mentioned, which were corrected in the most recent course. (See country reports for additional details.)

B) Technology Transfer

The second component of the Food and Nutrition Institute's efforts is technology transfer. Through MFM/FFH staff and pilot plant facilities, the developing and testing of innovative village-scale food machinery is carried out, machinery which people in Third World

communities can build and utilize locally to produce nutritious and ACCEPTABLE foods from indigenous materials, at prices which low-income people can afford.

As one example of technology transfer, the "Village Texturizer" (cf folder, Attachment 6) can "quick cook" nutritious cereal grains, an important feature in communities where malnutrition is widespread and fuel is often scarce. An instructional manual on the texturizer published by MFM with the collaboration of VITA has been sent to 750 individuals and groups, mainly in 88 developing countries. A second printing of 1000 copies has already been done and distributed, again mainly overseas. Programs have also begun in the Philippines, Mali and Upper Volta to build this simple machine and put it to work, especially at the village level where industrialized products seldom have nutritional impact because of their comparatively high cost. In 1980 the development, testing and application of the texturizer will continue in many new countries of Asia, Africa and Latin America as integral parts of a larger technology transfer program. MFM/FFH's food technologist and food engineer has been following up on technical assistance through correspondence, overseas travel and the training courses. As part of MFM/FFH's contribution to a conference in Guyana on "Feeding the Weaning Age Child," Dr. Anderson demonstrated how the texturizer works, and interested participants were able to obtain copies of the handbook. In February of 1979 he visited the Philippines to demonstrate the Texturizer's capabilities. The Philippine Rural Life Center, with which MFM has had a relationship for some years, invited him to work with its staff to test and demonstrate a village texturizer they had fabricated. He experimented with broken rice, mung beans, dried and pulverized fish, skim milk powder and vegetable oil, and a combination of rice and desiccated coconut; also included in the tests were the charcoal and L.P. gas for fuels. Considerable interest was generated and work with the texturizer in the Philippines is continuing. A second demonstration was conducted in Cotabato City at the Notre Dame Social Action Center. This group is now interested in building a machine, possibly using the vocational training

department of a local university. Another visit to the Aboitiz Foundation in Cebu City promoted the construction of another texturizer there; and, finally, at the National Nutrition Center of the Philippines (which coordinates all official efforts in nutritional improvement), a former participant of MFM/FFH's training course motivated the entity's interest in evaluating foods from the texturing process for their nutritional value.

In Africa interest has also been awakened in the use of the texturizer to produce foods to meet the needs of the severely malnourished in many areas, especially the Sahel. SAED, an organization in Upper Volta which attempts to develop and market promising appropriate technology devices, expressed interest in studying the energy requirements of the texturizer. The Diocesan Development Coordinator in Sierra Leone requested MFM support for local construction of one. The grant has been made and the coordinator is exploring the possibility of incorporating the process into the training program of the YWCA Vocational Institute in Freetown.

In addition to use of the texturizer, work is also in progress on simple oil extraction technology, so that village people in depressed areas may process locally available oilseeds to obtain low-cost cooking oil and thus obtain a source of badly-needed calories. Project activity involves collecting information on oilseed processing technologies in less-developed countries and evaluating them in the California laboratories. During trips to Korea, India, Tanzania and Ethiopia, Dr. Walter Bray of the MFM/FFH staff observed and discussed local oilseed processing. Dr. Anderson investigated similar processes in the Philippines, and later in Kenya, Sierra Leone and Upper Volta. A hydraulic press and an Indian "ghani" press have been purchased for this work and a dehulling system is being built.

Other appropriate food technologies include the puffing gun, drum drier and various food preservation technologies such as solar drying, salting, canning and pickling. In addition, Dr. Walter

Bray provided technical assistance to leaf protein extraction work in India. A widely recognized authority on leaf protein, he desired to prove the cost-effectiveness of processing edible leaf protein concentrate at the village level, since an often neglected aspect of village-level technologies is their economic feasibility. The nutritional impact of the product has already been demonstrated by Indian workers. International development agencies are awaiting the results of the project to determine whether the concept is sufficiently sound economically to warrant further investigation and promotion.

Continuing development and dissemination of these and similar technologies through the R & D Capabilities of staff and the introduction of tested methods through the training school, as well as through technical publications, responses to inquiries and in-field projects, all promote the multiplier effects of these efforts.

As an indication of follow-up by MFM with school participants after they have returned to their homes are: Support for a project in the Philippines, curriculum development work for the South Pacific Commission in Fiji, and a workshop there, and the conducting of a 1980 training course in Freetown, Sierra Leone, in collaboration with the YWCA Vocational Institute, as well as others planned for Antigua in September and October of this year, to be run with the collaboration of former participants.

C) Technical Assistance

Requests to MFM/FFH for direct technical assistance come from around the world. Staff respond with correspondence, information from the Resource Center, and personal site visits. As an example, the South Pacific Commission invited Kathryn Shack, Nutrition Planner, to evaluate and recommend changes in the Commission's Community Education Training Centre in Suva, Fiji Islands. This Centre, established in 1963, provides training in home economics to women from the South Pacific. The training stresses practicality

and usefulness. In view of the participants' changing needs, the Centre's staff had begun assessing its program. Kathryn assisted in this and together with the staff and officers of the Commission developed a new curriculum. The focus was changed from home and family to preparing women for their expanding role in the community. The new curriculum, which incorporates suggestions from past participants, centers on problem-solving and relevant skills. The recommended goal is "to assist women fulfill their role in development - with particular emphasis on food and nutrition." Complementing these curriculum changes was a restructuring of teaching techniques emphasizing the participatory approach. The final report was well received, and the MFM/FFH staff member was invited to return and help implement the changes.

Dr. Walter Bray visited several organizations in Tanzania, Ethiopia and India which requested his technical expertise. At the Ethiopian Nutrition Institute he discussed current problems in the manufacture of a weaning food. In India he discussed various food technology problems with the staff at Marthwada University, Auranagabad; Sri Avinshilingham Home Science College, Coimbatore; University of Mysore and the Central Food Technology Institute, Mysore and the Soya Production and Research Association, Bareilly.

Dr. Glenn Patterson, based in Barbados, responds to many requests for technical assistance in the Caribbean, under a joint program with WAND (Women and Development) unit of the University of the West Indies, located in Barbados. (cf: Caribbean)

D) Nutrition Education Training Program

An equally important undertaking of MFM/FFH is its program in nutrition education training. Field level nutrition workers and educators must overcome a variety of obstacles: illiteracy, superstition, tradition, food taboos, language, and low income are just a few. The effort to meet those challenges and to bring about long-term meaningful change is dependent, to a large extent, on the ability of workers to use a multi-faceted approach in the nutrition education process. This includes, on their part, a clear

understanding of the nutrition problems within their communities, a knowledge of and familiarity with techniques which encourage participatory involvement, and possession of the necessary tools to assess the results of their efforts. Successful performance also requires that workers are provided with sufficient opportunities to refine their skills if they are to effectively meet the needs and provide the services that their communities require. This involves, in part, learning techniques which are effectively practiced by others in the field, and developing and practicing new learning approaches. Based on these needs the training program "trains the trainers" in participatory approaches, materials development and evaluation procedures. This approach helps develop cadres of trained staff capable of continuing and expanding the process of nutrition education through the knowledge, skills and practice they acquire. In this way the program stimulates cross-fertilization and has a multiplier effect on individuals, community and national levels of development.

In June of 1977, MFM conducted a one-week nutrition education workshop for 28 nutritionists and nutrition educators working in 14 developing countries, to examine techniques being used to teach nutrition to illiterate or semi-literate people; the workshop also provided them with an opportunity to share their experiences and knowledge. Their presentations were compiled into a publication, Teaching Nutrition in Developing Countries or The Joys of Eating Dark Green Leaves, which has been widely distributed to nutrition educators world-wide. The participants requested additional training which would increase their effectiveness and responsiveness to community needs, more specifically relating to participatory education techniques, educational materials, and methodology for teaching illiterates; above all, they expressed a need for ways to evaluate their programs to determine whether they are actually improving nutrition. In response to these expressed needs MFM's Nutrition Planner and Training Coordinator, working in collaboration with staff from Save the Children and World Education, developed a comprehensive program whose goal is "to improve nutrition in

rural communities by helping nutrition educators develop approaches and materials appropriate for those communities, and involving the villagers themselves in identifying and solving their own nutrition problems." MFM/FFH's decision to adopt a collaborative approach for the proposed program reflects and promotes an overall shared goal of the three voluntary agencies to formulate programs that respond to the priority needs of developing countries. This partnership approach likewise reflects the agencies' desire to capitalize on their individual expertise and maximize the potential benefits of the project for both the participants and the agencies themselves. In fact, all three agencies have conducted workshops and seminars to transmit participatory approaches to field workers which they can reapply in a community setting. As a joint venture, the program will increase worker effectiveness and strengthen their existing programs through formation of working groups using the participatory approaches. It is also an opportunity for the three planning agencies to mutually share their technical, material, and educational expertise and build on and strengthen their collaborative channels. The two-phase program will run for 30 months, with two field operational seminars at different sites.

Phase I of the program, a seminar on "Learning Participatory Nutrition Education Techniques and Materials and Applying Them," took place in Choloteca, Honduras, September 17 - 28, 1979. Twenty-two participants from Mexico, Honduras, Guatemala and Colombia attended. They were mostly field-level workers providing health and education services within their own and surrounding villages. For the most part they had little formal education, but all had received in-service training in health and nutrition, and some non-formal education (For a list of participants and trainers see Attachment 7). Choloteca was chosen as the site because the conditions of poverty, malnutrition and limited access to health services were representative of the participants' own situations. The innovative methodology used by the seven member resource team was based on popular culture combined with mass media to integrate nutrition education content. Together the

resource team and the participants studied, tested and evaluated techniques and materials. The seminar was a learning experience for the participants as well as for the trainers/facilitators. The agenda included content analysis, preparation of publicity campaigns to disseminate nutrition information; preparation of newsletters and a "diario mural". The participants took 220 slides for thematic research. They identified and designed games and prepared more than 60 riddles, songs and stories. They worked on theater and socio-dramas, and learned to use videotapes. They also developed work plans to incorporate what they had learned into their own programs at home. Support groups were formed and plans made to assist each other in applying new techniques and materials. Finally, they outlined the follow-up support they would need from the seminar resource staff.

Phase II will include a seminar focusing on evaluation techniques. Continuous monitoring and follow-up will go on during the life of the program. Throughout the planning process for this program, participating organizations in Mexico, Guatemala, Honduras and Colombia have been actively involved in the identification of participants, thus confirming their commitment and support to the program.

Both seminars combine a problem posing/solving format with a field operational approach. Through dialogue, participants jointly identify problems and will formulate and test out solutions to shared problems relating to the role of education in the nutrition delivery system. This will include the participants in the design of the actual learning process, and will allow them to assess the effectiveness of that experience for their own learning. In addition, the seminars are an opportunity to develop and practice communication techniques and use audio-visual materials that are applicable to the needs of villagers. The involvement of participants in determining the form and content of the training format and the follow-up program ensures that the model created will reflect the indigenous social and cultural context of their representative communities, and be a structure which the working

groups can replicate in their own programs. It should also be noted that this joint process involves not only the trainers and participants but also the villagers with whom they work both in the field test and in their own programs in the field.

Evaluation of the Nutrition Education Training Program:

All three organizations (MFM/FFH, Save the Children and World Education) felt that although training is an integral part of the development process, it is only one part of this process and they had to be realistic about what they could and could not expect. A training program in participation seeks to improve human social skills and capacity to analyze and solve problems through dialogue. The training aims to change attitudes, behavior, thinking and approach, and to present techniques that can be used to promote participation in the development process. It would be exceedingly difficult to find a real indicator coming from this training program which might be linked directly to improved nutritional status. Too many variables affect this condition, and training would be only one. Changes in nutritional status would be perceived only if a comprehensive approach dealing with many socio-economic variables could be implemented, and therefore it would be inappropriate to think that the training program alone could be correlated to improved nutritional status. There could be, it was thought, a relationship between the training and increased participation of community members (the trainees) which, in turn, would improve a community's ability to identify and solve its own problems.

The long-term goal of this project had been stated as "To improve the nutritional status of rural community members by enabling villages to participate more fully in the identification and solution of the nutrition-related problems which confront them." For the purposes of evaluation, the training group decided to set a short-term goal: "To enable community members to participate more fully in the identification and solution of their nutrition-related problems." The evaluation proposed, which will be completed by August 1981, set the objectives as:

- 1) Training 20 field-level trainers in participatory approaches to education; and then
- 2) Supporting them in an effort to apply these approaches in their field programs
- 3) Encouraging them to support each other; and
- 4) Training these trainers in assessment techniques for participatory approaches

The evaluation is to be carried out in two parts, starting with a trainer profile developed from tapes made at the first seminar in which the field-level workers described their communities of residence and work. These trainer profiles provide baseline data and could eventually serve as a measure of each field-level trainer's effectiveness as a trainer. Although a comparison of "before" and "after" tapes would probably not be able to indicate behavior changes in the trainers, they could probably show whether they were more effective communicators and motivators. In addition, there would be evaluations in the field and during the second seminar. Further, a questionnaire is being developed and will be used during staff visits to the field to evaluate each participant's behavior as it pertains to teaching, i.e. have the trainers become more effective trainers as a result of the training they received at the first seminar? Have their attitudes towards their communities and their work changed? Training situations would be observed where possible and each participant's immediate superior would be interviewed for feedback on the participant's work performance. The questionnaires are currently being finalized and this part of the evaluation process will be carried out between now and early November. The second seminar is scheduled for November 12 - 22 in an area outside Mexico City. The field-level trainers will also be evaluated during the second seminar. Each participant or group of participants will be asked to design a training program, including lesson plans. The training plans may be demonstrated in a simulated training situation or actually applied in communities adjoining the site of the second seminar. These plans will also serve as case studies for the evaluation tools to be developed during the seminar and used in the second

part of the evaluation.

The second part of the evaluation will focus on the effectiveness of the training vis-a-vis the community. For six months after the second seminar, the field-level trainers will be asked to assess their communities for behavior changes using the evaluation tools developed at the second seminar. Is there increased participation, increased attendance at training programs, and improved nutritional habits as determined by observation in the home? Are community members participating in the identification and solution of their nutrition problems? The results of this six-month formative evaluation period are scheduled to be collected in May of 1981, and to indicate whether or not the program has reached its goal. An analysis of the effectiveness of participatory training as it applies to field-level nutrition programs will be made after the data mentioned is collected, and results will be presented in the form of a research paper. The paper will contain the data collected throughout the program and answer the following questions:

- 1) What is participatory training's effect on field-level trainers?
- 2) What is its impact on the community?
- 3) What can honestly be expected from this kind of training?
- 4) Can it be expected to affect nutritional status directly; if not, why not?

To date the commitment of the agencies participating in the nutrition education training program continues to be strong (perhaps even stronger now that the program is under way and better understood). Participants were chosen initially because of where they worked, the type of jobs they were performing, and the interest they and their agencies expressed in this type of training. These criteria have proven their worth in the intervening months. In very brief resume, there follow a few samples of work carried out by the participants since the initial seminar in September of 1979. The spinoff or multiplier effects are evident:

Mexico: The five field-level trainers representing three Mexican organizations worked well together; they formed two support groups

during the seminar, one in the north and one in the south, to organize and conduct follow-up activities. The northern group is planning a series of health/nutrition workshops for training 28 - 32 primary health care promoters working for Save the Children, the Ministry of Health and other agencies in the 20 communities of the Alamos area. The workshops will utilize the participatory methodologies for involving community members in the identification and resolution of health and nutrition problems (as learned at the workshop). The promoters will be trained in preventive health care, in nutrition/health education, and in basic treatment of common illnesses. The first workshop was held May 12 - 17 and was considered a resounding success.

The southern group planned one workshop for the Guanajuato area, to include 20 health/nutrition promoters and to provide training in participatory education skills that could be applied in their community work. A newsletter on "Nutrition and Development" was put out by one of the trainees, with the assistance of David Sanchez-Juliao, one of the consultants from Mexico, and was sent to all seminar participants and their organizations. Two newsletters have been written by David. Five bulletins on nutrition have been written by others in the south.

Guatemala: The six field-level trainers, representing four different agencies, were well organized from the beginning since they were all members of ASECSA (a consortium of PVO's working in health/nutrition) and were used to working together. At the seminar they strengthened their commitment in this respect, aided by two program trainers who are assisting with the follow-up plans. In October thirty-four health/nutrition workers met for two days to share experiences and learn training skills (employing some of the methods learned at the seminar). All felt that it was a really good meeting. In January the participants met with one of the trainers to plan their activities for 1980. They have planned two big workshops, one in the Oriente, in Spanish, and one in the Altiplanos, in an Indian dialect. In addition, they offered their services as a group to CONCADA, a

new umbrella organization of development organizations which sponsors an annual women's conference. They planned to limit the number of large workshops (which are usually attended by supervisory level people) and instead organize various small local workshops which would involve more of the women in little local groups.

Honduras: Eight field-level trainers, representing six different agencies, decided to work in four different groups. Since September various sets of plans have been received and 3 workshops have been held. Twenty five community leaders and health workers attended a four-day workshop stressing motivational and problem identification skills plus nutrition education techniques at Pinalejo sponsored by two of the participants from two different agencies (CEDEN and Centro Medico Evangelico). Two other participants from two different agencies held workshop for 30 participants in Olancho. Another participant is planning a workshop which will be run for 30 field-level health and nutrition workers with the assistance of four other participants of the seminar. These are initial efforts, demonstrating the strong multiplier effects of the seminar.

Colombia: The three trainees from Colombia have submitted plans for three training workshops aimed at reducing health/nutrition problems in the rural areas.

This program has offered \$500 (from the joint funds) to each of the participating organizations to assist the groups in their follow-up efforts to use and disseminate the skills gained during the Choluteca seminar. Money has already been transferred to Mexico, Guatemala and Honduras for the training workshops which were held.

It should be stressed, in conclusion, that the foregoing activities all came from the field-level participants themselves. Staff members of the three sponsoring organizations have visited the areas several times to provide assistance upon request, and the in-country program trainers David Sanchez Juliao and Maria Teresa

Cerqueira in Mexico and Susan Emrich in Guatemala have been called upon for assistance also; but in most cases the participants are running their own training programs using their colleagues to support their efforts.

E) Caribbean Program

The program in the Caribbean is a community level food technology assistance program which began in September of 1979 as an expansion of a MFM/FFH effort in Jamaica during the period from August 1976 to August 1979. During that time MFM/FFH provided technical assistance in small-scale food processing to community groups, public and private organizations and individuals, for the purpose of improving the nutritional status of vulnerable groups. Collaboration was primarily with the Knox Community Development Foundation located in Spaldings, Jamaica, and the CFNI (Caribbean Food and Nutrition Institute). When project inputs were completed in 1979, a number of Caribbean institutions expressed interest in further collaboration with MFM/FFH. In September of 1979, MFM/FFH signed a one-year agreement of collaboration with the Women and Development unit (WAND) of the University of the West Indies, located in Barbados. The seeds of this relationship had been sown in October 1978 at a conference in Guyana coordinated by CFNI on "Feeding the Weaning Age Child." WAND's program provides assistance to rural women and unemployed youths interested in small-scale economic activities in crafts, food processing and food preservation. This agreement between MFM/FFH and WAND provides for technical assistance to such groups in the Caribbean who wish to develop income-generating projects in the areas cited. Because MFM/FFH's primary goal is to improve the nutritional status of the most vulnerable groups through self-help efforts, the Foundation supports a food technologist to work with WAND in those projects related to food technology. MFM/FFH provides his salary, employee benefits, administrative/program support and supervision for the Food Technologist assigned to the program, as well as operational costs of an office and his international travel expenses. WAND provides office space, secretarial and administrative assistance, international travel costs for those

programs which are specifically related to their program(s) and project support services. The two organizations are jointly responsible for developing acceptable project guidelines and criteria, and for developing systems for managing and evaluating their inputs in specific projects. The arrangement does not prevent MFM/FFH from developing relationships with other international, national or local institutions or groups. At the termination of the year's arrangement it may be extended upon agreement of both parties.

More specifically, the areas of assistance comprise:

- 1) Food material survey, supplies and markets
- 2) Project planning, implementation and evaluation
- 3) Direct technical assistance to specific community food technology projects and problems
- 4) Response to community food technology inquiries and related questions
- 5) Participation in training activities and workshops to provide information about community food technology
- 6) Testing and adaptation of appropriate food technologies, i.e. equipment, raw materials and essential supplies
- 7) Assistance in suggesting possible funding sources for projects
- 8) Identification, interviewing and preparing prospective students for the Santa Monica MFM/FFH training courses

Criteria for the selection of projects include the following:

- 1) Projects must have potential for improving nutritional status of the most vulnerable groups, i.e. children 0-6 years old, pregnant and lactating women
- 2) Projects must have a self-help component
- 3) Projects should be oriented towards some activity which better utilizes local food resource materials through food processing, preservation or handling
4. Preference is given to projects oriented towards small-scale technology, which are:

- (a) Low in capital cost
- (b) Utilizing local materials and human resources
- (c) Can be developed and managed by local organizations and individuals.
- (d) Do not conflict with existing projects or policies
- (e) Can be continued after withdrawal of technical assistance
- (f) Promote community or group participation
- (g) Rely on local initiative, for project implementation, management and leadership
- (h) Are oriented towards the lower socio-economic groups in a community

The projects visited in Antigua (see trip report, Attachment 8) are some examples of the work being done in the Caribbean area.

F) In-country Training Programs

To make the solving of food/nutrition problems more specific to a country's (or region's) needs, MFM/FFH has begun to conduct in-country courses and workshops to catalyze and assist local organizations having some training ability. The objectives of such courses are the same as those of other efforts, i.e.

- To strengthen the capabilities of communities in the developing countries to solve their own food/nutrition problems
- To give special emphasis to the nutritional needs of infants, children, pregnant and lactating women, and the elderly
- To promote and perfect the participatory approach to achieve lasting development

To date MFM/FFH has sponsored such courses or workshops in Jamaica and Guyana, as well as in Central America, Fiji and Korea.

A small-scale food preservation and processing workshop in Antigua is being planned for September/October of this year. Since this workshop will be mostly a participatory "hands on" demonstration and problem-solving type exercise, the number of participants will be kept to 12 - 15 Antiguan so as to allow good interaction between the participants and the resource persons. The objectives are that the participants learn:

- How to make better use of local foods for improving nutritional status of young children, pregnant and lactating women
- Some ways to reduce the work load at home related to foods and water
- Some small, simple technologies to preserve and/or process foods
- How to plan, implement and evaluate a community-level project dealing with food and nutrition
- How to use improved techniques to increase production of backyard gardens

Some suggested subject areas include:

- Nutritional food-mix formulation using multi-mix techniques with family pot foods
- Fuel-saving cooking devices
- Water collection and catchments
- Solar drying.
- Solar cooking
- Fish salting, drying and smoking
- Corn, sorghum, bean, vegetable roots and fruit processing
- Food preservation and storage
- Fermentation and sprouting
- Backyard gardening
- Human needs and material resource assessment
- Project development (planning, implementation and evaluation)
- Resources for technical and financial assistance

G) Resource Library

The Resource Library is an information gathering and disseminating facility that serves MFM/FFH office staff, participants being trained in Santa Monica and overseas, field programs, and others in developing communities who are working to solve food and nutrition problems. It provides technical information to help the Training School students develop practical solutions to the food problems they have brought to the course; it provides resource materials for field staff and workers in the Applied Nutrition Programs and in R & D work. Selecting from resource material in various sectors, the Information Specialist compiles background information for the staff, participants and other interested parties. There is also a referral service which directs inquiries from outside sources as

well as from those mentioned to other agencies or individuals who can most adequately respond. For example, during 1979 a special information packet on mass media techniques was sent to Sri Lanka for a campaign to promote breast feeding in that country. In 1980 the services will be expanded to include publishing such materials as catalogs of appropriate food technologies, technical bulletins, journal articles and bibliographies and also to provide technical resource information packets to former training school participants in support of their projects overseas.

	<u>1979</u>	<u>1980</u>
Books Distributed (to Training School students)	258	154
Information Requests Answered	75	40

IV. Applied Nutrition Programs

As stated previously, Applied Nutrition Programs (ANPs)* are comprehensive, integrated development activities aimed at the improvement of local food production, storage, distribution and consumption for the benefit of local communities, particularly mothers and children in rural areas. The three key elements of each applied nutrition project are:

- 1) Technical support: program design and evaluation, nutrition planning, intermediate level food processing and preservation
- 2) Material assistance: equipment, food, small grants in support of projects; and
- 3) Nutrition education through participatory learning techniques.

Basically, the ANP concept involves four phases:

- 1) Doing a feasibility survey and preliminary planning
- 2) Defining objectives, collecting baseline data and doing more detailed planning
- 3) Initiating program operations in a pilot zone
- 4) Expanding the program to areas outside the pilot zone.

The concept of improving community conditions through an integrated plan of development is not new but has become important as institutions both in and out of developing countries have improved their skills in designing and evaluating rural development programs. The problems of sanitation, potable water, diarrheal diseases, malnutrition and income generation are inter-related and must be dealt with together, if improvement in the conditions of life are to be achieved at the community level. Without basic structural changes in the communities themselves, self-perpetuating development is not likely to take place. Thus the guiding principles

* "Applied Nutrition Programs" follow the FAO Manual of Food and Nutrition Policy, published in 1969 and republished in 1972, regarding nutritionally oriented, integrated rural development programs.

of these ANP programs are the active participation of the people themselves, and coordination among different agencies and institutions working in the area. MFM/FFH, in collaboration with others, provides the information, staff, training, material or technical assistance needed to help the communities improve the quality of life, including implementing small-scale technologies that will directly help the nutritional status of their people.

ANPs in Antigua, Ecuador and Honduras were visited in order to assess these programs at first hand. A visit to Dr. Glenn Patterson in Barbados was also made to learn about his community-level technical assistance in the Caribbean area. Since the underlying philosophy regarding ANPs and detailed description of their methodology have already been given, the description of these projects is presented in the form of narrative and anecdotal trip reports (Attachment 8 - Antigua and Barbados; 9 - Ecuador; and 12 - Honduras).

KOREA

The Korean project in Wonseong County is among the longest-running and most interesting of all MFM/FFH field projects. It is a comprehensive rural nutrition project which combines two unique elements: a) The manufacture and wide distribution of a nutritious snack food to supplement the local diet and thus improve the nutritional status of young children and pregnant and lactating women, and b) a truly all-inclusive top-to-bottom nutrition education program.

BACKGROUND

Prior to 1971, Wonseong County, a region of approximately 64,000 inhabitants (in 1976) about 80 miles southeast of Seoul, was receiving food donations through the Food for Peace program, distributed by Catholic Relief Services (CRS) under the supervision of the U.S. Agency for International Development (USAID) Korea. At this time there was talk of phasing out the PL 480 foods and local community leaders were concerned; they determined to find a substitute high-protein food. The Wonseong County Chief called a meeting of CRS, St. Peter's Rural Development Association, village leaders and others. Dr. Jin Soon Ju of the University of Korea Medical School and a leading Korean nutritionist was consulted and MFM was also asked to provide technical and material assistance to help the Korean institutions involved to produce a replacement food using local raw materials. The Wonseong County group came to MFM because the Foundation was already providing technical assistance to the Sam Yang Noodle Company in the capital in the production of a high-protein beverage ("Super-D") for distribution in the school lunch program.*

The current comprehensive model rural nutrition project derives from this early beginning. From its inception it has continued to involve Korean institutions and the local community. MFM/FFH's role is that of catalyst and coordinator, providing technical assistance, training and equipment.

* Production of this beverage has grown from 12,000 bottles per day to more than 80,000 and it is now being introduced into the commercial market, as well as being used for school lunches.

NUTRITIONAL NEEDS

Protein deficiency among children is a major health problem in this and other rural areas of Korea, where the annual per capita income is well below the national average of \$250. Mothers usually breast-feed their infants for about four months, after which a weak rice porridge very low in protein and other essential ingredients is customarily given. This limits normal physical and mental development at a critical growth period in the child's life. The need is well documented and Dr. Ju Soon Jin (among others) has written frequently concerning the anemia and undernutrition among large segments of the Korean population. Thus it is essential to provide low-cost high-quality protein foods/beverages to fill this protein gap and also to educate mothers on the importance of nutrition to a child's development. Although some nutritious foods have been produced commercially in the major cities, their high cost puts them out of the reach of most rural families. This project was designed in part to demonstrate that it is feasible to produce and sell a low-cost but highly nutritious food in competition with non- or less-nutritious foods.

THE PROJECT

The purpose of the project is to improve the nutrition of poor at-risk families of Wonseong County, as a model for replication, by combining a comprehensive nutrition education program with the production and distribution, at a low price, of highly nutritious foods. The nutrition education component is targeted to reach all the inhabitants, while the high-protein foods are targeted to 7,500 infants and pre-school children and 2,500 pregnant and lactating women. The food products are fortified by the addition of vitamins and minerals and will include weaning foods for the infants, snack-type foods for the pre-school children and other foods for the women. At this time only the snack-food is on the market.

A Coordinating Committee was formed of:

- a) The County Government
- b) Korean Institute of Science and Technology (KIST)
- c) A market research group (ASI)
- d) University of Korea Medical School
- e) MFM/FFH
- f) Others

Production of the food is handled by a joint company set up by The Wonseong County Government (with local participation) and MFM/FFH. The County provided the plant site in Wonju city, a small county seat conveniently serving the village communities of the county. It also takes care of the distribution of the food to approximately 1,000 of the poorest, gratuitously. The rest of the food is marketed as described below. MFM provided the food processing equipment and its installation; it has also conducted training programs and technical assistance. Dr. John Anderson of MFM/FFH assisted with plant set-up and equipment installation. Dr. Walter Bray made several trips, totaling more than three months, to provide technical assistance in building construction, equipment lay-out and inspection, product development, and the development of a business plan for the company. Ken Shewman spent a week discussing the test market and business plan. And Hank Sterner, an extruder expert, spent many days on improving the extruder/technology. MFM/FFH also provided the labor to produce the food on a small commercial scale; the County provided two plant workmen. Many other steps have been taken to effect the production and distribution of the food, according to a scheduled implementation plan.

MFM/FFH opened a small Korean office with an American Project Director, initially Rev. Michael McFadden, who had spent many years in Korea, and currently a Korean, John Seo (mentioned in the staffing pattern). All the other staff members are Koreans, including three nutritionists, an administrative assistant and a secretary. Costs of operating this office were covered by a multi-year grant from PACT (Private Agencies Collaborating Together) until the end of February of this year and are now covered by MFM/FFH from general funds. MFM/FFH also trained three Koreans in extrusion and other food technologies, including operation and maintenance of the equipment. One of these is now Production Manager.

The Korean Institute of Science and Technology (KIST), with technical assistance and training from MFM/FFH's food engineer and technologist, built the extruder in Korea, and has made a number of important innovations on this unique piece of food-processing equipment. The total cost of building the MFM/KIST extruder was \$10,000 while similar commercial equipment would cost upwards of \$60,000 - \$80,000 in the U.S. KIST then produced a number of nutritious food products locally, using the extruder. These are based on a mixture of corn, soybean meal and sesame; or barley, soybean meal and sesame. The nutritional aspects, including the desired vitamin and mineral con-

tent, have been specified and laboratory feeding tests conducted on rats. Nutritional quality has been determined to be excellent. Consumer tests were done by ASI Market Research on the products, with good acceptability of product size, shape and color. Product name and packaging studies were also done.

In December 1979 an agreement was made with the Baekma Food Company (Korean) by which MFM/FFH would use the plant to manufacture Baekma's extruded snack product, Hodori. In return, Baekma agreed to sell the project's nutritious snack, Woo Ryang A, in their major marketing area in the southwest part of Korea. This agreement was entered into to provide needed working capital, especially in view of PACT's decision not to fund a fourth year of the project. In order to produce the Hodori snack product and the Woo Ryange A., the food plant has operated around the clock six days a week for most of 1980. The additional operating time has reduced the production costs, an important factor in light of the PACT decision to terminate its funding. The Baekma Food Company has a total of 50 trucks and more than 100 salesmen to cover the central area and the remote farm areas of the southwestern part of the country. The agreement with Baekma was to enable the product to reach the "poorest of the poor" throughout the country. Under this agreement, the MFM/FFH product should not be sold in urban areas.

The specifications for the product were fixed following a series of tests which established the amount of calcium that could be added to the formulation and still produce a good-looking product. Additional equipment was purchased and installed for the production of new powdered food products, which is just starting. In the past few months a second extruder was installed in order to increase production. Development work was carried out on cheese-flavored products. A large-scale market test for these new products is now being undertaken. Other development work is also being done: Evaluation of other oils for enrobing; ways to improve the flavor of the sugar syrup used for product coating; etc. The large marketing test completed in August 1979 had shown the need to improve the appearance of the packages. Accordingly new package designs were developed and these were printed on glossy laminated film which greatly increased the attractiveness of the package in the market place.

MARKETING

The Wonseong County Comprehensive Rural Nutrition Program is in reality a project designed to find ways to induce the nutritionally at-risk members of the community to spend some of their disposable income on beneficial foods. The nutrition education project deals with nutrition in general, while the food plant production provides a highly nutritious food in the local market place. The test marketing completed in 1979 showed that the food did obtain significant market penetration and had the potential to obtain a major share of the snack-food market in Wonseong County. On the basis of this, it was decided to proceed with the full-scale marketing of the product with emphasis on Woo Ryang A, which had a somewhat higher acceptability than did alternative products tested. In October of 1979 a new marketing manager was hired; a retailer was selected in each Myon of the county to serve as the product distribution center. Marketing was also started in seven stores immediately adjacent to primary schools in the county, and in five stores in Wonju City. Efforts were then intensified to develop a complete sales network by using the 125 Nutrition Improvement Clubs (NIC) that the Nutrition Education project had already established in the county. These village NIC's have lists of pre-schoolers, pregnant and lactating women in their respective villages. They encourage the mothers to participate in the nutrition education classes. In line with instructions from the County Chief, every Myon chief and health worker has an obligation to notify the NIC of new-born babies and pregnant mothers. Every county health center serves as a product-distribution center, as do 34 selected commercial stores in the vicinity of primary schools throughout the county.

The food is sold to the Nutrition Improvement Clubs at 35 Won per package and MFM/FFH sets aside 5 Won per package for the Myon-level NIC fund; the village NIC leader will deposit 10 Won per package for the village-level NIC fund. This appears to be one of the best methods to approach the target population and improve nutritional status through nutrition education and product distribution.

In order to provide highly nutritious low-cost food for social welfare organizations in conjunction with the nutrition education project, the Ministry of Health asked MFM/FFH to provide this product to a number of social welfare agencies; in addition, a number of church groups also have requested it for their health/nutrition programs in the field.

GOVERNMENT AND LOCAL COMMUNITY INVOLVEMENT

Of particular significance in this project is the degree of participation by local Korean private institutions; by the government at the county, provincial and Ministry levels; and by the local village leadership. In Korea, the Saemual (New Community) movement is focused on the economic and social development of local communities. The participation of the St. Peter's Rural Development Association and other community leaders from the very beginning of the program and, in fact, its derivation in response to a "felt need" as the PL 480 program was phased out, played significant roles in the success of the project. Often programs take place in larger cities and do not reach the target populations directly. This project is centered in the rural community at the grass roots level. Local men and women are involved. The beneficiaries are:

1. Those who receive the low-cost high-nutrition food products and/or those who receive the nutrition education and thereby improve the nutritional status of their children, their families and themselves.
 - a) Pre-school children: The target group of 7,500 pre-school children receive the food which contains some 20% protein. The distribution system aims to reach those pre-school children who are most in need of improved protein intake. They are the principal direct beneficiaries of the program.
 - b) Pregnant and lactating women: 2,500 pregnant and lactating women are the target group and will also benefit from the nutrition education which they will receive from the village social workers, Saemual village leaders, and indirectly from their older children who will receive the nutrition education in school.
 - c) Heads of households and women: Beyond the target group to receive the food, all families will benefit from the increased awareness of the importance of good diet brought about by the nutrition education and by the availability of the food.

2. In addition to the direct beneficiaries and participants, a second group of beneficiaries are those who are involved in the planning, implementation and evaluation of the project at the local or county level. This group includes:

- a) Primary and high school teachers
- b) Village social workers
- c) Village leaders in the Saemul movement
- d) Others

3. Likewise, those at the provincial and institutional levels involved in project implementation are also learning by doing, such as:

- a) KIST staff (two having been trained at MFM/FFH in Santa Monica, and having produced and improved the extruder(s).
- b) University of Korea Medical School group, who have had first-hand experience in nutrition surveys, implementation of nutrition projects, and evaluation.
- c) Numerous county and provincial leaders who are involved in aspects of the project's implementation, e.g. County Chief Nutrition Officers and other county officials. In addition to benefits from the planning and implementation of the project, all the above are benefitting from the inter-relationships they are experiencing through the Coordinating Committee and the planning skills they are acquiring, which are of value far beyond the direct project outputs.

ADDITIONAL FEATURES OF THE PROJECT

1. Technology transfer: A unique aspect of this project is that it applies low-cost food technology in a way that will benefit all participants directly. Koreans from KIST, who trained at MFM/FFH facilities in Santa Monica, returned to their country to build the MFM-designed extruder, and modified it to fit their own country needs and raw materials. The extruder will be the principal testing and production tool for all food produced in this project; its capabilities will be carefully evaluated for use in similar projects.
2. Replicability: The project will present to the Government and people of Korea a viable field demonstration on improving nutrition that can be applied throughout the country. For this reason, careful monitoring and constant evaluation are essential to its success.

The Nutrition Education Program

The nutrition education component is also a cooperative program involving MFM/FFH and the local community. The Foundation provides the project coordination and technical materials while the local county provides the trainers, consisting of village leaders, school teachers and county social workers. The trainers will then be working directly with the families in the community at all levels.

As stated in the OPG proposal:

"Since this is a demonstration school-community based nutrition education outreach system, its applicability extends beyond Won-seong county. In working through the existing system of country organizations, the program will demonstrate that nutrition education can be widely disseminated throughout other counties and provinces of Korea.

"The guiding principle of this nutrition education program is to avoid sophisticated approaches that might look good but will never have a lasting effect. This project will function at the grass-roots levels, working towards achieving simple, practical and well-defined goals, aimed at producing eventual changes in food consumption. It is designed so learning may progress in the following three-stage sequence: (a) an understanding of the change to be induced, (b) acceptance that such change is desirable, and (c) putting that change into effect. The program will stimulate interest in nutrition and increase the awareness of the relationship between nutrition and general health. It will especially emphasize the importance of adequate nutrition for the most vulnerable groups of weaning children, and pregnant and lactating women."

Funds for this program, \$199,000, were made available by AID/Korea under an Operational Program Grant, which greatly facilitated its rapid progress. To date:

- 1) A top-quality Nutritional Advisory Committee was set up, chaired by Dr. Jin Soon Ju. Dr. Harriet Kim, professor at Seoul National University, has also given outstanding assistance. The committee laid the plans for the nutrition education program right from the start, prior to its presentation to AID/Korea for funding.
- 2) A baseline nutrition survey was completed and the data analyzed to determine the nutritional level of the communities in which the nutrition education and food distribution is to take place. Results of the survey are used as training and evaluation tools throughout the life of the project.
- 3) Training curricula were designed to train each group in the communities, including: Village Saemual (New Community)

leaders, primary school teachers, rural extension agents and county social workers, all of whom provide nutrition education to the target parents, their elementary school-age children, and the entire population. Also included are the Nutrition Improvement Clubs and the Home Defense forces.

- 4) The University of Korea Medical School team has been carrying out anthropometric measurements (height, weight, arm circumference), blood tests, and food intake studies to evaluate progress in improving the health/nutrition of the target groups.

The nutrition education program includes development of educational materials, training, creation of public awareness in the government, creation of public awareness at the local level, and in the armed forces; and monitoring and evaluation. Under this program, the target population in Wonseong County was introduced to the subject of nutrition during the first year. For the second year of the project, the objectives focused on the continued development of educational materials and training. The educational materials developed include: A manual for teaching nutrition to adults, to be used by social workers at the village level (in Korean and English); a nutrition slideshow for use in the villages and training the Homeland Reserve Forces (Korean and English); and a booklet on how to conduct dietary surveys (Korean). These materials are distributed to government and private agencies. In addition, the Kananhan Farmers' Training "School regularly receives nutrition information from the project. The local radio station has broadcast short nutrition messages daily, and a longer program once a week.

Training sessions were held for social workers, Nutrition Improvement Club (NIC) leaders and members, primary school teachers, and the Homeland Reserve Forces. During the second of two trips to Korea during 1979, Nutrition Planner Kathryn Shack, with assistance from Dr. Walter Bray, led a two-day workshop on "Educational Skills for Village-level Nutrition in Korea." The 11 participants included MFM/Korea staff and staff from Wonseong County Rural Guidance Office, Panbu Myun Health Center, Save the Children Federation, and the Korea Health Development Institute. The training objective was "to learn some educational skills that will facilitate participation." This practical workshop began with a discussion of the educational process and how to involve people in it. Together the

trainers and participants designed a nutrition lesson incorporating these ideas, which they then tested in a local village.

Evaluation of the project involves collecting anthropometric data every three months and individual dietary surveys. An easy-to-use dietary survey form was developed which enables the surveyors to collect data on individual family members, a necessity for effective monitoring. The County social workers used the form without difficulty and it is hoped that it will be adopted by the Office of Rural Development's nutrition programs.

A sample report from the Korean Nutrition Education supervisor is attached (Att: 24) to show the type of activities undertaken in the nutrition education project. It will also give some idea of the numbers of social workers, community leaders and housewives being trained. Another report (Att: 25) dated July 10th of this year indicates that the educational work continues apace.

FINANCING

Because of the size and comprehensiveness of the project, it has received funding from various institutions. MFM/FFH has also applied a substantive portion of its general funds. The Korean Government has likewise contributed largely to the counterpart and site acquisition costs. Some of the contributions during 1977-79 were:

PACT (operational costs)	\$95,000
United Church Board for World Ministries (equipment)	31,100
USAID/Korea (nutrition education - 3 years)	199,000
MFM/FFH general funds (staff salaries, support)	67,000
Government of Korea (counterpart staff, site, etc)	200,000
Church World Service (shipping equipment)	7,000

Equipment purchased in the U.S.: A de-stoner, to remove heavy particles from the grain; a cleaner, to clean the grain before processing; a dryer/enrober (to dry and apply oil and flavoring); a proportioning mill (to meter, blend and mill the grains and other ingredients; and a packaging machine to pack individual servings were all purchased in the U.S. for a total cost of approximately \$96,000.

Equipment purchased in Korea: Such items as a bench-scale, screw conveyors, storage bins, liquid feed tank, bucket elevator, belt conveyors, a feed hopper and a hopper elevator were purchased in Korea, to a total of approximately \$30,000. The cost of the extruder built by KIST to process the food was \$10,000. Equipment installation, electric system, etc. cost \$18,300 and contingency funds are \$10,000.

During 1980, expenditures for equipment and spare parts in the U.S. have been approximately \$12,000. A new extruder, installed in June, was bought and paid for here, with donations from the Pew Memorial Trust of \$50,000 and an additional \$20,000 from the United Church Board for World Ministries. During July of this year a 5-year loan at an interest rate of 6% was obtained from ECLOS, a ecumenical loan organization operating from Geneva, Switzerland.

IMPACT

The project has received visits from prominent Korean officials, and various newspaper articles have appeared on its work. KBS had a 20-minute program on its TV stations on the food plant and the nutrition education project. In addition to periodic visits from MFM/FFH staff for technical assistance and the nutrition education project, various visitors from other countries have also come to observe the operations. Four students from Wonju City High School were attached to the food plant for a month for on-the-job training in food processing.

A Nutrition Officer has been assigned to Wonseong County. He will receive intensive training during the life of the project and will take over the coordination of the program when MFM/FFH phases out. The Kangwon Provincial Government has been making plans for project replication. It is likely that nine more social workers will be assigned to Wonseong County, one for each Myon. They will coordinate nutrition activities at the Myon level with the Nutrition Officer. The Office of Rural Development (ORD) will act as the supervisory agency during and when MFM/FFH's involvement is terminated. ORD has already supported the project in many ways, including assisting in training, reviewing and pre-testing educational materials, sharing their publications, and using the jointly prepared materials in their ANP villages.

MFM/FFH staff continue to work at raising government awareness of the importance of nutrition. Most exciting is the fact that the Project Manager, John Seo, was invited to participate in National Food and Planning seminars sponsored by UNICEF and AID. As a result of these policy meetings, the Economic Planning Board of Korea has decided to include nutrition in the nation's next 5-year Development

Plan to be written during 1980. MFM/FFH is the only PVO to participate in this national nutrition planning.

CONCLUSIONS

From the reports read and conversations with staff in Santa Monica and New York, it appears that the Korea project is unique and replicable, and the model may well be expanded to other countries which are highly motivated to produce a good quality low-cost nutritious food for their needy. However, it is costly and relatively few governments seem so inclined at the present time. The nutrition education component has proven to be extremely effective and should be replicated in one or more countries to check its transferability, before being promoted as a possible "solution" for improving nutrition world-wide.

V. Management Practices

A) Project Control and Reporting

- 1) Current: Attachment 14 demonstrates and explains in detail the various steps in the development of a project from the initial request from the field to the Vice President for Program, through various staff meetings and field visits, to submission to the Board Program Committee, and on to final approval of the Finance Committee. Attachment 15 then describes the various steps of project implementation and the monthly, semi-annual, annual, and termination of project reporting system. After a careful reading of this material and discussion with field project managers in the countries visited, it appears that the reporting system is adequate to meet the needs for an effective system of project supervision and control.

Quarterly Program Review: A two-day quarterly program review is held periodically in Santa Monica for all staff members to assess the progress of projects, identify obstacles or areas which require modification, inform co-workers of activities, and otherwise evaluate the work being done. A brief summary of items discussed, decisions taken and changes recommended is prepared in writing and circulated to the staff workers as guidelines. This review process was instituted in 1978 and has since become an important part of the management system.

- 2) Projected: No major changes in the project control and reporting system are anticipated under the matching grant funds, as has been done previously with the DPG and OPGs, but no fundamental modification is expected since the system is providing optimum control and efficiency.

B) Cost/Benefit Analysis

No utilizable data on cost/benefits was found either in the Santa Monica office or in the field. Top of the head figures (such as the area formerly cultivated vs. that in 1979 after the use of the tractor, in Ecuador) might provide a very rough idea of costs

per participant, but since indirect costs were not considered, the figures would have no validity. One recommendation of this report will be that in the future efforts should be made to attempt to obtain such analysis, but recognizing that such items as measuring participatory action impact on a community are not quantifiable.

C) Size and Qualifications of Technical and Program Staff

The crucial problem and weakest link in the MFM/FFH operational chain at the moment is personnel. The Vice President for Program has just terminated his relationship with MFM/FFH; the Technical Director slot is also vacant; and the Director of the Latin American Division has recently left the office though continuing to render assistance until the end of the year from the state of Washington. Although these vacancies are in the process of being filled, there is a current lack of support to the field managers which attests to the need (as described in the recommendations) for improved integration among U.S. staff and their involvement in field projects, so that there is a "back-up" system for substitution in case of emergency.

CVs of key staff members are attached in resume, Attachment 16. As is the case in most voluntary agencies, the staff appear to be highly motivated, competent and productive - and also overworked and underpaid. The present organizational set-up is as follows:

President (Davies)

V.P. for Program (vacant)

ANPs

L.A. & Caribbean (vacant)
Community Level Food Technologist
(Patterson)
Africa (Temanson)
U.S. - HLS - (Warner)
HLS Coordinator
Tucson Staff

Director of Development
(vacant)
Asst. Director of Development
(Brainard)

FNI
Director of Technological
Supervision (vacant)
Plant Manager (Brown)
Labor/Plant Technologist
(Tony)

Director of Training
(Shept)
Coordinator of Training
(Burke)
Information Specialist
(Butler)

Country Project Managers
Ecuador (Andrade)
Honduras (Alvarez)

Future plans (under the matching grant) include the creation of a U.S. slot as director of Asian programs for the current project director in Korea, Jong Seo, to supervise other projects in Asia when the Korean project is phased out. As previously mentioned in the section on the Caribbean, the Community Level Food Technologist, Dr. Glenn Patterson, will be transferred from Barbados as soon as he finds and trains a local replacement. In Santa Monica he will be better able to provide assistance to the FNI and to the ANPs on a world-wide basis.

VI. Financial Growth and Capabilities

MFM/FFH has consistently increased its income from private sources (excluding government funding) from \$678,845 in 1977 to \$918,187 in 1979. This increase is due in large part to its success in raising money from churches, foundations and direct mail. Attachment 17 shows 1977, 1978 and 1979 income by source as well as projected 1980 income. Attachment 18 gives a more detailed list of grants received from private and public sources from January to June, 1980. As can be seen, the diversity of donors is increasing and at mid-year the goal for churches has already been surpassed and MFM/FFH is 3/4 of the way towards meeting its goals for funds from foundations.

Two new initiatives that are particularly promising are: 1) Planned giving campaign and 2) Major donors (Partners for Development). Pamphlets describing each of these are attached as Attachment 19. The Planned Giving program comprises a gift annuity, which provides a guaranteed life income for the donor and/or another person, along with several kinds of tax savings at the same time as the gift portion goes to support life-giving, self-help development programs. With a Charitable Remainder Trust, the donor also provides a life income and receives an immediate tax reduction. There is no tax on long-term capital gains on assets used to fund the Trust. The rate of return, from 5% to 8% or more, is determined in advance by the donor and the Trustee, and the Trust will make fixed or variable payments, according to the donor's desires for a fixed income or a possible hedge against inflation. There will be considerable estate tax savings, and at the death of the last beneficiary, the balance of the trust assets become the property of MFM/FFH to fund long-range self-help programs.

Another source of income is from direct mail appeals. At the end of June, 1980, direct mail income was \$53,000 over the previous year (\$156,287 vs. \$103,706) and approximately \$14,000 over the estimated budget. Much of the increase is attributable to renewals, which were \$29,000 over the previous year. This is due in large measure to the new names added to the list of active donors.

Also at the end of June, 1980, prospect returns showed an income of \$51,415 (from mailings of 445,000 pieces) vs. \$28,325 in 1979 from 299,500 pieces of mail. In short, by mailing 48% more pieces, MFM has already realized 50% more income - and that income will continue to grow over the next months. A summer newsletter is scheduled to go out at the end of July, and the fall mail campaign will commence with a September renewal and the beginning of a mail drop of half a million prospect appeals. The 1980 mailings began to go out in March, with 400,000 appeals targeted and the early returns are highly promising.

In summary, MFM/FFH has continued to increase its public support through direct mail and solicitation of foundations, churches and major donors. The AID SSG and OPG account for approximately 25% of 1979 income (cf attached chart of Twelve Months Income by Source). MFM is less dependent on AID than many other voluntary agencies, some of which already have matching grants. The existence of the matching grant will enhance MFM/FFH's ability to raise funds since donors are more willing to make contributions if they know that the Federal Government is also supporting the programs.

Copies of most recent audits are attached (Attachment 20).

VII. Evaluations

The project managers in all three areas have themselves done some evaluation of their projects and their impact on the communities. Attachment 21 demonstrates the impact of the Ecuador project on various aspects of community life in the seven towns included between 1973 and 1978: Community organization and infrastructure, transportation, improvement in housing, individual and community agricultural equipment, public facilities, and the campesinos' attitudes toward self-help. Although results are not quantified, nevertheless the evaluation gives a general idea of the changes which have taken place, which were confirmed by the site visits. It was evident, seeing the campesinos individually, collectively at the town meeting in Dos Mangro, and in the "concentration" when they met with the Secretary of Agriculture, that they have the ability to organize themselves to take steps to improve their quality of life.

Attachment 22 is an evaluation of the Caribbean collaborative programs with WAND and shows number of beneficiaries and possible beneficiaries during the first six months of activity (to March 30, 1980). It includes the time spent on each activity, how it was spent, and follow-up activities. The objectives of the contractual relationships are stated clearly, and an estimate is made of the degree to which these objectives were met (or not met). This evaluation shows that the relationship with WAND has developed well and an office and associated procedures have been set up. Nearly 16% of the activities were directed towards reducing or eliminating malnutrition in young children, pregnant and lactating women. Almost 24% of the 81 activities dealt with providing direct technical assistance, which is an important part of the outreach and follow-up program. A bibliography on small-scale food technologies has been made up and is being distributed to interested agencies and institutions. WAND is compiling a resource list of persons and organizations. The evaluation stresses the need for resident field staff who would be more familiar with local conditions and customs.

Regarding the short-term technical support in the Caribbean, it was felt by both the AID evaluator and the MFM/FFH staff member that this was less effective than the ANPs in the other countries visited, and probably has a poorer cost/benefit ratio, though this could not be determined. Without specific local project leadership and constantly available assistance, a community group with no prior tradition of collaboration and decision-making does not progress with any rapidity, and much momentum is lost. In Antigua, for example, in the soap making project, the women knew they needed a larger area for drying and storing the soap, but they were "waiting for Dr. Patterson" to help them get it. In later discussions with Dr. Patterson he stated he was "waiting for the women" to find the new site. If there were a project director able to provide the catalytic action(s) required to get the group actively implementing the project, this "Alphonse-Gaston" situation might be avoided. While short-term technical assistance is highly valued input, without the community development factor at a very high level, it does not seem to be effective to the degree desired. Therefore the recommendation will be made that the Caribbean technical assistance program be converted to the model used in Ecuador and Honduras, rather than the "scattered shot" undertaking it is now and that the technical assistance be made a part of a Caribbean ANP project. This can be done with relative ease now when Dr. Patterson is seeking a replacement, and his technical assistance can continue to be a valuable input, out of Santa Monica, rather than the entire assistance offered to the Caribbean.

Attachment 23 is an evaluation of the Honduran project's three sub-programs of "growth and development," "pre-natal control" and "vaccination," all of which are important components of the ANP. The objectives of this evaluation were to increment action and to correct shortcomings of the sub-programs; to know the coverage provided by the growth and development clinic; to determine the number of pregnant women who attend the pre-natal control clinic; to detect problems of attention and coverage in all three sub-programs; and to set general guidelines for the services to be provided by the CESAR (Rural Health Center) of Zopilotepe and its

area of influence. The evaluation shows that of an estimated population of 1007 in the 12 villages, 884 were surveyed and of these 380 attend or were registered at the growth and development clinic, a coverage of 37.74%. Of the children surveyed who were classified as having first degree malnutrition, 35.76% attend the control clinic; of those having second degree malnutrition, 54.74% attend, and of those having third degree malnutrition, 57.14% are covered. 45.89% of the children diagnosed as normal also attend. The conclusion reached is that although the percentage of the population attending the clinic is high in relation to those surveyed, it is quite low as compared to the overall population - and therefore additional efforts must be made to increase the clinic's coverage.

With reference to data on pregnant and lactating women, little was available. 22.8% of the women in the control clinic had aborted; 13.33% were considered as high-risk pregnancies since they were over 36 years of age; 31.43% had had some type of complication during pregnancy; and 70.57% had attended only the first clinical control. As a result of these preliminary findings, efforts are also being made to increase the coverage of the pre-natal control clinic.

The social motivation sessions are definitely mobilizing the communities, as testified by the visits to various towns, and the people are now planning and implementing their own projects, such as the milk-distribution program, the cookie making/selling which supports it, the school garden, and many others. Coordination among various governmental organizations in the area is excellent, and from the auxiliary nurse at Zopilotepe down to Maria, the volunteer health guardian of her community, all have learned more of health care/nutrition than ever before, with subsequent trickle-down effect on the humblest of the people.

As previously stated, MFM/FFH tries to select the countries in which it will operate on the basis of projects presented by former participants in the training courses (or others) and as a form of

follow-up and support to them. Lautaro in Ecuador, Zoila in Honduras, and Ruth Spencer in Antigua were all participants in Santa Monica (although already working on projects which in these cases later became ANPs). Bernardo in Ecuador was a participant in the nutrition education seminar in Choluteca, Honduras and is currently utilizing many techniques he learned there. This process of selection seems to be adequate and certainly provides the continuity of support which is so sadly lacking in other (non-MFM/FFH) projects world-wide.

Local inhabitants are deeply involved in assessing their own needs and determining their own priorities as well as in the design and implementation of the projects selected. The farmers of San Vicente de Loja who decided to pool their resources and buy their own tractor after the use of the MFM tractor demonstrated the increased harvest possible, and who have since not only expanded their own acreage but are also renting out their tractor to farmers in other communities (and thus further increasing their income) demonstrate the multiplier effect of the MFM inputs.

VIII. Conclusion and Recommendation

A) Conclusions: MFM/FFH, under its DPA and SSG, has definitely improved its capabilities to design and manage its international programs to strengthen the capabilities of communities in the developing world to solve their food and nutrition problems. The local project managers in the countries visited and also - from the reports read and discussions with staff in Santa Monica - the project manager in Korea, are dedicated and motivated to an unusually high degree to helping the poor and neglected people of their communities to help themselves. In Ecuador on three successive days Lautaro was so absorbed in his visits and meetings that he completely FORGOT to eat for 10 and 12-hour stretches. In Honduras Zoila drove her jeep over the worst roads imagineable to be sure to reach all the outlying districts, and just sparkled as she showed us the new water supply system in the town of San Nicolas which the villagers themselves, with MFM/FFH assistance, had finished. Both were held in high esteem - and also warm affection - by the villagers we met.

From its past years of experience in these and other field projects, MFM/FFH has been able to develop a project model which appears to be successful in helping solve the multiple and complex problems of poverty, underdevelopment and malnutrition to a certain degree - certainly to a point equivalent to or even surpassing that reached by AID itself! With the matching grant, they will be able to move more rapidly and vigorously into Africa and provide technical assistance in training and in food processing, preservation, storage, nutrition education and nutritional status improvement, all of which are virtually needed by African food-short countries; to expand their programs in other Asian and Latin American countries, and further test, refine and implement the model. The matching grant can also support overseas nationals by providing funds for their travel to attend training courses, conferences and seminars. It can also be used for the purchase of additional equipment, such as additional machinery, when deemed appropriate. Combatting malnutrition, it is generally conceded,

is a highly complex task - but involving the beneficiaries of programs in the decision-making and development of the projects in which they are to be involved appears to be the key to "stimulating change rather than simply transferring technology or knowledge," which is the basic philosophy underlying MFM/FFH's programs and activities.

The timelines and adequacy of MFM/FFH project development and of its technical and material support are also not quantifiable but certainly any projects with a goal of improving the quality of life in under-developed areas are timely whenever they are undertaken, but especially now as more and more people in LDCs become aware of their rights to improved health, nutrition and well-being. If the matching grant permits expanded funding to on-going projects to permit additional inputs, i.e. well-digging equipment in the drought stricken Santa Elena peninsula, the technical know-how is available and the benefits to the region will be increased far beyond the costs.

It is also difficult, if not impossible, to assess the "operational value of equipment developed, distributed or recommended by MFM/FFH" since some of the equipment in Santa Monica dates back to the 50's and 60's when the multi-purpose food was produced and distributed; improvements and innovations have been made in-house; and other equipment such as solar dryers and solar ovens may be made of any locally available scrap material such as cardboard or fruit-crate woods. The Ford truck in which we drove around the Santa Elena peninsula had 170,000 miles on it - in the U.S. its current value would be negligible, in Ecuador it is still invaluable!

B) Recommendations: MFM/FFH is a dynamic and growing voluntary agency. Its overall administrative procedures appear to be effective, although its organizational structure needs to be modified for better operational efficiency:

1) Field personnel need a better back-stopping structure to allow them to feel more closely integrated into the MFM/FFH Foundation.

For example, the project manager in Ecuador, Lautaro, has had no contact in the past three years with anyone of the staff other than his immediate supervisor and two visits from the President. When his Latin American regional supervisor resigned, Lautaro is left in a complete vacuum, with no other staff member prepared to take over support to his project in Ecuador.

2) The regional supervisors themselves need better back-stopping and coordination (in addition to the integration mentioned below) for exchange of information and experience. It is therefore recommended that a Director of Field Projects (or Director of Applied Nutrition Projects) be hired to provide these services and also serve to fill the gaps in back-stopping when the need arises.

3) Directly related to both the above items is the need for cross-fertilization of knowledge, experience and technical assistance throughout the organization. As an example of this, the Ecuador project manager badly needs technical assistance in income-generation, solar drying and similar techniques, but he has never been visited by the community level food technologist, who is based in the Caribbean. (Note: Of course it is recognized that when Dr. Patterson is transferred to Santa Monica, his services will then be available to other regions) Second, although Lautaro has just hired a nutritionist for the important work in nutrition education which is a basic part of his ANP, the current visit by the MFM/FFH nutritionist/nutrition educator was purely coincidental! And think, he is working in an area where the most vital and excruciating problem is drought and arid lands. The Papago Indian project in Tucson has on its staff an agronomist specialized in desert agricultural practices -- yet the latter's expertise has never been offered to Lautaro in Ecuador, where it might have an overwhelming impact. The pertinent recommendation, therefore, is that a strong effort should be made to provide greater staff integration for better support to the field. And a Director of Field Projects could promote and oversee such

integration.*

4) The exact location or "fit" of the Training Division is not clear nor is its relationship to the Food and Nutrition Institute. If the Institute's two major areas are training in food processing, in Santa Monica until now and soon to be mainly overseas, and in providing technical assistance, where does the training in Nutrition Education fit in? It is recommended that the FNI should be reorganized along the following lines:

There should be a Director of the Food and Nutrition Institute (a TRAINING function). Under the Director there should be four specific sectors: One, research and development, community-level technology assistance and the pilot plant. The second would cover Food and Nutrition training in Santa Monica, plus the follow-up reunions in the various geographical areas. Suggestion is made that this position might be filled by the information specialist, in addition to her Resource Center duties, if a program assistant were hired to help with the logistics and typing. The third would be overseas training of all types, which could be handled by the present Training Coordinator. The fourth would be training in nutrition education, both the long-term programs such as Korea's (which should be replicated elsewhere as soon as possible) and short-term nutrition education programs, such as the one in Central America in collaboration with Save the Children and World Education. In this way the Food and Nutrition Institute group would function as a TEAM instead of as it does now, with practically unrelated individuals, and the Director of the ANPs and the Director of the FNI could provide the overall integration of MFM's two major lines of effort.

5) In addition to these modifications, it is strongly recommended

*Note: If this recommendation is implemented in the near future, Gary should be sent to Ecuador at the start of the planting season there, i.e. mid-December to early January, when the farmers are deciding what crops to plant.

that the western office be moved out of the Los Angeles area.

To a certain extent, the current personnel problems are due to the extremely high costs of living in that area, especially in consideration of the disproportionately low salaries of the staff. The previously suggested move to Davis, for example, would permit far less expensive housing, lower transportation costs (i.e. bicycle), and more pleasant and less polluted environment, the latter of special interest to the staff members who, by the very nature of their professions are more sensitive to and happier in less congested areas. It would also facilitate closer relationships with and increased inputs from the staff of the University of California at Davis, world-famous in the agricultural, food-processing and rural development fields.

6) Some effort should be made to obtain cost/benefit data for future evaluation, although the difficulty of quantifying participatory efforts and results is well recognized. As of interest, in this connection, see "Program Devaluation: Can the Experiment Reform?" by Paul A. Schwarz, President of the American Institute for Research, which describes an improved method of setting goals and evaluating results. (Attachment 24)

7) Some consideration should be given to providing well-digging equipment to the Santa Elena peninsula, since a reliable water supply is basic to all food-producing and therefore nutritional improvement activities. It would seem that MFM through its own efforts, or perhaps through AID (in this "Decade for Water"!) might be able to locate some used drilling equipment to donate. This is essential to the ANP and the campesinos' self-sufficiency!

C) Impact on the Field: Statistics regarding the number of wells dug, latrines built and vegetable gardens planted have been given earlier as part of the trip reports on the visits to the Caribbean, Ecuador and Honduras. Far more difficult to quantify is the impact on the communities in the creation of an awareness of their ability and right to have a voice in assessing their own needs, to set their own priorities and to help resolve their own

problems. In Antigua we observed the satisfaction and pride the women in the soap-making project, who had already deposited several hundred dollars in a bank account towards the realization of their priority of establishing a pre-school hot lunch program. In Santa Elena we were present when the Minister of Agriculture met with the campesinos for the first time, and recognized that this felicitous occasion was due, at least in part, to MFM/FFH's efforts; prior to MFM activities on the peninsula there had been no government services of any kind in that area, and now there were more than a dozen official entities working there and the Minister himself listening to the campesinos' needs! In San Vicente de Loja we met the group of farmers who had bought their own tractor, as an outgrowth of MFM/FFH's inputs of a tractor and education in improved soil technology; learned of their increased acreage, and observed their improved personal and living conditions as compared with other communities where ANP had not been implemented. We heard from the women in that same town their request for sewing lessons, which might provide added income so that they could afford to buy the burners for the pump which in turn would provide the water and enable them to continue their community garden project despite the drought; and for lessons in nutrition so they could improve the health of 'their children. They themselves recognized the need for these lessons and the effect such assistance would have on their lives! In Honduras we were able to observe the enormous differences in living conditions, child care, and family health/hygiene between those villages which already were well into their ANP and those which had not yet started, differences striking in both their emotional and social implications. These impacts, and the happiness of the village people and school children in San Nicolas over the new water system, primitive though it might be, and their lavish use of the water it provided, cannot be quantified but they are nonetheless a living testimony to the impact of the self-help projects undertaken by MFM/FFH. We are convinced beyond the shadow of a doubt that this organization, especially if they follow the recommendations presented herein, can ably continue to implement meaningful activities in developing countries and provide appropriate technology

and training so that these underprivileged people can improve their own lives and enjoy the benefits of modern civilization.



MEALS FOR MILLIONS/FREEDOM FROM HUNGER ANNOUNCES
ITS 1980 TRAINING COURSE

COMMUNITY LEVEL FOOD PROCESSING

The course is designed to provide practical nutrition and food technology skills for Field Workers active at the community level in Developing Countries. It will enable them to plan, organize and implement activities in their own communities to improve the utilization of local resources for improving the nutritional status of the most vulnerable groups.

THE COURSE WILL COVER THE FOLLOWING SUBJECTS:

NUTRITIONAL REQUIREMENTS	FOOD STORAGE AND PRESERVATION
ASSESSMENT OF NUTRITIONAL STATUS	HOME AND VILLAGE PROCESSING
EVALUATION OF LOCAL FOODSTUFFS	SMALL SCALE COMMERCIAL PRODUCTION
FORMULATION OF MULTIMIXES	PLANNING, BUDGETING, ACCOUNTING
APPROPRIATE FOOD TECHNOLOGY	HOW TO GET HELP

Through lectures and hands-on experience in the laboratory, kitchen and pilot plant, the participants will acquire an adequate background to assess nutritional needs, evaluate and formulate locally available food resources, prepare (process) nutritious, low-cost foods in homes or on a small-production scale, provide nutrition education and plan and design implementable projects.

COURSE REQUIREMENTS:

Participants will be selected who have a genuine concern about malnutrition in their own communities, who are in a position to do something about the problem but lack the necessary knowledge, skills and/or resources, and who have a working knowledge of the English language.

Participants will be asked to bring with them information on basic food habits, food processing, and food preservation as now practiced. In addition, participants will be required to bring with them to the course a problem relevant to their local situation upon which they will work during the course. (No guarantees of a solution, but individual assistance will be provided). At the beginning of the course the participants will describe their problems to the group, and will report to the group on their progress at the end of the course. They will also be asked to make a commitment to periodic reports on their progress after returning home.

DATE: April 14 to May 16, 1980

COSTS: • The tuition fee, including board and room is \$1400. Financial aid may be available for this fee.

- Transportation to and from California is to be provided by the participants.

For additional information and application forms, interested persons should write to:

DIRECTOR OF TRAINING
MEALS FOR MILLIONS/FREEDOM FROM HUNGER
P.O. DRAWER 680
SANTA MONICA, CA 90406 USA

SPRING 1979 TRAINING COURSE

"FOODS FOR SMALL CHILDREN"

SUMMARY REPORT

APPENDIX 6

Hugh J. Roberts, Ph.D., Vice President for Program

and

Joanne Burke, Training Coordinator

MEALS FOR MILLIONS/FREEDOM FROM HUNGER FOUNDATION

Santa Monica, California

July 16, 1979

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I. INTRODUCTION

In 1978 Meals for Millions/Freedom from Hunger Foundation introduced a new training activity by offering a course for field workers active in developing countries at the community level. Given the success of that course, and in recognition of 1979 as the U.N. Year of the Child, the Foundation decided to repeat the course "Foods for Small Children" both in the Spring and in the Fall of 1979.

The goal of the new program is to provide practical and applicable training in nutrition and food technology for people who do not necessarily have a degree in those disciplines, but are currently in a position to help communities improve nutritional status through better utilization of local food resources. The course provides a general overview of the working principles of nutrition and basic food technology. It is designed to give participants the capability to assess nutritional needs, to evaluate locally available raw materials, and to formulate and prepare nutritious, low cost foods in homes or on a small production scale.

III. PARTICIPANTS

The group of 8 participants represented 6 different countries. Representation was global: Africa (2), Asia (2), the Caribbean (2), and the Papago Reservation, Arizona (2). Of the group, there were seven women and one man. Half had completed some formal post-secondary education, and three held advanced degrees. All were somehow involved with food and nutrition problems at the community level.

List of Participants

1. Mrs. Zahara Abdalla
c/o Agricultural Extension Administration
P.O. Box 285 Kh
Khartoum, Sudan

Zahara Abdalla holds a B.S. in Agriculture from the University of Khartoum, Sudan. Since 1975 she has worked as an Agricultural Extensionist with the Ministry of Agriculture. Her responsibilities include the supervision of graduate students and technical assistants in the Home Economics Program, and developing methods of food preservation. Zahara's participation in the MFM training course is part of a 20-week training program sponsored by the U.S. Department of Agriculture/Office of International Cooperation and Development.

2. Mrs. Eun Ja Choi
IPO Box 1193, SCF/CDF, KFC
Seoul, Republic of Korea

Eun Ja Choi works as a Social Development Consultant with the Save the Children Federation/Community Development Foundation. In her work she is involved in program development activities and supervision of field coordinators and the day care programs. In addition, she has done a great deal in presenting guidelines for improved gardening and food production for the SCF program. Mrs. Choi holds an M.A. in Health and Nutrition from the school of Public Health in Korea.

7. Ms. Cynthia St. Aimie
124 Rosedale Lane
Castle Bruce, Commonwealth of Dominica, W.I.

Since 1972 Cynthia St. Aimie has acted as President of the Junior Red Cross. She is an active community volunteer, working in the village Health Center with 4-H Clubs and with the children and elderly in her community. Some of her responsibilities include: teaching nutrition, providing medical assistance at the clinic, fund raising and cultural activities. She is interested in learning ways to use local food resources to improve the diet and nutrition in her community.

8. Mrs. Rachanee Sawangkat
Nutrition Division, Department of Health
Ministry of Public Health
Bangkok 2, Thailand

Rachanee Sawangkat holds an M.S. in Food Science and works as a First Grade Nutrition Officer in the Food Analysis & Research Section in the Nutrition Division of the Department of Public Health. She has experience in proximate analysis of local Thai foods, and is interested in developing new technologies to use locally available staple foods to improve the nutrition of her country.

2. Faculty

The course was directed by Dr. Hugh J. Roberts, MFM/FFH's Vice President for Program, with assistance of Joanne Burke, Training Coordinator.

MFM Instructors

John C. Anderson, Ph.D., Food Technologist/Engineer

Walter J. Bray, Ph.D., Food Technologist

Patricia Butzer, M.L.S., Information Specialist

Kathryn W. Shack, M.S., M.P.H., Nutrition Planner

Patrick T. Widner, Latin America & Caribbean Program Director

Guest Lecturers

Mr. George Bookwalter
Northern Regional Research Lab/USDA
1815 North University Street
Peoria, Illinois 61604

Mr. Eldon Helm
205 N.E. 67 Avenue
Portland, Oregon 97213

Ms. Margot Higgins
106 Third Street, N.W.
Washington, D.C. 20002

Mr. Joel Jackson
Ball Corporation
345 High Street
Muncie, Indiana 47302

Mr. Howard R. Lippman
384 North Meyer
Tucson, Arizona 85716

Professor Alvin I. Nelson
INTSOY Program
University of Illinois
Champaign-Urbana
Urbana, Illinois 61801

Ms. Mary Ann Schlosser
Cornell University
Department of Food Science
120 Stocking Hall
Ithaca, New York 14853

Mr. Hank Sterner
Appropriate Engineering and
Manufacturing Company
815 W. 9th Street
Corona, California 91720

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4. Field Trips

In addition to the classes held at MFM's own facilities, three field trips were scheduled:

1. Community Garden Project, Santa Monica

Santa Monica Mayor Pro-tem, Christine Reed, gave the group a guided tour of the Community Garden Project that has been successfully developed and maintained by the citizens of Santa Monica.

2. Ecology Action/Common Ground, and Syntex Corporation, Palo Alto

Ecology Action/Common Ground is a research and community garden project on land provided by Syntex Corporation to test the yields of the Biodynamic/French Intensive method of horticulture. The method provides for a self-sustaining agriculture and is an approach especially workable in countries with limited resources. A most instructive group tour was led by Mr. John Jeavons; each participant received a copy of his publication, "How to Grow More Vegetables". Following that, Mr. Frank Koch, Vice President of Syntex Corporation met the participants and hosted them at lunch.

3. WIC Program, San Antonio Health Center, Los Angeles

Mr. Steve Baranov and Ms. Suzanne Watanabe arranged for the group to visit the Health Center and attend a nutrition education class for mothers who receive WIC food vouchers. The visit gave the participants information on U.S. Government supplemental food programs which were then discussed in relation to programs in their countries.

5. Social Activities

Over the 5 weeks the Foundation arranged various social activities to give the participants the opportunity to relax and become better acquainted with each other and with the staff. In addition, unscheduled time was available for students to visit with acquaintances in the Los Angeles area and to sightsee, shop, etc., on their own.

6. Schedule of Classes

Classes were held for 5 weeks beginning Monday, April 23 through Friday, May 25. The following is a detailed listing of topics, time allocations and instructors.

<u>Date/Time</u>	<u>Topic</u>	<u>Instructor</u>
April 23 9-11	Welcome; orientation: Staff, Library, Building area. Introduction to Course, Questions, Answers	Staff
11-5	Presentation of Problems by Students	Students/Staff
April 24 9-10	Nutritional Requirements of Small Children	K. Shack
10-11	Nutritional Composition of Foods	W. Bray
1-5	Food Fortification; Designing of Multimix Formulas	W. Bray/K. Shack
April 25 9-11	Breastfeeding and Infant Formula	K. Shack
1-5	Nutritional Composition of Foods, Food Fortification, Designing of Multimix Formulas	W. Bray/K. Shack
April 26 9-11	Nutritional Assessment	K. Shack
1-5	Resource Center Independent Problem Solving	P. Butzer/ Staff
April 27 9-5	Appropriate Food Technology, including Village Texturizer, Lecture and Lab	J. Anderson
April 30 9-12	Community Garden Trip/Santa Monica	
1-5	Course Modification, Independent Problem Solving	Staff
May 1 9-12	Teaching Nutrition Education, Preparation of Visual Aids	J. Burke
1-5	Independent Problem Solving	Staff
May 2 9-5	Kitchen Level Methods of Soy Processing	A.I. Nelson
May 3 9-5	Kitchen Level Methods of Soy Processing	A.I. Nelson
May 4	Palo Alto Field Trip, Ecology Action Center/Common Ground	

V. DOCUMENTATION

The course was documented in several ways by MFM staff. Notes were taken during the lectures, discussions, and laboratory sessions, and a collection of the lecturers' hand-outs was made. Black and white photographs and color slides were taken of the participants in various classroom, laboratory and pilot plant activities. In addition, newspaper articles featuring the training program appeared in the Los Angeles Times and the Christian Science Monitor (see Appendix 2).

Three participants stated a desire to increase their skills in food preservation, three in weaning food preparation, and two in nutrition education.

The questionnaire results indicated that the course successfully met their expectations. In addition, several commented on the unexpected benefits that were acquired over the 5 week period, including: new methods of food production and preservation, new ideas for project activities, awareness of potential for cooperation with others in similar situations in developing countries. The accumulated responses to the questionnaire are presented in Appendix 3.

3. Results: What Did the Participants Do?

Throughout the course the participants worked individually and together, and accomplished much that was indicative of their grasp of new knowledge and skills. Cooperation and mutual respect were evidenced by the manner in which they worked together -- both on group tasks and on their individual problems.

The following should be regarded as indicators of the extent to which the objective of the course was achieved.

Accomplishments

1. Constructed a portable solar dryer for use in teaching on drying local foods -- Cynthia St. Aimie and Mafelena Jacob.
2. Constructed a solar oven that was capable of baking fish in 45 minutes -- Entire Group.
3. Developed an instant soya-rice weaning food that can be produced at community kitchen level -- Eun Ja Choi and Rachanee Sawangkapat. Since returning home, Mrs. Choi has explored potential funding sources for the development and implementation of a weaning foods project in Korea.

C. Content

- provide more library/reading time
- have more practical application with machines in the pilot plant
- provide more demonstrations on uses of equipment
- devote more course time to aspects of community development
- include a field visit to a child day care center with a feeding program
- have students prepare and present some local food dishes that others can taste and evaluate
- devote more course time to issue of breastfeeding
- cover fewer course topics in greater depth

APPENDIX 3

Att. 3

MFM Training School
Foods for Small Children
April 23 - May 25, 1979

1. How much of the training program was adequate to your needs as a field worker?

2 All 4 Almost all 1 Some 1 Not much _____ Nothing

2. How did you find the following? How much of each was adequate to your needs?

<u>Classroom</u>	<u>Pilot Plant</u>	<u>Kitchen</u>	<u>Field Trips</u>
<u>4</u> All	_____ All	<u>5</u> All	<u>4</u> All
<u>2</u> Almost all	<u>6</u> Almost all	<u>1</u> Almost all	<u>2</u> Almost all
<u>2</u> Some	<u>1</u> Some	_____ Some	<u>2</u> Some
_____ Not much	<u>1</u> Not much	<u>2</u> Not much	_____ Not much
_____ Nothing	_____ Nothing	_____ Nothing	_____ Nothing

3. There are different combinations for the overall program of classroom, kitchen, plant work. State your preference choosing a percentage out of each column (to total 100%).

<u>Classroom</u> o/o	<u>Pilot plant</u> o/o	<u>Kitchen</u> o/o	<u>Field Trips</u> o/o	<u>Other*</u> (specify below) o/o
_____ 10	_____ 10	<u>2</u> 10	<u>1</u> 10	<u>1</u> 10
_____ 20	<u>4</u> 20	<u>3</u> 20	<u>4</u> 20	_____ 20
<u>4</u> 30	<u>2</u> 30	<u>1</u> 30	<u>2</u> 30	_____ 30
<u>1</u> 40	<u>1</u> 40	_____ 40	_____ 40	_____ 40
<u>2</u> 50	_____ 50	_____ 50	_____ 50	_____ 50
_____ 60	<u>1</u> 60	<u>1</u> 60	_____ 60	_____ 60
_____ 70	_____ 70	_____ 70	_____ 70	_____ 70
<u>1</u> 80	_____ 80	<u>1</u> 80	<u>1</u> 80	<u>1</u> 80
_____ 90	_____ 90	_____ 90	_____ 90	_____ 90
_____ 100	_____ 100	_____ 100	_____ 100	_____ 100
(average) <u>43%</u>	<u>30%</u>	<u>31%</u>	<u>29%</u>	<u>45%</u>

*OTHER Team teaching by MFM staff; audio-visual presentations.

4. What is your opinion about the classroom setting (table & chairs, around it, etc.)

6 It's all right 2 I'd prefer a different setting (please explain).

Participant Survey
Page Three

13. How helpful was the material presented by the lecturers?

1.10 K. Shack 1.50 Dr. Bray 1.62 Dr. Anderson 1.23 Prof. A. Nelson
1.50 G. Bookwalter 1.37 J. Jackson 1.25 Dr. Roberts 1.62 P. Widner
1.75 M. Higgins 1.37 H. Sterner 1.50 J. Burke 1.50 P. Butzer
1.50 M. Schlosser 1.12 E. Helm 1.25 H. Lippman

(use numbers:

1. very helpful 3. somewhat irrelevant
 2. satisfactory 4. irrelevant

Field visits:

1.85 C. Reed, Community Garden Project/Santa Monica
1.57 Women, Infants and Children (WIC) field trip
1.28 John Jeavons, Ecology Action Center, Palo Alto

14. Rate the subjects covered according to their importance for your work
(use the numerical rating indicated in #12).

1.57 Nutritional assessment and evaluation
1.57 Nutritional requirements of small children
1.57 Nutritional composition of foods
1.85 Multimix formulations
1.42 Breastfeeding and infant formula
2.0 Village texturizer
1.57 Extrusion cooking
2.0 Fermented foods
2.0 Methods of processing soybeans
2.0 Leaf proteins
1.42 Home canning
1.57 Community canning
1.14 Solar drying
1.42 Small scale commercial operations
 -- economics, planning, budgeting, accounting
1.71 Communication: how to break through
1.14 Resources for technical and financial help
1.12 Food preservation and storage
1.42 Nutrition Education
1.57 Approaches to community development

APPENDIX 4

Course Evaluation Foods for Small Children

Course evaluation is based on the information or data collected from all participants working in three groups; the areas of discussions were as follows:

- I. Course Content (topics specified)
 - (a) relevance of content
 - (b) adequacy
 - (c) presentation
 - (d) practical work
 - (e) field trips
 - (f) facilities at the Foundation
- II. Administration
 - (a) accommodations
 - (b) library facilities
 - (c) weekly stipend
- III. Recreation
- IV. Recommendations
- V. Any other business

I. Course Content

Course content was put into four categories:

1. Community development
2. Nutritional requirement of small children
3. Food processing and preservation
4. Planning, budgeting and accounting

In community development it is relevant for an effective child nutrition program to include planning and implementation as well as evaluation. However, there was not enough time for in-depth discussions of these concepts, and it was hurriedly done.

In nutritional requirement for small children we have included the following topics:

1. Nutritional assessment
2. Food composition and nutritional quality of food
3. Food fortification
4. Design of multi-mixes
5. Breastfeeding
6. Nutrition education

The group felt that this was the most vital part of the course in acquiring knowledge and skills for the development of low-cost nutritious multi-mixes in a child nutrition program. In this area we had very high expectations which the group felt were inadequately met. We definitely felt that:

1. time allotted was not enough;
2. laboratory facilities were insufficient;
3. work spaces were limited;
4. the departure of some staff members disrupted the continuity of the program;
5. under-utilization of food brought by participants in spite of the time, money, effort spent in purchasing, packaging, and bringing the food;
6. technique of soliciting the participation of the group was good, but more information to cover the subject would have increased knowledge of the subject.

Food processing and presentation is vital. However, the group felt that the following topics were not well presented:

1. Fermented foods, basic food chemistry and food processing.
2. Food preservation techniques.

Theoretical techniques out-weighed practical experience. It was also felt that extrusion cooking could be omitted from a course of this nature.

Ball Canning was very well presented, but with more time participants could have gained more practical experience geared to home canning relevant to our situations.

Planning, budgeting and accounting was relevant to our particular situations and the individualized approach helped to enhance effective learning, but it could probably be scheduled earlier in the course.

II. Administration

1. Motel accommodations:
 - (a) We appreciated being left on our own in the motel in groups, except that we didn't feel comfortable to stay three to a room.
 - (b) Cooking facilities should be checked prior to arrival of participants.
 - (c) Transportation was excellent.
2. The weekly stipend was adequate, but for a few who didn't have other financial assistance, we felt that it could have been increased.

3. Work space in the library is too small to accommodate participants, but the library system is very well organized.

III. Recreation

Recreational activities were very good and relationships with the staff were very cordial. We appreciated very much the way the members of the staff put themselves at our disposal, even on weekends.

IV. Recommendations

1. As the course is specifically on foods for small children, the focus should have been on the preparation of multi-mixes of low-cost nutritious foods. Group recommends, therefore, that in the future a course of this nature be conducted for five weeks to cover the following areas:
 - Nutritional requirements as listed above, and also to include:
 - (1) shelf life determination
 - (2) quality control analysis
2. It is further recommended that a separate course be planned on appropriate technology and food preservation in the future.
3. The group recommends that once in a while future courses be conducted in one of the developing countries where the environment and facilities are relevant and related to participants' backgrounds.
4. We recommend that the laboratory should be up-graded to fully meet course objectives.
5. Course outline should be included in advance communications with the participants.

V. Comments

The group acknowledges and appreciates the opportunity given to us to participate in this course and feels that all have benefited in various ways.

FORMULATION OF MULTIMIXES

1. Choose 3 or more raw materials using those that are available in your area, preferably from the list below:

<u>Cereals</u>	<u>Legumes</u>	<u>Oilseeds</u>	<u>Root Crops</u>
Maize	Cowpeas	Soybeans	Potatoes
Sorghum	Chickpeas	Groundnuts	Cassava
Millet	Lentils	Sesame	Plantain
Rice	Black Beans		

2. What are the nutrient needs in your area? (from your own experiences) e.g., Vitamin A, calories, protein . . .

3. Look up the protein, calories and the vitamin and mineral contents for the raw materials you have chosen (use attached sheet 1a as a work sheet). Calculate the protein/calorie ratio (the ideal ratio is 18-20%).

$$\text{Protein/Calorie Ratio} = \frac{\text{calories from protein}}{\text{total calorie content}}$$

Note that 1 gm of carbohydrate = 4 calories)
 1 gm of protein = 4 calories) if calories are not given
 1 gm of fat = 9 calories)

4. Look up the essential amino acid content of the raw materials. What are the most limiting amino acids?

5. Design a multimix which combines your ingredients in the best fashion to meet nutrient and amino acid needs. What is the percent of each ingredient? (About 30% legume is recommended)

Questions: How adequate are the ingredients in meeting the needs?
 Should you use other ingredients, e.g., oil, for calories?

Note: Only dry ingredients should be considered.

6. Calculate the protein, calories, vitamin, mineral, amino acid composition, protein/calorie ratio, and amino acid score of your multimix.

Caution: Be careful of the decimal point.

7. What would you recommend for the amount to be given in one serving? What is the nutrient content per serving? Amino acid content? What percent of the needs is this?

NUTRIENT CONTENT OF THE RAW MATERIALSI. Protein and Calories (per 100 gms)

	<u>Protein</u>	<u>Calories</u>	<u>Protein/Calorie Ratio</u>
A			
B			
C			
D			
Needs/preschool age child: 1-3 years	16 gms	1,360	

II. Vitamins (per 100 gms/prod.)

	<u>Vitamin A</u>	<u>Vitamin C</u>	<u>Thiamin</u>	<u>Riboflavin</u>
A				
B				
C				
D				
Needs/preschool age child: 1-3 years	2500 ^{IU} mgs	20 mgs	0.5 mgs	0.8 mgs

III. Minerals (per 100 gms)

	<u>Calcium</u>	<u>Iron</u>
A		
B		
C		
Needs/preschool age child: 1-3 years	450 mgs	7.5 mgs

IV. Amino Acid Content (mg/100 gms material)*

	<u>Lysine</u>	<u>Threonine</u>	<u>Tryptophan</u>	<u>Sulfur a.a.;s</u>
A				
B				
C				
D				

* divide each value by the protein content (see page 1a) to get mg/g protein and compare with values below

Needs/preschool age child: mg/g protein
1-3 years 62 mg/g lysine 44 mg/g threonine 6 mg/g tryptophan 30 mg/g sulfur a.a.

Which is the most limiting amino acid?

Multimix

Percent A _____ B _____ C _____ D _____

I. Protein and Calories (per 100 gms)Percent x Protein = _____ Percent x Calories = _____

A	A
B	B
C	C
D	D

Total for Product

II. Vitamins (per 100 gm/product)Percent x A = _____ Percent x C = _____ Percent x Thiamin = _____ Percent x Riboflavin = _____

A	A	A	A
B	B	B	B
C	C	C	C
D	D	D	D

Total for Product

III. Minerals (per 100 gm/product)Percent x Calcium = _____ Percent x Iron = _____

A	A
B	B
C	C
D	D

Total for Product

I. Summary of the Multimix Formulation from page 3a

Total for Product:	<u>Protein</u>	<u>Calories</u>	<u>Vit A</u>	<u>Vit C</u>	<u>Thiamine</u>	<u>Riboflavin</u>	<u>Calcium</u>	<u>Iron</u>
--------------------	----------------	-----------------	--------------	--------------	-----------------	-------------------	----------------	-------------

II. Amount per serving = 150 gms (suggested)

Nutrients in each serving:	<u>Protein</u>	<u>Calories</u>	<u>Vit A</u>	<u>Vit C</u>	<u>Thiamine</u>	<u>Riboflavin</u>	<u>Calcium</u>	<u>Iron</u>
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III. Percentage of the needs for each nutrient in one serving

(Remember needs/preschool age child = protein 16 gms; calories 1,360; Vit A 2500¹⁰mg; Vit C 20 mgs; thiamine 0.5 mg; riboflavin 0.8 mg; calcium 450 mg; iron 7.5 mg)

IV. Amount of most limiting Amino Acids in one serving

SIMPLIFIED PROCEDURE FOR
CALCULATING AMINO ACID SCORES OF BLENDED FOODS*

G. Richard Jansen and Judson M. Harper
Colorado State University, Fort Collins, CO 80523

Component (Ingredient)	Wt (g)	Prot (g)	Lys (mg)	Thr (mg)	Try (mg)	SAA (mg)
Total						
Mg/g protein in mixture						
FAO Pattern (mg/g protein)			62	44	6	30
Amino Acid Score						

DIRECTIONS:

1. Record the weight in grams for each of the components of the mixture.
2. Record the amounts of protein, lysine, threonine, tryptophan and sulfur amino acids (methionine plus cystine) by multiplying the corresponding handbook values by the weight of the component in grams divided by 100.
3. Add up the weight and amounts of lys, thr, try and SAA in the total mixture.
4. Mg/g protein is obtained by dividing the amounts (mg) of lys, thr, try, and SAA by the amount (g) in the mixture.
5. Amino acid scores are obtained by dividing the mg/g for each amino acid by the corresponding values in mg/g listed for the FAO pattern X 100.

* The values listed on the attached data set were summarized from FAO nutritional studies no. 24, Rome, Italy, 1970.

TABLE 1. - RECOMMENDED

INTAKES OF NUTRIENTS

Age	Body weight	Energy		Protein	Vitamin A	Vitamin D	Thiamine	Ribo- flavine	Niacin	Folic acid	Vitamin B ₁₂	Ascorbic acid	Calcium	Iron
		(1)	(2)											
	kilo- grams	kilo- calories	mega- joules	grams	micro- grams	micro- grams	milli- grams	milli- grams	milli- grams	micro- grams	micro- grams	milli- grams	grams	milli- grams
Children														
< 1	7.3	820	3.4	14	300	100	0.3	0.5	5.4	60	0.3	20	0.5-0.6	3-10
1-4	13.4	1300	5.7	16	250	100	0.5	0.8	9.0	100	0.9	20	0.4-0.5	5-10
4-6	20.2	1830	7.6	20	300	100	0.7	1.1	12.1	100	1.5	20	0.4-0.5	5-10
7-10	28.1	2190	9.2	25	400	2.5	0.9	1.3	14.5	100	1.5	20	0.4-0.5	5-10
Male adolescents														
10-12	36.9	2600	10.9	30	575	2.5	1.0	1.6	17.2	100	2.0	20	0.6-0.7	5-10
13-15	51.3	2900	12.1	37	725	2.5	1.2	1.7	19.1	200	2.0	30	0.6-0.7	9-18
16-19	62.9	3070	12.8	38	750	2.5	1.2	1.8	20.3	200	2.0	30	0.5-0.6	5-9
Female adolescents														
10-12	39.0	2350	9.8	29	575	2.5	0.9	1.4	15.5	100	2.0	20	0.6-0.7	5-10
13-15	49.9	2490	10.4	31	725	2.5	1.0	1.5	16.4	200	2.0	30	0.6-0.7	12-24
16-19	54.4	2310	9.7	30	750	2.5	0.9	1.4	15.2	200	2.0	30	0.5-0.6	14-28
Adult man														
(moderately active)	65.0	3000	12.6	37	750	2.5	1.2	1.8	19.8	200	2.0	30	0.4-0.5	5-9
Adult woman														
(moderately active)	55.0	2200	9.2	29	750	2.5	0.9	1.3	14.5	200	2.0	30	0.4-0.5	14-28
Pregnancy														
(later half)		+350	+1.5	38	750	100	+0.1	+0.2	+2.3	400	3.0	30	10-12	(9)
Lactation														
(first 6 months)		+550	+2.3	46	1200	100	+0.2	+0.4	+3.7	300	2.5	30	10-12	(9)

¹ Energy and Protein Requirements. Report of a Joint FAO/WHO Expert Group, FAO, Rome, 1972. -- ² As egg or milk protein. -- ³ Requirements of Vitamin A, Thiamine, Riboflavin and Niacin. Report of a Joint FAO/WHO Expert Group, FAO, Rome, 1965. -- ⁴ As retinol. -- ⁵ Requirements of Ascorbic Acid, Vitamin D, Vitamin B₁₂, Folate and Iron. Report of a Joint FAO/WHO Expert Group, FAO, Rome, 1970. -- ⁶ As cholecalciferol. -- ⁷ Calcium Requirements. Report of a FAO/WHO Expert Group, FAO, Rome, 1961. -- ⁸ On each line the lower value applies when ever 25 percent of calories in the diet come from animal foods, and the

higher value when animal foods represent less than 10 percent of calories. -- ⁹ For women whose iron intake throughout life has been at the level recommended in this table, the daily intake of iron during pregnancy and lactation should be the same as that recommended for nonpregnant, nonlactating women of childbearing age. For women whose iron status is not satisfactory at the beginning of pregnancy, the requirement is increased, and in the extreme situation of women with no iron stores, the requirement can probably not be met without supplementation.

FOOD AND NUTRITION BOARD, NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL
RECOMMENDED DAILY DIETARY ALLOWANCES,* Revised 1974

Designed for the maintenance of good nutrition of practically all healthy people in the U.S.A.

	Age (years)	Weight		Height		Energy (kcal) ^b	Protein (g)	Fat Soluble Vitamins		Water Soluble Vitamins							Minerals							
		(kg)	(lbs)	(cm)	(in)			Vita- min A Activity (IU) ^c	Vita- min D Activity (IU)	Vita- min E Activity ^d (IU)	Ascor- bic Acid (mg)	Fola- cin ^e (μ g)	Nia- cin ^f (mg)	Ribo- flavin (mg)	Thia- min (mg)	Vita- min B ₆ (mg)	Vita- min B ₁₂ (μ g)	Cal- cium (mg)	Phos- phorus (mg)	Iodine (μ g)	Iron (mg)	Mag- nesium (mg)	Zinc (mg)	
Infants	0-0.5	6	11	60	21	kg \times 117	kg \times 2.2	120 ^g	1,100	100	4	35	50	5	0.4	0.3	0.3	0.3	360	210	35	10	60	3
	0.5-1.0	9	20	71	28	kg \times 108	kg \times 2.0	100	2,000	100	5	35	50	8	0.6	0.5	0.4	0.3	510	300	45	15	70	5
Children	1-3	13	28	86	31	1,300	30	100	2,000	100	7	10	100	9	0.8	0.7	0.6	1.0	800	800	60	15	150	10
	4-6	20	41	110	41	1,800	30	500	2,500	100	9	10	200	12	1.1	0.9	0.9	1.5	800	800	80	10	200	10
	7-10	30	66	135	51	2,150	36	700	3,300	100	10	10	300	16	1.2	1.2	1.2	2.0	800	800	110	10	250	10
	11-14	41	97	158	63	2,800	41	1,000	5,000	100	12	45	100	18	1.5	1.4	1.6	3.0	1,200	1,200	130	18	350	15
Males	15-18	61	131	172	69	3,000	54	1,000	5,000	100	15	45	100	20	1.8	1.5	2.0	3.0	1,200	1,200	150	18	400	15
	19-22	67	147	172	69	3,000	54	1,000	5,000	400	15	45	400	20	1.8	1.5	2.0	3.0	800	800	140	10	350	15
	23-50	70	151	172	69	2,700	56	1,000	5,000		15	45	100	18	1.6	1.4	2.0	3.0	800	800	130	10	350	15
	51+	70	151	172	69	2,100	56	1,000	5,000		15	45	100	16	1.5	1.2	2.0	3.0	800	800	110	10	350	15
	11-14	41	97	155	62	2,100	41	800	4,000	100	12	45	100	16	1.3	1.2	1.6	3.0	1,200	1,200	115	18	300	15
Females	15-18	51	119	162	65	2,100	48	800	4,000	100	12	45	100	14	1.4	1.1	2.0	3.0	1,200	1,200	115	18	300	15
	19-22	58	128	162	65	2,100	46	800	4,000	100	12	45	100	14	1.4	1.1	2.0	3.0	800	800	100	18	300	15
	23-50	58	128	162	65	2,000	46	800	4,000		12	45	100	13	1.2	1.0	2.0	3.0	800	800	100	18	300	15
	51+	58	128	162	65	1,800	46	800	4,000		12	45	100	12	1.1	1.0	2.0	3.0	800	800	80	10	300	15
Pregnant					+300	+30	1,000	5,000	100	15	60	800	+2	+0.3	+0.3	2.5	4.0	1,200	1,200	125	18+ ^h	450	20	
Lactating					+500	+20	1,200	6,000	100	15	80	600	+4	+0.5	+0.3	2.5	4.0	1,200	1,200	150	18	450	25	

* The allowances are intended to provide for individual variations among most normal persons as they live in the United States under usual environmental stresses. Diets should be based on a variety of common foods in order to provide other nutrients for which human requirements have been less well defined. See text for more detailed discussion of allowances and of nutrients not tabulated. See Table I (p. 6) for weights and heights by individual year of age.

^b Kilojoules (kJ) = 4.2 \times kcal.

^c Retinol equivalents.

^d Assumed to be all as retinol in milk during the first six months of life. All subsequent intakes are assumed to be half as retinol and half as β carotene when calculated from international

units. As retinol equivalents, three fourths are α retinol and one fourth as β carotene.

^e Total vitamin E activity, estimated to be 80 percent as α -tocopherol and 20 percent other tocopherols. See text for variation in allowances.

^f The folacin allowances refer to dietary sources as determined by *Lactobacillus casei* assay. Pure forms of folacin may be effective in doses less than one fourth of the recommended dietary allowance.

^g Although allowances are expressed as niacin, it is recognized that on the average 1 mg of niacin is derived from each 60 mg of dietary tryptophan.

^h This increased requirement cannot be met by ordinary diets; therefore, the use of supplemental iron is recommended.

BEST AVAILABLE

CEREALS AND GRAIN PRODUCTS

1 ACHA	1.26	7.90	205	315	111	462	2 BARLEY	1.88	11.00	404	349	180	443
3 BUCKWHEAT	1.95	12.20	464	439	152	476	4 COMBE FRIDGE	2.51	15.70	236	472	0	439
5 FOXTAIL MILLET	1.69	10.40	233	328	103	296	6 IBIRU	1.69	11.32	225	349	215	616
7 JOHNS TEARS	2.21	13.80	255	409	57	406	8 KODA MILLET	.91	5.70	171	176	35	45
9 MAIZE	1.52	9.50	254	342	67	329	10 MILLET	1.55	9.70	332	374	189	448
11 OATS	2.23	13.00	517	462	176	476	12 PROSO MILLET	1.39	8.70	242	204	48	222
13 QUINOA	1.92	12.00	672	420	127	240	14 RAGI MILLET	1.18	7.40	213	310	107	421
15 RICE (BROWN OR HUSKED)	1.26	7.50	299	307	98	247	16 RICE (MILLED POLISHED)	1.13	6.70	255	274	95	248
17 RICE (PARBOILED)	1.19	7.10	241	343	87	447	18 RYE	1.89	11.00	401	305	87	307
19 SANGUR	2.85	17.60	214	658	0	393	20 SORGHUM	1.62	10.10	204	306	123	293
21 TEFF	1.57	9.80	273	334	146	472	22 TERSENTE	3.81	23.40	304	712	91	549
23 WHEAT (WHOLE GRAIN)	2.09	12.20	374	382	142	428	24 WHFAT (GFPM)	3.95	22.40	1678	1047	261	906
25 WHEAT (BRAN)	2.16	13.60	543	482	173	443	26 WHFAT (FLOUR 80-90 PERCENT)	2.05	11.70	326	394	139	449
27 WHEAT (FLOUR 70-80 PERCENT)	1.91	10.90	248	321	128	478	28 WHEAT (FLOUR 60-70 PERCENT)	1.61	9.20	182	246	93	349
29 WHEAT (PARBOILED)	1.92	11.20	309	340	127	420							

STARCHY ROOTS+TUBERS

30 CASSAVA (MEAL)	.26	1.60	67	43	21	45	31 CASSAVA (MEAL FERMENTED)	.16	1.00	26	24	7	21
32 GIANT ARUM	.38	2.40	107	93	0	88	33 MAISA POTATO	.21	1.30	75	75	13	39
34 LOTUS, EGYPTIAN	.83	5.20	240	192	0	99	35 POTATO	.32	2.00	96	75	33	18
36 SWEET POTATO	.21	1.30	45	50	22	36	37 TACCA	.26	1.60	41	47	13	12
38 TARO	.29	1.80	70	74	26	71	39 TIGERNUT	.56	3.50	175	113	35	77
40 WHITESPOT GIANT ARUM	-0.00	-0.00	275	281	39	65	41 YAM	.38	2.40	97	46	30	45
42 YACHTIA	.35	2.20	70	65	30	79							

DRY LEGUMES AND LEGUME PRODUCTS

43 AFRICAN LOCUST BEAN	5.17	32.30	2089	1008	289	493	44 BAMPARRA GROUNDNUT	2.83	17.70	1141	417	192	396
45 BEAN	3.54	22.10	1593	878	223	422	46 BONAVIST NIGER	3.65	22.80	1591	755	144	379
47 BROAD BEAN	3.74	23.40	1513	786	202	359	48 CHICK-PEA	3.22	20.10	1376	756	174	407
49 CUPPEA	3.74	23.40	1549	842	254	428	50 GEMSBOK BEAN	4.37	27.30	1119	422	219	283
51 GROUND BEAN	3.10	19.40	1220	738	155	442	52 GROUNDNUT	4.49	25.40	1076	744	305	704
53 LENTIL	3.87	24.20	1739	760	231	415	54 LIMA BEAN	3.15	19.70	1466	423	199	307
55 LUPINE	4.99	31.20	1652	1139	314	449	56 MUNG BEAN	3.42	23.90	1927	709	191	307
57 PEA	3.60	22.50	1692	914	202	457	58 PIGEON PEA	3.34	20.90	1607	408	117	207
59 SESBANIA	5.12	32.00	1219	768	0	404	60 SOYBEAN (SEED)	6.65	38.00	2653	1443	432	607
61 SOYBEAN (CAKE)	8.06	46.00	3053	2152	774	1555	62 SOYBEAN (SOYA MILK)	.56	3.20	195	128	48	107
63 SOYBEAN (FERMENTED)	2.98	17.00	1120	742	235	442	64 SWORD BEAN	3.92	24.50	1344	1078	0	207
65 TAMARIND	3.01	18.40	1111	394	57	169	66 VELVET BEAN	5.25	32.80	2037	1313	0	207
67 VETCH	4.13	25.80	1490	863	0	437	68 YAM BEAN	2.96	18.50	1254	754	0	207

NUTS AND SEEDS

69 AFRICAN FAN PALM	.17	.90	53	45	17	37	70 AFRICAN MANHUE-APPLE	.38	2.00	95	71	22	19
71 ALMOND (DRY)	3.24	16.80	454	492	172	490	72 AMARANTH	3.13	16.40	970	476	51	344
73 ACADIA	5.66	30.00	1307	1132	0	458	74 BOMBAX	3.44	19.10	1111	728	147	241
75 BRAZIL NUT	2.71	14.80	474	442	322	1339	76 CASHEW	3.28	17.40	1442	445	374	369
77 CHIRALI NUT	5.53	29.30	1316	1040	342	453	78 COCONUT	1.25	6.50	274	245	85	245
79 COLEWORT	5.12	32.00	1547	1393	441	1397	80 COTTON (SEED)	3.81	20.20	1752	705	117	374
81 LOTUS (CAKE)	5.17	27.40	1334	1060	440	441	82 DECCAN HEMP	5.44	24.40	1524	1151	0	1244
83 DESERT DATE	5.00	26.50	1015	780	155	1440	84 DIKA NUT	1.62	8.40	436	386	173	644
85 JUM PALM	.74	3.90	226	125	0	190	86 GAMBIA NUT	1.40	8.50	436	440	0	340
87 HAZELNUT	3.75	19.90	690	623	263	489	88 HELISTERIA	2.09	11.10	527	510	0	408
89 JACKFRUIT	1.70	9.00	617	457	117	192	90 KOLA	1.09	5.80	401	219	34	144
91 LINSEED	3.40	18.00	826	613	330	423	92 LOTUS, EGYPTIAN	1.58	9.90	244	246	0	224
93 MANKETTI	4.00	21.20	1174	900	244	716	94 MELON	4.87	25.80	1111	1174	444	2074
95 MANGO-LI TREE	3.08	16.30	1214	829	0	490	96 NIGER SEED	3.24	17.30	1111	744	0	444
97 PISTACHIO TREE	4.57	24.20	1000	1257	0	443	98 PALM	1.24	6.40	436	276	74	144

NO.	NAME	NITR	PROT	LYS	THR	TRP	CAA	NO.	NAME	NITR	PROT	LYS	THR	TRP	CAA
99	MANGO	5.21	27.60	1141	1042	0	422	100	PARO-CANARY TREE	4.03	21.60	738	816	0	792
101	MARSHMALLOW	8.46	52.90	1560	812	677	1936	102	PECAN	1.24	7.80	348	275	97	274
103	MISTACHIO	3.57	18.90	1080	613	225	752	104	RAFFIA PALM	1.47	7.50	523	322	0	2176
105	SAFFLOWER	2.38	12.60	464	455	143	443	106	SESAME	3.42	18.10	585	763	247	948
107	SUNFLOWER	1.32	7.00	347	182	0	145	108	SUPPI	1.27	9.90	537	448	0	176
109	SCORION	.51	2.70	142	156	0	13	110	SUNFLOWER (SEED)	2.32	12.60	535	547	202	504
111	SUNFLOWER (CORE)	7.60	40.30	1754	1733	576	2004	112	T. LEAF TOFE	.81	4.30	147	182	0	258
113	TROPICAL ALMOND	3.84	24.00	553	595	0	211	114	T. LEAF SEED	6.94	43.40	2387	1672	542	1743
115	WALNUT	2.94	15.60	265	494	165	247	116	WHITE AND BLACK MANGROVE	1.24	6.60	224	241	0	247

VEGETABLES

117	AERVA	.62	3.90	194	178	0	129	118	AFRICAN FAN PALM	1.24	8.00	240	104	37	145
119	RISEN	.50	3.10	122	.97	0	32	120	ALRIZZIA	1.11	7.00	333	209	0	148
121	ALTERNANTHERA	.75	4.70	254	211	0	60	122	ARABACIA	.12	2.80	26	0	5	2
123	ARUM	.35	2.20	54	63	52	0	124	ASPARAGUS	.34	2.10	96	60	25	47
125	BADJAB	.61	3.80	225	183	48	80	126	BEAN	.38	2.40	131	92	33	51
127	BEEF (LEAVES)	.34	2.10	60	62	21	37	128	BEEF (ROOT)	.29	1.80	96	60	17	20
129	BEGONIA-TICKS	.61	3.80	175	150	0	94	130	BITTER LEAF	.45	5.30	196	218	0	100
131	BLACK PLUM	.19	1.20	55	55	0	43	132	BOMBAX	.37	2.30	120	104	0	100
133	BROCCOLI	.69	4.30	218	151	46	109	134	BROCCOLI SPROUT	.75	4.70	257	199	58	100
135	BURDEED	.67	4.20	225	184	0	148	136	CABBAGE	.26	1.60	50	41	17	100
137	CADABA	1.47	9.20	337	276	0	203	138	CALABASH	.70	4.40	210	153	0	100
139	CAPER	1.34	8.40	436	376	0	127	140	CARROT (ROOT)	.18	1.10	44	32	8	100
141	CASSAVA	1.12	7.00	437	327	102	195	142	CALIFLOWER	.45	2.80	160	119	39	100
143	CELERY	.18	1.10	27	38	14	25	144	CELOSIA	.43	2.70	126	109	0	100
145	CORN SALAD	.38	2.40	147	114	36	17	146	COPEEA	.53	3.31	198	0	33	100
147	CRASSOCEPHALUM	.51	3.20	150	140	0	73	148	CRATEVA	.94	5.90	271	217	0	100
149	CUCUMBER	.13	.80	35	21	6	8	150	EGGPLANT (LEAVES)	.74	4.60	222	172	0	100
151	EGGPLANT (FRUIT)	.19	1.20	63	44	12	19	152	EGYPTIAN MARJORAM	.64	3.00	78	129	64	100
153	ELEPHANT GRASS	.42	2.60	63	0	0	50	154	ENDIVE	.29	1.80	78	71	30	100
155	ERYNGI	.37	2.30	45	58	42	0	156	FALSE SESAME	.47	4.20	214	180	0	78
157	FAMEFLOWER	.38	2.40	75	71	0	62	158	FENUGREEK	.74	4.60	219	215	60	100
159	FLEURYA	.93	5.80	273	279	0	215	160	FRONDOUS	.70	4.40	223	171	0	119
161	HOGWEED	.72	4.50	207	166	0	121	162	HORSERADISH TREE	1.31	8.20	476	368	0	312
163	INULA	.14	.90	20	38	20	0	164	IPOMOEA	.64	4.00	144	132	52	60
165	JOINT FIR	.96	6.00	252	258	66	214	166	LANNEA	.54	3.40	199	141	0	105
167	LEAD TREE	.46	2.90	144	106	0	86	168	LEPTADENTA	.70	4.40	192	158	0	52
169	LETTUCE	.21	1.30	50	54	10	24	170	LUCERNE	.47	4.20	247	194	72	116
171	LUPINE	.43	2.70	108	98	0	37	172	MALLOU	.80	5.00	118	168	86	0
173	MULBERRY	1.12	6.97	276	232	0	133	174	NIGERIA AFRAEGLE	1.02	6.40	267	210	0	198
175	OKRA (LEAVES)	.70	4.40	217	186	40	128	176	OKRA (FRUIT)	.34	2.10	70	49	12	49
177	ONION	.22	1.40	63	20	20	16	178	PARSLEY	.59	3.70	531	0	74	18
179	PAVETTA	.51	3.20	134	118	0	45	180	PEA (SEED)	1.05	6.60	479	247	45	124
181	PEPPER (PIPER UMBELLATUM)	.74	4.60	226	195	0	143	182	PEPPER (CAPSICUM ANNUUM)	.19	1.20	38	50	7	6
183	PIDGEED	.74	4.60	234	197	57	170	184	POLYSONUM	.58	3.60	177	177	0	100
185	PUMPKIN (LEAVES)	.64	4.00	254	204	52	118	186	PUMPKIN (FRUIT)	.16	1.00	43	27	11	5
187	PUNCTUREVINE	.86	5.40	182	145	0	70	188	RADISH	.18	1.10	40	42	4	100
189	MED PEPPER	.66	4.10	252	0	41	40	190	ROSEMARY PEA	.90	5.60	244	237	0	100
191	SCRATCHBUSH	.45	2.80	135	138	0	48	192	SENA SICKLE	.90	5.60	324	241	0	241
193	SESAME	.75	4.70	203	218	0	114	194	SOLENDISTEMON	.45	4.30	186	177	0	100
195	SPIDERHERB	.77	4.80	280	188	0	48	196	SPINACH	.10	2.20	159	114	14	42
197	SUGARCANE	.29	1.80	35	0	0	21	198	TAMARIND	.50	3.10	184	144	0	40
199	TASSER FLOWER	.64	4.00	216	180	0	132	200	THYME	.47	2.90	65	60	59	0
201	TURNIP	.18	1.10	32	25	9	14	202	TURNIP (ROOT)	.14	1.90	17	25	11	11
203	TURNIP (LEAVES)	.50	3.10	157	127	42	54	204	VINE SPINACH	.29	1.80	89	56	0	47
205	MUSHROOM (COMMON UNSP.)	.59	3.70	165	190	38	36	206	MUSHROOM (CANNED)	.54	3.40	190	174	54	75

BEST AVAILABLE

MEAT AND POULTRY

NO.	NAME	NITR	PROT	LYS	THR	TRY	CAA	NO.	NAME	NITR	PROT	LYS	THR	TRY	CAA
207	BEEF AND VEAL (EDIBLE FLESH)	2.83	17.70	1573	812	198	704	208	BEEF AND VEAL (OFFALS)	2.34	16.00	1249	714	172	581
209	CATERMILLANS	2.43	15.20	979	651	197	726	210	CHICKEN (EDIBLE FLESH)	3.20	20.00	1590	794	205	704
211	CHICKEN (OFFALS)	2.56	16.00	1149	783	184	491	212	HORSE	3.20	20.00	2000	781	202	704
213	IGUANA	3.84	24.00	2244	1797	247	426	214	MEAT	2.56	16.00	1276	445	0	612
215	MUTTON AND LAMB (EDIBLE FLESH)	2.50	15.60	1275	733	196	543	216	MUTTON AND LAMB (OFFALS)	2.56	16.00	1357	748	245	701
217	PORK (EDIBLE FLESH)	1.90	11.90	961	593	142	454	218	PORK (OFFALS)	2.56	16.00	1354	722	207	655
219	HAT	2.72	17.00	1268	696	0	748	220	SALSADES	2.10	13.10	1135	493	0	53
221	ZEBU	3.20	20.00	1923	874	249	730	222	WILDEBEEST	2.88	18.00	1558	485	193	645

EGGS

223	HEN (WHOLE)	1.98	12.40	863	634	184	717	224	HEN (YOLK)	2.58	16.10	1202	743	240	599
225	HEN (WHITE)	1.78	11.10	739	532	176	708								

FISH, SHELLFISH, AND FISH PRODUCTS

226	DUCK	1.63	-0.00	743	652	173	488	227	FISH	3.01	18.80	1713	841	211	749
228	ANGUILLIFORMES	3.20	20.00	1504	896	202	749	229	BELONIFORMES	2.72	17.00	1673	870	227	706
230	CLUPPEIFORMES CLUPLOIDEI	3.20	20.00	1802	1027	214	444	231	CLUPPEIFORMES SALMONOIDEI	2.88	18.00	1674	784	199	547
232	CYPRINIFORMES	2.88	18.00	1590	749	184	427	233	GADIFORMES	2.72	17.00	1773	879	0	701
234	GALEIFORMES	3.20	20.00	1930	822	224	752	235	MUGILIFORMES	2.88	18.00	1813	819	184	448
236	PERCIFORMES SCOMBRIOIDEI	4.32	27.00	2328	1067	320	451	237	PERCIFORMES	2.72	17.00	1477	718	185	705
238	PLEURONECTIFORMES	2.56	16.00	1631	799	220	429	239	RAJIFORMES	3.20	20.00	1692	723	215	636
240	CRUSTACEANS	2.56	16.00	1262	730	184	468	241	MOLLUSCS	1.60	10.00	797	449	130	412
242	FISH (CANNED)	3.52	22.00	1844	964	211	444	243	FISH (CUPPED)	6.40	40.00	3540	1990	422	1204
244	FISH (FROZEN)	3.01	18.80	1993	780	244	498	245	FISH (MEAL)	12.00	75.00	5878	3180	720	2005
246	WHALE (FRESH)	2.36	20.40	1712	1020	205	477	247	WHALE (MEAT MEAL)	13.80	86.00	6293	5549	483	2148

MILK AND MILK PRODUCTS

248	BUFFALOS (UNTREATED)	.63	4.00	308	194	58	158	249	BUFFALO (ROILED)	.71	4.50	311	217	46	123
250	BUFFALO (PASTEURIZED)	.67	4.20	276	193	60	109	251	BUFFALO (STERILIZED)	.63	4.00	248	181	54	64
252	COWS (UNTREATED)	.55	3.50	268	153	48	114	253	COW (PASTEURIZED)	.55	3.50	248	143	40	45
254	COW (STERILIZED)	.55	3.50	239	148	51	103	255	COW (EVAPORATED)	1.10	7.00	450	312	91	140
256	COW (CONDENSED)	4.08	26.00	1848	1073	343	498	257	COW (FLUID IRRADIATED)	.55	3.50	243	148	35	44
258	COW (COLOSTRUM)	2.35	15.00	1201	1043	0	284	259	COW (CURD)	.55	3.50	276	159	42	143
260	EWES (UNTREATED)	.74	4.70	406	209	0	122	261	EW (COLOSTRUM)	2.87	18.30	1458	1243	0	107
262	GOATS (UNTREATED)	.60	3.80	196	164	45	50	263	HUMAN	.19	1.20	81	53	20	30
264	CHEESE	2.82	18.00	1559	725	217	406								

YEAST AND ALGAE

265	YEAST (BREWERS)	6.21	39.80	3509	2149	429	449	266	STRAWBERRYS (RHOD. PILIMANAE)	7.86	44.60	4107	2593	183	1000
267	STRAWBERRY (TURBIDOPSIS UTILIS)	-0.00	-0.00	4409	2692	226	1456	268	ALGAE (MILKIA FLAVIFORMIS)	.90	5.60	14	100	42	70
269	ALGAE (DUNALIA PINNATIFICA)	2.03	12.70	467	690	148	382								

FORTIFIED/PROCESSED

270	SOY-FORTIFIED BULGUR	2.80	17.70	637	584	213	429	271	WHEAT SOY BLEND	3.20	20.00	1050	746	40	100
272	ALL PURPOSE WHEAT FLOUR	1.60	9.00	199	275	169	413	273	BREAD FLOUR	1.90	11.00	243	331	41	100
274	SOY FORTIFIED BREAD FLOUR (12)	2.60	16.20	451	482	188	417	275	SOY-FORTIFIED CORNFLOUR	2.10	17.00	374	460	60	100
276	CORN SOY MILK	3.00	19.00	1043	760	228	436	277	INSTANT CORN SOY MILK	3.00	17.00	1104	742	100	100
278	SOY-FORTIFIED SCORUM GRITS	2.40	15.00	614	571	240	426	279	SOY-FORTIFIED ROLLED OATS	3.20	20.00	844	440	50	100
280	SOY FLOUR (FULL FAT)	6.70	42.00	2648	1640	591	490	281	SOY FLOUR (TOASTED, DEFATTED)	8.00	50.00	3200	1992	104	100
282	WHEAT SOY BREAD MIX	3.00	19.00	233	160	49	120	283	NONFAT DRY MILK FORT. (VIT. A, D)	5.70	34.90	2802	1611	111	100
284	BULGUR	1.60	9.30	271	302	126	313								

BEST AVAILABLE

6.2.2 Estimated amino acid requirements of infants

Two types of information have been used in arriving at the estimates of the amino acid requirements of infants in Table 18. Holt & Snyderman¹²³ have reported studies on the amounts of individual amino acids required to

TABLE 18. ESTIMATED AMINO ACID REQUIREMENTS OF INFANTS

Amino acid	Estimated requirements		Composite of lower values (mg per kg per day)	Suggested pattern ^a (mg per g of protein)
	Holt & Snyderman ¹²³ (mg per kg per day)	Fomon & Filer ¹²⁴ (mg per kg per day)		
Alanine	34	28	28	14
Asparagine	119	70	70	35
Aspartic acid	229	161	161	80
Glutamic acid	103	161	103	52
Glutamine + cystine	45 + Cys	58.4	58	29
Methionine + tyrosine	90 + Tyr	125.4	125	63
Proline	87	116	87	44
Serine	92	17	17	8.5
Valine	105	93	93	47

achieve normal growth in young infants. The values shown in the table represent the lowest level of intake that was adequate for all the infants tested. In a different type of study, Fomon & Filer¹²⁴ calculated the intakes of amino acids by infants fed a variety of formulas at levels that maintained adequate growth. The values shown in the table represent the lowest intake that had been demonstrated to maintain growth in all the infants studied. In general, there is good agreement between the two sets of estimates. In considering the two studies, the Committee accepted that a composite of the lower estimates of the two sets of data would provide an estimate of the upper range of amino acid requirements of infants aged 0-6 months. The estimates of requirements per kg of body weight were converted to mg of amino acid per g of protein on the basis that the average safe level of intake of milk protein appeared to be about 2 g per kg over this age range.

^a The values for tyrosine and tyrosine were estimated on the basis of the methionine : cystine and methionine : tyrosine ratios in human milk (see Table 20).

BEST AVAILABLE

Preschool
1-3

62

30

44

6

6.2.3 Estimated amino acid requirements of children

Nakagawa et al.^{125,126} have examined the amino acid requirements of boys aged 10-12 years. Their observations on the lowest amount of amino acid intake that led to nitrogen balance into positive N balance are shown in Table 19. These workers also demonstrated that such levels of intake were adequate, or more than adequate, for girls of comparable age. To

TABLE 19. ESTIMATED AMINO ACID REQUIREMENTS OF CHILDREN

Amino acid	Schoolchildren, 10-12 years	
	Observed requirements ^a (mg per kg per day)	Suggested pattern ^b (mg per g of protein)
Histidine	0	0
Isoleucine	30	37
Leucine	45	56
Lysine	60	75
Methionine + cystine	27	34
Proline + tyrosine + threonine	27	34
Treonine	35	41
Tryptophan	1	1.6
Valine	33	41

^a Based on Nakagawa et al. (1961). The values represent the average of the entire range of daily requirements of the 10-12 year olds, as determined by nitrogen balance studies.

^b Based on a safe level of protein intake of 0.8 g per kg per day, the average of safe levels of protein intake for boys and girls of this age range.

To convert these requirements into concentrations in protein, the safe level of intake for this age was taken as 1.5 g per kg. It should be noted that this was much less than the actual levels fed in the original study; as in most of the other studies of amino acid requirements, total protein (N) intakes were kept quite high.

6.2.4 Amino acid patterns

In Table 20, the derived patterns of amino acid requirements, expressed per g of protein, are compared with the concentrations of these amino acids in egg and milk protein and with the 1957 FAO provisional pattern. As would be expected, the derived pattern of requirement for infants closely resembles the reported composition of breast milk. The Committee agreed that for infants, breast milk was the appropriate food and that the amino acid requirements of infants should be excluded from the application

COMPOSITION OF FOODS PER 100 GRAMS EDIBLE PORTION

	PROTEIN (GMS)	CALORIES	VIT. A (I.U.)	VIT. C (MG)	THIAMINE (MG)	RIBOFLAVIN (MG)	CA (MG)	Fe (MG)
<u>Legumes</u>								
Beans-mung, mature, dry, raw	24.2	340	80	2.6	.38	.21	118	7.7
Beans-mature, dry, raw								
Black, red,	22.5	343	20	-	.31	.20	110	6.9
Pinto	22.9	349	-	-	.84	.21	135	6.4
Chickpeas	20.5	350	50	-	.31	.15	150	6.9
Cowpeas	22.8	343	30	-	1.05	.21	74	5.8
Lentils	24.7	340	60	-	.37	.22	79	6.8
<u>Cereals</u>								
Corn - field, whole, raw	8.9	348	490	-	.37	.12	22	2.1
Corn - sweet, raw, white, yellow	3.5	96	400	12	.15	.12	3	.7
Corn flour	7.8	368	340	-	.20	.06	6	1.8
Millet	9.9	327	-	-	.73	.38	20	6.8
Rice-brown								
raw	7.5	360	-	-	.34	.05	32	1.6
white, milled								
enriched, raw	6.7	363	-	-	.44	-	24	2.9
unenriched, raw	6.7	363	-	-	.07	.03	24	.8
Rice bran	13.3	276	-	-	2.26	.25	76	19.4
Sorghum	11	332	-	-	.38	.15	28	4.4
<u>Lseeds</u>								
Soybeans-mature								
dry, raw	34.1	403	80	-	1.10	.31	226	8.4
Flour-full fat	36.7	421	110	-	.85	.31	199	8.4
low fat	43.4	356	80	-	.85	.36	263	9.1
defatted	47	326	40	-	1.09	.34	265	11.1
Peanuts-ground nuts								
raw	26	564	-	-	1.14	.13	69	2.1
roasted	26.2	582	-	-	.32	.13	72	2.2
Sesame-dry								
whole	18.6	563	30	-	.98	.24	1,160	10.5
decorticated	18.2	582	-	-	.18	.13	110	2.4
<u>Rootcrops</u>								
potatoes								
raw	2.1	76	-	20	.10	.04	7	.6
cassava	.6	352	-	-	-	-	10	.4
plantain	1.1	119	-	14	.06	.04	7	.7

(19)

FALL 1979 TRAINING COURSE

'FOODS FOR SMALL CHILDREN'

SUMMARY REPORT

Joanne Burke, Training Coordinator

MEALS FOR MILLIONS/FREEDOM FROM HUNGER FOUNDATION

Santa Monica, California

December 31, 1979

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I. INTRODUCTION

In November, Meals for Millions/Freedom from Hunger Foundation successfully concluded the third session of its training course "Foods for Small Children". In honor of 1979 as the United Nations Year of the Child, the Foundation offered both Spring and Fall courses.

"Foods for Small Children" teaches nutrition and basic food technology to community level workers from developing countries. The training provides practical skills that workers use to help communities improve nutritional status through better utilization of local food resources. Participants learn how to:

- Assess nutritional needs;
- Provide effective nutrition education;
- Evaluate locally available raw materials;
- Formulate and prepare nutritious low cost foods in homes or on a small production scale.

The curriculum also covers small scale business principles, and rural and community development theory.

The training equips participants with the skills and knowledge they need to plan, organize, and implement activities that promote self-help development within their respective countries.

II. RECRUITMENT

From 1967 to 1977 the Foundation conducted training courses in protein food technology for Third World food technologists and nutritionists. In 1978, the course emphasis and content changed. The courses now provide community level workers in developing countries with the education and technical training they need to implement community self-help projects in health and nutrition.

Over the past 10 years an extensive recruitment network has been established to identify and select course participants. Through this network the Foundation recruits motivated community level workers who can benefit from and contribute to this type of training. Some of these referral sources include: church related and other international development organizations, e.g., CODEL, PACT, UCBWM, USAID; announcements in international newsletters that reach community level development workers, e.g., L.I.F.E. Newsletter, TAICH News, VITA News; contacts developed by MFM/FFH staff; and contacts from participants in former training courses.

The response to this course (from the field) was enthusiastic, and the number of qualified applicants far exceeded our enrollment capacity. Applications were carefully screened to identify suitable candidates representing a broad range of interests and skills. Fifteen women from eleven Third World countries were accepted to participate in the course.

III. PARTICIPANTS

The fifteen participants in the Fall 1979 course work in various positions at the community level, in programs aimed at improving the health and nutritional status of their most vulnerable groups.

All have completed some formal post-secondary education, and six of the group hold advanced degrees. The diversity of cultural, educational and professional backgrounds enhanced both the success of the course and each participant's personal experience.

Each participant, in accordance with the course criteria, brought a local food/nutrition problem to work on during the five week program. At home, they continue to apply their new knowledge and skills towards solving the problems that exist in their communities.

<u>Participant</u>	<u>Country</u>
Natividad Casillano	Philippines
Rina Kumari Dutt	Fiji Islands
Candelaria Formación	Philippines
Alicia A. Harrison	Belize
Juanita I. James	Antigua
Elenoa S. Misikini	Fiji Islands
Subaida Moosa	India
Dorothy C. Muntemba	Zambia
Vijayalakshmi Purushothaman	India
Premanie Samarasinghe	Sri Lanka
Margaret N. Thuo	Kenya
Siti Rokiah Binti ^{ah} Udin	Malaysia
Eutik Atikah Utju	Indonesia
Elizabeth Williams	Sierra Leone
Sabariah Binti Zainuddin	Malaysia

IV. COURSE OVERVIEW

1. Design

"Foods for Small Children" is a trainee centered course. Based on a participatory format, the course provides a forum in which participants can explore and share the unity and diversity of the reality that faces them. In the Fall 1979 course, group members assessed their own learning needs and interests, and took part in planning and evaluating the learning experience. Participants, staff members and guest lecturers interacted as both teachers and learners, and worked cooperatively to identify problems and develop solutions.

The course utilized various methods, of both a traditional and non-formal nature, to present the content in an effective and interesting manner. Learning activities were structured to provide as much "hands-on" experience as possible, and to capitalize on the rich variety of skills and resources that were available. For the most part, lectures were restricted to the morning hours; the remainder of the time was spent in participatory activities in the kitchen, laboratory, pilot plant, Resource Center, and classroom. Learning activities included: small group work, debate, dramatizations, independent research, peer teaching, case studies, field visits and media presentations.

A great portion of the course was devoted to independent work sessions. Participants worked individually, and with one another, on their problems. Foundation staff worked one-to-one with participants, and visiting lecturers also assisted in their problem solving. In a final class session participants shared solutions, discussed future

project plans, and identified areas where they would need MFM/FFH's follow-up assistance. In that way, each left with a sense of accomplishment and with plans to put their new skills into practice.

2. Faculty

Dr. Hugh J. Roberts, MFM/FFH Vice President for Program, and Joanne Burke, Training Coordinator, directed the course.

In response to the suggestion from participants in previous courses to capitalize on the professional expertise and resources available at the Foundation, MFM/FFH staff assumed a more prominent teaching role than in the past. Staff members taught individually and in teams, and worked with participants on their individual problems.

Guest faculty were recruited to augment the Foundation's expertise in certain areas. In addition, several participants gave presentations, and worked in small task groups to plan and teach some of the course content.

MFM/FFH Instructors

John C. Anderson, Ph.D.	Food Technologist/Engineer
Walter J. Bray, Ph.D.	Food Technologist
Ted Brown	Pilot Plant Manager
Joanne Burke, M.I.A.	Training Coordinator
Patricia Butzer, M.L.S.	Information Specialist
Howard Lippman	Horticulturalist, MFM/FFH Southwest Program
Hugh J. Roberts, Ph.D.	Vice President for Program
Kathryn W. Shack, M.S., M.P.H.	Nutrition Planner
Leslie A. Temanson	Africa Program Director
Patrick T. Widner	Latin America and Caribbean Program Director

Guest Lecturers

Mr. Eldon Helm
205 N.E. 67th Avenue
Portland, Oregon 97213

Mr. Joel Jackson
Ball Corporation
345 High Street
Muncie, Indiana 47302

Ms. Mary Ann Schlosser
Cornell University
Department of Food Science
120 Stocking Hall
Ithaca, New York 14853

Mr. Hank Sterner
Appropriate Engineering
and Manufacturing Company
815 W. 9th Street
Corona, California 91720

3. Reading List

Throughout the course reading material was assigned and distributed to supplement the lectures and other classroom activities. Participants received a lecture outline and handouts on each topic, and they copied materials from the Resource Center which are not available in their own countries. Several participants requested additional publications, and the Information Specialist agreed to forward them as part of the follow-up to the course.

The following publications were included in the course curriculum:

Alinsky, Saul D., Rules for Radicals. New York, Vintage Books, 1971.

Brown and Brown, Finding the Causes of Child Malnutrition. Atlanta, Georgia Task Force on World Hunger, 1978.

Cameron, M. and Hofvander, Y., Manual on Feeding Infants and Young Children. 2nd Edition, N.Y., UNICEF, 1976.

Jelliffe, D.B., Child Nutrition in Developing Countries. Washington, D.C., U.S. Government Printing Office, Stock No. 004-001-00029-2.

King, M.H., et al., Nutrition for Developing Countries. Nairobi, Kenya, Oxford University Press, 1972.

Latham, M.C., Planning and Evaluation of Applied Nutrition Programs. Rome, FAO, 1972.

Nutrition Education in Child Feeding Programs in Developing Countries.
AID, 1969. PN-AAC-747.

Shack, K.W., ed., Teaching Nutrition in Developing Countries or The Joys of Eating Dark Green Leaves. Santa Monica, California, Meals for Millions Foundation, 1977.

4. Field Trips

In an initial exercise on course expectations, participants expressed their learning interests. We then examined the schedule to assess how and to what extent the proposed program met their expectations, and appropriate adjustments were made.

Two of the major interest areas identified were community gardens and goat raising. The course covered this information through a weekend field trip to the Ecology Action of the Midpeninsula in Palo Alto. Ecology Action operates Common Ground, a research, training and community garden project based on the French Intensive/Biodynamic method. The method seeks to provide maximum food production on small plots of land, and is an approach especially valuable in countries with limited resources. On Saturday morning some of the group attended a class in backyard goatkeeping at the Ecology Action Center. The remainder visited the Food Research Institute at Stanford University, where they discussed world food issues with Professor Bruce Johnston. That afternoon, John Jeavons and his staff conducted a guided tour of the Common Ground garden for the entire group. This was followed by a slide presentation on the project, and each participant received a copy of his publication "How to Grow More Vegetables".

Other major interest areas were breastfeeding, food taboos and nutritional assessment. A field trip was arranged to visit the School

of Public Health, University of California Los Angeles, where the group enjoyed a lively discussion with Professors D.B. Jelliffe and E.F.P. Jelliffe, and Drs. Fred Zerfas and Charlotte Neumann (MFM/FFH Board of Trustees Member).

5. Social Activities

Social activities, both planned and spontaneous, were held in and outside the Foundation for staff to get acquainted with participants, and to facilitate their feeling "at home" as much as possible during their stay. Some of the planned events included:

- Welcome reception at the home of Aileen and Hugh Roberts
- Trip to J. Paul Getty Museum and tour of Hollywood
- Sunday picnic at Rustic Canyon Park, Santa Monica
- Dinner at Joan Sealy's (MFM/FFH Board of Trustee Member)
- Tour of San Francisco
- Trip to Disneyland
- Reception and graduation dinner at the Marriott Hotel, Marina del Rey, at which all participants received a diploma in recognition of their having successfully completed the course (Appendices 2 and 3).

The highlight of the Social Calendar was the International Night which the participants sponsored for the MFM/FFH staff. The group, in their native dress, prepared and served an international dinner which they followed with a program of songs and dancing, and a game of charades. The successful evening was a memorable experience that gave us a better appreciation of cultural diversity and the value of international understanding.

6. Schedule of Classes

The course ran for five weeks from Monday, October 8th to Friday, November 9th. A detailed listing of topics, time allocations and instructors follows.

<u>Date/Time</u>	<u>Topic</u>	<u>Instructor</u>	
October 8	9:30-12:00	Welcome, Orientation: Staff, Library, and Building Area. Get acquainted exercises.	Staff
	12:00-1:00	Lunch with MFM staff	Staff
	1:00-4:00	Independent time for preparation of presentations	Participants
October 9	9:00-10:30	"Triggers" — Slide Presentation & Discussion	Staff/ Participants
	10:45-12:00	Expectations/Course Review	Participants/ Staff
	1:00-3:00	Expectations/Course Review	Participants/ Staff
	3:15-5:00	Participants' Problem Presentations	Participants
October 10	9:00-12:00	Participants' Presentations	Participants
	1:00-2:00	Independent Problem Solving: Definition of Problem Area; Organization of Interest Groups	Staff/ Participants
	2:15-5:00	Resource Center	P. Butzer
October 11	9:00-5:00	Concepts of Community Development; Assessment of Community Needs	P. Widner
October 12	9:00-5:00	Field Trip - J. Paul Getty Museum; Hollywood Tour	Participants
October 15	9:00-10:00	Nutritional Requirements of Small Children/Weaning Foods.	K. Shack
	10:15-12:00	Food Composition and Nutritional Quality of Foods	K. Shack/ W. Bray

Date/Time	Topic	Instructor
October 15	1:00-5:00 .. Independent Problem Solving	Staff
October 16	9:00-12:00 Nutritional Composition of Foods, Food Fortification/ Design of Multimix Formulas	W. Bray/ K. Shack
	1:00-4:00 Design of Multimix Formulas	W. Bray/ K. Shack
	4:00-4:45 Tea with MFM staff	Staff
October 17	9:00-11:00 Breastfeeding and Infant Formulas	K. Shack
	11:00-12:00 Supplemental Feeding	C. Formacion
	1:00-4:30 Leaf Protein	W. Bray
October 18	9:00-4:30 Appropriate Food Technology: Texturizer, Grinding Machine, Puffing Gun	J. Anderson
October 19	9:00-5:00 Kitchen Level Methods of Soy Processing	H. Roberts/ J. Anderson
October 20/21	Field Trip to San Francisco: Ecology Action, Palo Alto; Food Research Institute, Stanford University	
October 22	9:00-5:00 Extrusion Cooking	H. Sterner
October 23	9:00-5:00 Ball Canning	J. Jackson
October 24	9:00-5:00 Ball Canning	J. Jackson
October 25	9:00-5:00 Fermented Foods; Basic Food Chemistry; Food Processing	M. Schlosser
October 26	9:00-4:30 Food Preservation Techniques	M. Schlosser
October 29	10:00-2:00 U.C.L.A. Visit - Breastfeeding; Food Taboos; Nutritional Assessment	D.B. Jelliffe/ E.F.P. Jelliffe/ C. Neumann/ F. Zerfas
October 30	9:00-5:00 Independent Problem Solving	Staff
October 31	9:00-12:00 Solar Oven/Solar Dryer	H. Lippman/ T. Brown

<u>Date/Time</u>	<u>Topic</u>	<u>Instructor</u>	
October 31	12:00-1:00	Lunch with MFM staff	Staff
	1:00-5:00	Solar Oven/Solar Dryer	H. Lippman/ T. Brown
November 1	9:00-10:00	Solar Oven/Solar Dryer	H. Lippman/ T. Brown
	10:00-12:30	Nutrition Education/Behavior Change	Participants
	1:30-5:00	Independent Problem Solving	Staff
November 2	9:00-4:30	Nutrition Education Techniques: Mass Media, How to Develop Learning Materials	K. Shack/ J. Burke/ C. Formacion
November 5	9:30-12:00	Planning, Budgeting and Accounting	E. Helm
	1:00-5:00	Independent Problem Solving	Staff
November 6	9:00-12:00	Planning, Budgeting and Accounting	E. Helm
	1:00-3:00	Independent Problem Solving	Staff
	3:00-5:00	Course Evaluation by Participants	
November 7	9:00-12:00	Planning, Budgeting and Accounting	E. Helm
	1:00-3:00	Resources for Financial and Technical Help	E. Helm
	3:00-5:00	Independent Problem Solving	Staff
November 8	9:00-5:00	Presentation of Problem Solving Work	Staff/ Participants
	7:00-10:00	Graduation Dinner	
November 9	9:00-12:00	Review and Evaluation of Course/Follow-up Suggestions	Staff/ Participants

V. EVALUATION

1. Method

The evaluation of the training course is conducted on two levels; by participants themselves at the completion of the course, and by the MFM/FFH staff after the participants return home. A small planning committee was organized by the participants, and their questionnaire was administered to the group at the end of the course. Participants worked in three groups to discuss the questionnaire, and prepared a report from their discussions. (Appendix 4)

The final day of the course was set aside for evaluation. Discussions focussed on:

- To what extent their expectations had been met
- The new skills that they learned
- How what was learned was applied towards the solution of their individual problems
- Recreation activities
- Suggestions for future courses

2. Participant's Course Expectations

Naturally, each participant came with individual learning objectives for the course. During the first two days they shared these expectations with each other and with the staff, and identified the specific skills they hoped to acquire over the five week period. The major learning objectives fall into three categories:

- Weaning food preparation, including shelf life and quality control analysis
- Food preservation techniques

- Nutrition education information and techniques, with a focus on how to educate the most vulnerable groups

Of the group, eight expressed a desire to work on problems related to nutrition education: overdependency on imported and donated foods, poor sanitation habits, how to promote breastfeeding, lack of effective materials, evaluation of nutrition education programs. Seven group members concentrated on developing easily prepared and inexpensive weaning food mixtures. All wanted to learn food preservation methods to conserve and process foods that are abundant seasonally.

Some additional individual course expectations were to acquire knowledge of: community gardens, goat raising and use of goat's milk, resources for financial help, and nutritional requirements of the fetus.

3. What Did Participants Do?

"Foods for Small Children" provides a general overview of the basic principles of nutrition and food technology. Given the nature of the course and the range of participant's professional, cultural, and educational backgrounds, not all course material is equally relevant to each participant. The course does, however, try to meet individual learning needs, and capitalize on the contribution that each person can make to the training. This is accomplished through the curriculum, contact with MFM/FFH staff members, participant interaction, and outside contacts.

Participants worked collectively and independently to fulfill their objectives, and take advantage of the learning opportunities provided. At the final session several commented on the unexpected benefits they derived from the course, and from one another, including: improved

teaching techniques for nutrition education, how to construct a solar oven, how to develop an experimental design, improved methods of food preservation, and ideas for new projects.

More specifically, the following accomplishments indicate the extent to which each individual achieved her specific learning objectives.

Accomplishments

- 1) Natividad Casillano, Philippines:
 - Developed a methodology to evaluate the nutrition education component of a Maternal and Child Health Program.
 - Designed a set of simple and effective nutrition education teaching materials to be used in the above nutrition program.
 - Designed a pilot plan to experiment on the use of goat's milk to feed the pre-school age child.
- 2) Rina Kumari Dutt and Elenoa Misikini, Fiji Islands:
 - Developed a series of nutrition education lessons to promote breastfeeding.
 - Formulated a plan to develop an income generating project in handicrafts with urban and rural women's clubs.
- 3) Candelaria Formación, Philippines:
 - Drafted plans for a nutrition education campaign to feed the sick child and promote better feeding practices. The project is designed to improve the quality of life of the young child and reduce the incidence of child malnutrition. The methodology outlined includes:
 - a) mass media campaign -- radio programs;
 - b) development of nutrition education handouts to be distributed to mothers and community workers;
 - c) training of community workers to give demonstrations on how to prepare and use multimix formulas, on sanitary food preparation, and on diarrhea management; and,
 - d) evaluation.

- 4) Alicia Harrison, Belize:
 - Formulated an outline for a maternal and child health pilot project to:
 - a) improve the diet of target population;
 - b) encourage breastfeeding;
 - c) promote the use of weaning foods; and,
 - d) encourage cultivation of community gardens.
- 5) Juanita James, Antigua:
 - Formulated a weaning food sample of cornmeal and ground black-eyed peas. At home, the participant will work to refine the taste, appearance and acceptability of the food.
- 6) Subaida Moosa, India:
 - Formulated a plan to develop a solar oven project for the MCH Centres.
- 7) Dorothy Muntamba, Zambia:
 - Developed a weaning food mixture based on sorghum, cassava, beans, and groundnuts. The participant works at the National Food and Nutrition Commission where she will pre-test and refine the mixture.
- 8) Vijayalakshmi Purushothaman, India:
 - Researched methods and materials to assess the growth of the fetus and nutritional status of the mother during pregnancy.
- 9) Premanie Samarasinghe, Sri Lanka:
 - Worked on a project to teach mothers to prepare and use locally available food resources to make supplementary food for the 6-24 month age child. Participant developed nutrition education teaching materials for the project, which she will pre-test at home.
- 10) Margaret Thuo, Kenya:
 - Produced a weaning food from dried pigeon peas, groundnuts, and millet flour which can be produced to supplement the diet of the 0-5 population.
 - Researched models of community garden projects.
 - Discovered she could use a hammer.

- 11) Siti Rokiah Udin, Malaysia:
 - Developed a nutrition education course with accompanying materials to promote breastfeeding. Materials included: posters, flip charts, handouts, which will be field tested with mothers in the pre-school education centers in the Community Development Division.
 - Developed a soy and sweet potato weaning food mixture.
- 12) Eutik Atikah Utju, Indonesia:
 - Designed a nutrition education project using primary school children to do nutritional assessment, using mid-arm circumference, of young village children.
- 13) Elizabeth Williams, Sierra Leone:
 - Produced a weaning food mixture from black-eyed peas, groundnuts, and rice to be used as a dietary supplement for the weaning age child.
- 14) Sabariah Zainuddin, Malaysia:
 - Developed and tested a set of soya based multi-meal recipes for supplementary foods to be prepared at pre-school education centers.
- 15) Entire Group:
 - Constructed a solar oven and solar dryer.
 - Acquired knowledge and techniques on the modes of food preservation and processing at the home and community levels.

4. Suggestions for Future Courses

Based on their training experience, participants recommended the following for future courses:

- A) Faculty
 - Have all MFM/FFH staff members be available throughout the five week training period.
- B) Format
 - Provide more time for individual problem solving.

- Up-grade laboratory facilities.
- Expand working space in kitchen, laboratory, and library.
- Present small scale business principles and resources for financial help earlier in the course.
- Send course schedule to participants in advance.

C) Content

- Devote more course time to preparation of low-cost multi-mixes.
- Offer a separate course on appropriate technology and food preservation.
- Conduct a training course in a developing country where the environment and facilities are more related to participants' background.
- Include field visits to child care centers and pre-schools that have a feeding program.
- Increase emphasis on practical experience vs theoretical techniques.
- Cover fewer topics in greater depth.

VI. FOLLOW-UP ACTIVITIES

1. Evaluation by MFM/FFH

The participants' course evaluation measured the extent to which they fulfilled their personal learning objectives. However, the long term effectiveness of the course must also be monitored to assess how, and in what areas, the graduates utilize the training.

MFM/FFH will administer a second questionnaire to determine how the training benefits each individual, and to identify the constraints preventing their use of the training. This information will be used to plan and provide the follow-up assistance that individual graduates will need, and to plan for future training courses.

2. Newsletters

A second follow-up activity to the course is an Alumni Newsletter compiled by MFM/FFH. This publication contains information, messages, and materials submitted by the participants, and also includes news of the Foundation. Through this, participants maintain contact with one another and with the MFM/FFH staff.

3. Ongoing Support

At the end of the course, participants reported on the progress and results of their independent problem solving work. Several requested follow-up assistance for activities and projects on which they worked during the course. MFM/FFH can and will provide the technical, material, and educational assistance, as needed, to help participants accomplish their identified objectives.

Responses will be through correspondence, providing information and suggestions as requested, and by personal visits when necessary. MFM/FRH's Africa Program Director will visit several alumni in the first part of 1980 to discuss follow-up program activities within their countries. More specifically, follow-up activities may include:

- Technical assistance to develop food preservation projects using solar equipment.
- Technical assistance in the development of weaning food projects.
- Educational and technical assistance to organize and conduct nutrition education training workshops.
- Assistance in identification of funding sources for project development.

TOP VIEW

HANDLE

SHIM

POINTEF

TORQUE ARM

STOP

TORQUE READOUT

BOLT

SUPPORT

SLEEVE

LID

CUP

BASE PLATE

COIL

BEARING

CAM

SHAFT

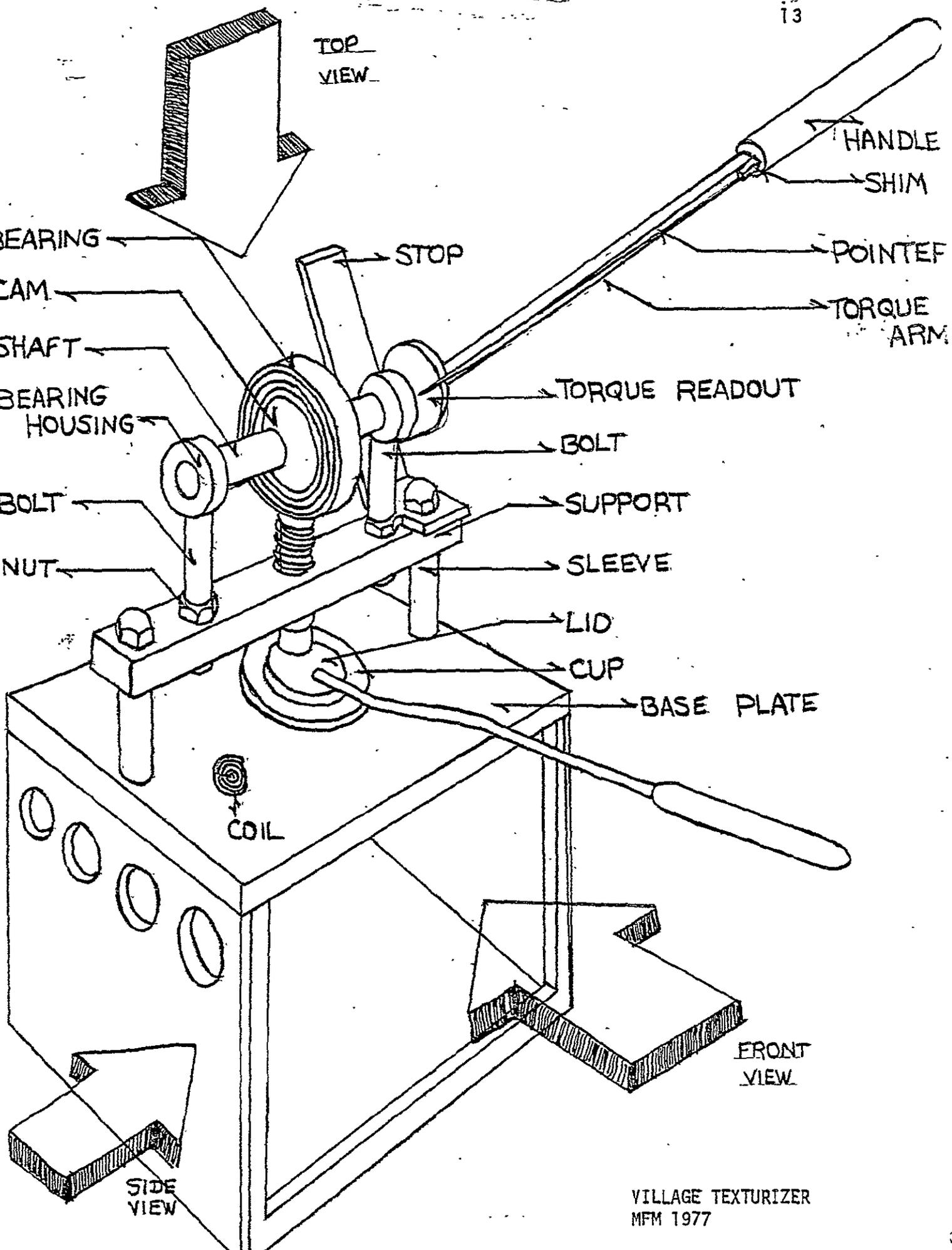
BEARING HOUSING

BOLT

NUT

SIDE VIEW

FRONT VIEW



APPENDIX A

Nutrition Education Workshop Participants
September 1979

Aurea Albisu Merida
S.E.R.N. Casa Bonita
Santiago Atitlán
Depto. de Solola
Guatemala, C.A.

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Santa Sofía
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La Ceiba, Honduras, C.A.

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Leticia Armienta Galaviz
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Isabel Muchavisoi
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TRIP REPORT -- Antigua

Antigua is a small and underdeveloped Caribbean island, lush and green, but with little visible farming activity. Its major "industry" is tourism. Once it grew a lot of sugar cane, but some 8-10 years ago, the government decided it was not economically viable, and ordered all cane growing halted. However, it has taken no steps to replace the sugar cane with anything else, and agriculture is now of low prestige.

Monday a.m., 7/14: We visited a community garden project in Blubber Valley with Ruth Spencer, former MFM/FFH participant: an interesting community garden project with tremendous potential for income generation and multiplier effect on community planning and leadership development. On government-donated land, 23 families selected on criteria of socio-economic status, need and interest, grow vegetables for their own consumption and sale to local hotels and restaurants. Crops include okra, cabbage, cauliflower, tomatoes, eggplant and green peppers. Since climatic conditions in Antigua, plus irrigation, permit four crops per year, the project provides year-round food supply and income, whereas in other parts of the island, because of lack of irrigation, only two annual crops are harvested. The families pay dues of \$100 per crop for the first two crops, which provides the rotating fund for insecticides, sprayers, and the small staff which prepares the fields for planting, does the spraying, etc. After the first two harvests, the dues increase to \$200 per crop. However, according to Ruth, several families earned two and three thousand dollars a piece in food sales on the first two crops, and there is a waiting list for participation.

However, at the present time the project is besieged with difficulties as the rotating fund is insufficient to cover all expenses and the Caribbeana Council (sponsors of the

project), are several months behind in their payments; both the project manager and the permanent staff have not been paid since March and naturally they are threatening to leave. Although the government is willing to donate more land and there is a convenient water source, cost of irrigation piping is extremely high, and without funding to cover such basics, the project cannot exist, much less expand. No food processing has yet been instituted, also because of lack of capital; the foods are highly seasonal and the abundance of one harvest could profitably be processed for year-round use. Although high-tension electric power lines pass along a road only several hundred meters from the site, the cost of posts, wires, labor and power-reduction equipment is also prohibitive. Nevertheless, from conversations with the project supervisor and the local rural extension agent who devotes considerable time to the project, it seems there may be other international organizations willing to provide the needed support. The missing ingredient appears to be a catalytic agent to help structure and organize the group, and develop and write up proposals to such international agencies. We suggested the possibility of requesting a Peace Corps volunteer, of which there are many on the island, but Ruth said "it takes 18 months to get one" and therefore dismissed the idea.

Next we visited a sweet potato flour project. At the Boys' Training School at Seaton, we discussed with Mr. Prince, a shop teacher and community leader, and Melvin Gore, Ministry of Education Regional Development Coordinator, their plans for a project for using a solar dryer on sliced sweet potatoes to be ground into a flour. Arrangements are being made for sale of the flour to National Bakery. The project is still in the planning phase, as the sweet potato crop is not quite ready for harvesting. The solar dryer is about half built, and the grinder for processing is on hand, though

powering it by means of bicycle pedal gears is still being studied by the group.

This project had been started in 1977-78; market testing was favorable, but due to production problems, it was dropped. The MFM/FFH technical consultant in the Caribbean, Dr. Patterson felt that it might still be viable and contacted various key people to see if it could be put together for testing its economic, technical and nutritional feasibility. Reactions were positive: there seemed to be sufficient sweet potatoes available for beginning a small production operation. If a guaranteed price were offered to farmers, a consistent supply appears to be available. The bakery is interested and would purchase 200 pounds per week for use in its bakery products. In case of a shortage of sweet potatoes, pumpkin flour and possibly others could be used. A successful project could supply more nutritious baked products, some aimed specifically at young children. The community group, which has a successful record of community collaboration, appears to be enthusiastic.

Later in the afternoon we visited a project for soap-making in Green Bay, a small fishing town near St. John. This is a very depressed area with little space for agriculture. The Coordination Council of Women in Antigua (CCWA) helps support a pre-school center which cares for 50-60 children from the area between 2 and 5 years of age. The children get no regular feeding during school hours, between 8:30 a.m. and 2:30 p.m., although a few bring a little snack from home. The government provides one teacher but little else. Two additional teachers and other costs are paid by sponsors, parents and CCWA with funds raised through occasional social events, but a longer-term and more dependable source of funding was being sought. Dr. Patterson suggested soap-making since soap is imported and quite expensive and the raw materials (fats or oil and caustic soda) are locally available. The money

raised could provide funds for the pre-school hot lunch program the women want to start, full-time employment for at least two women of the Green Bay area, as well as a needed commodity on the local market.

After a relatively slow start, the project is now well under way. Though the soap is not aesthetically attractive, it lathers well and already has a good sale in the local market place. Production is now on a 2-3 day per week basis and about 1000 bars per week are being sold. The representative of the local Kentucky Fried Chicken operation donates used cooking oil, on a start-up basis, and the women also obtain oil (coconut?) from a local sweet-oil factory which is very supportive of the project. Plans are to start the pre-school hot lunch program in September, when school reopens after the summer vacation, and by that time the ladies hope to have cooking equipment and food available. They currently are seeking a larger space for the manufacture and especially the drying and storage of the soap, and are checking out possibilities. Several hundred dollars from the soap-making operation have already been put into a local bank account, even though the soap-making is only on a part-time basis, and the community women we met seemed extremely enthusiastic about their achievements to date.

We also visited former MFM participant Juanita James, a home economics and food/nutrition teacher at Otto's School in St. Johns, to see what she had been doing and to obtain feedback re the training she had had at the FNI in Santa Monica. Her sentiments were eminently positive, except as regards the Ball Canning lectures which she did not find useful. She definitely was utilizing some of the food technology she had learned: two of her colleagues had built a large solar cooker to her specifications and she was in the process of testing it for baking custard which her class had made. She informed us that there is a good job market (in the tourist hotels and

restaurants) for the students who have had some food and nutrition background training. This year, for the first time, a few boys have also enrolled in the course, which she hopes represents a trend because of the employment potential.

In addition to the foregoing, other activities in Antigua already terminated or being planned included: a 3-day workshop (June 30-July 2) for members of the Coordinating Council of Women of Antigua (between 20-25 women) which ran for two hours each evening. Participants represented different groups that belong to the Coordinating Council. The workshop objectives were:

- a) To provide skills in needs assessment, program planning and evaluation
- b) To provide opportunities for participants to practice these skills; and
- c) To help the group develop their projects and to solve problems related to (AND other than) food and nutrition.

Another workshop in Antigua is being planned for September 29-October 10 of this year, on "Small Scale Food Technologies for Nutritional Improvement" for 15 Antiguan participants (and perhaps a few others) who work directly with communities that are in need of food and nutrition assistance. They will represent government, private and international organizations and will include: community health aides, community development officers, and others interested in food processing and preservation. Those selected will be in a training capacity and in a position to apply the skills and knowledge acquired to plan and develop self-help projects in their communities.

BARBADOS. Spent a day and a half with Dr. Patterson, Caribbean Regional Food Technology Representative, discussing the various projects he has assisted (including the foregoing in Antigua), and his relationship with WAND (Women and Development unit of the Extra-Mural Department of the University of the West Indies, Barbados). We visited his office and met a few WAND staff

members.

Other Comments: Dr. Patterson is preparing for return to MFM headquarters in Santa Monica at the end of 1980 and is making every effort to locate a qualified native of the Caribbean area as his replacement. He is justly concerned about achieving a smooth transition in the collaborative agreement with WAND and maintaining adequate back-up to insure that the program continues to fulfill its other objectives and expands as necessary. His transfer to Santa Monica is based on the fact that his services can provide greater input to the training being offered by MFM/FFH if made available on a world-wide basis, instead of being limited to the Caribbean; he can also be utilized in the Institute's training courses. However, it is clearly understood that he will continue to render a very high level of support to the Caribbean area, especially in the first year of his replacement's efforts.

TRIP REPORT -- Ecuador

After almost 24 hours of continuous late departures and subsequent missed connections on flights between Barbados, Port of Spain, Caracas, Bogotá and Guayaquil, we arrived after midnight and were met by the MFM/FFH project director for Ecuador, Lautaro Andrade. He urged us to drive with him on to the Santa Elena peninsula project site (another one-and-a-half to two hours) instead of overnighing in Guayaquil, in order to get a better start on the next day. Naturally we acceded, but really arrived at our destination in the town of La Libertad more dead than alive, having started our travel day at 4:30 a.m.!

The Santa Elena peninsula, some 130 kilometers from Guayaquil, is a paradox. Extremely arid with relatively little green vegetation (at this time of year and especially now after two years of drought), it is at the same time poverty-stricken just a short distance inland and a tourist area at the sea-side for the wealthy of Guayaquil who come out for their summer season (January and February) and buy luxury condominium apartments in Salinas or build elegant homes along the beaches. The dust, dirt and grayness of the thatch or cinder-block houses; the absolute lack of color of flowers, trees and streets in the villages, is overwhelming and depressing. Dozens of really mangy dogs warm their bones in the dust during this gray misty ("garua") season when the dampness is penetrating and chilling; pigs roam the streets and wander in and out of the houses. The gray homes have traditionally been of woven bamboo sides and thatched roofs, but this type of construction is gradually ceding to gray cinderblock houses with corrugated tin roofs. The people are almost all of Indian origin.

We met with Lautaro at 11 a.m. at the MFM/FFH office in the neighboring town of Santa Elena for a lengthy briefing on the area itself and on MFM/FFH activities. We first requested

an explanation of the organizational structure and political divisions of the country, which are somewhat complicated:

The country (Ecuador) is divided into:
provinces (in this case el GUAYAS); these are
 divided into:
cantons (counties or municipalities) such as Sta.
 Elena. These are then broken down into:
parishes (such as Manglaralto), which are sub-
 divided into:
"recintos" (or smaller communities called "comunas")
 such as Dos Mangas.

Approximately 60% of the country is agricultural, and there is very little in the way of infrastructure or services. There is perhaps 18% rural unemployment and most of the basic foods are imported, especially rice, wheat and oils. Economic problems are many, inflation is high, but at least the country is producing most of its own petroleum products and is rapidly working toward being able to enter the export market (gasoline is about 20¢ per gallon, which keeps transportation costs lower than they might otherwise be).

Meals for Millions began working in Santa Elena in 1971. Its initial efforts were in the donation of MFP, soya cereal mix, and in motivating and providing technical assistance to farmers to plant soya. Simultaneously in Guayaquil studies were undertaken to assess the feasibility of manufacturing foods based on soya. A field office was opened in 1973, and later farm machinery was imported to teach the farmers how to prepare the soil for planting and other agricultural practices. The imported tractor and cultivator were rented to the farmers at a low price, to cover the costs of the tractor operator, fuel, and maintenance; and at the same time they learned how to manage the equipment. Subsequently the system was changed: instead of paying MFM for the use of the equipment, the campesinos were helped to form their own community organizations and administer the tractor services themselves. This had worked out well, and in a few areas the community organizations have been able to buy (or are preparing to) their own tractor. They have learned

that it is for all to use, and this promotes more community spirit. This has led to the formation of a farmers association (AGRUPENSE -- Agricultores Unidos de la Península de Santa Elena) which already has a board of directors, a bank account, and is awaiting approval of the Ministry of Agriculture for legal status which will permit them to receive financial assistance.

The Ecuador project is working closely with other organizations, both public and private, in an integrated development effort. They have formed an Inter-institutional Coordinating Committee and are currently laying the groundwork for an Applied Nutrition Program (ANP). Pilot programs in six towns of two parishes (Colonche and Manglaralto) have been selected. Baseline data has been gathered by the local teachers on socio-economic, health, nutritional and educational status in the communities. MFM/FFH in Ecuador is in the process of hiring a nutritionist to work full-time on the ANP and from what we have seen, there is a great deal for her to do. The data collected was sent to the Polytechnical School in Guayaquil for tabulation on its computer. The inter-institutional collaboration, which started at the field worker level, has been so successful that the ministries in Quito, the capital, have noted the good results and have spontaneously offered more collaboration to MFM/FFH (see letter, attachment 10).

The difficulties of undertaking an ANP are great; data is more approximate than precise, the problem of infant/child malnutrition is quantified on the basis of the number of children who utilize the health sub-centers, which is relatively limited. Therefore the program may best be initiated in certain sub-areas of the six towns selected and subsequently be expanded to the rest of the community. The same bases for selection will be applied: population concentration, accessibility; natural resources; community organization; receptivity of beneficiaries; basic services; and the relative importance

of the nutritional problem. The nutritionist is to start work on a two-month trial basis on Monday next and will help develop in greater detail the plans for the ANP.

The principal objective of the program is to raise the nutritional level of farm families of the area as well as improve their health and well-being. This includes the short-term objective of improving efficiency in the utilization of the services and technical resources of the various institutions functioning in the area. In general terms, the activities of the ANP include:

- Organization of the Inter-institutional Coordinating Committee
- Establishment of the pilot communities to initiate the program
- Socio-economic survey of the pilot communities
- Nutritional status survey of children aged 0-5 in these communities

Since these steps have all been completed, and the data distributed to the various collaborating institutions, the group will now proceed to more detailed planning and start implementing the various projects developed. The MFM/FFH nutritionist will decidedly have an important rôle to fulfill as she is the only nutrition course graduate in the peninsula area.

For a list of the various institutions of the Inter-institutional Coordinating Committee, see attachment 11.

After this briefing, we set out to visit two parishes of the peninsula: Colonche and Manglaralto. The canton of Santa Elena, to which they belong, is one of twelve cantons of the province of El Guayas, which is 3,632 kilometers square and has an estimated population of 70,048.

COLONCHE has 16,140 inhabitants (in the 1974 census) in its county seat and 31 "recintos." Flat and arid, it has a limited amount of infrastructure: a sub-center of health (Ministry of Health), with a rural doctor 5 days per week and an auxiliary nurse. The health inspector for the entire area is also based here. The Ministry of Agriculture maintains some staff

in the area. The preliminary data collection showed 4,789 children between 0 and 5 years; 4,260 of school age; and 4,186 attending school. Each of the 31 "recintos" has a primary school, and there were three secondary schools in the region. An interesting basic sanitation (or LACK OF!) statistic is that of the total of 398 latrines in the region (for approximately 3,430 families, based on a population of 16,000 and an estimated average family size of 5), there are 270 latrines in Palmar, the largest village; 40 in Colonche township; 15 each in two other towns; 10 each in 4 towns; and 18 towns had NONE!

We visited Palmar, a fishing village that stank from the sardine processing, and Loma Alta, where the Ministry of Agriculture has a nursery for propagating seedlings appropriate for arid lands which are then sold or distributed gratis to local farmers. The MFM/FFH tractor was working in Loma Alta, plowing land for one of the farmers, and another farmer came to our truck to request its use the following week. Don Ricardo Rodriguez, at the Huerto Florestal (nursery), was most enthusiastic about the results of the utilization of the tractor in the area.

MANGLARALTO: According to the 1974 census, this parish of 17 "recintos" plus county seat had 13,668 inhabitants. Further inland it is the northern portion of the Santa Elena Peninsula, but closer to the mountainous areas. The Ministry of Health has a hospital providing all services, a total of 5 rural doctors, a professional nurse, and 4 auxiliary nurses. The region of Valdivia has a sub-center in the town of the same name. The Ministry of Agriculture has started a PIDA (Programa Integral de Desarrollo Agro-Pecuario -- Integrated Program of Agricultural and Stock-raising Development) for Manglaralto with an office in Valdivia and provides agricultural technology to the north of the peninsula from this office. In the town of Manglaralto the infant population is

1,722; school-age children number 3,682, of which 2,859 are in school. There are 302 latrines in the area, with 100 in Valdivia and the other 202 distributed more evenly than in Colonche, and only four towns have none at all.

In the Manglaralto parish we saw Barcelona, Sinchal, Valdivia, San Pedro, San Paulo, and Libertador Simon Bolívar. The principal occupation in this area is mining "gesso" for plaster of Paris; processing the straw that is later made into "Panama" hats (which are all made in Ecuador). We visited with several women in the tiny town of San Vicente de Loja (18 families), heard their pleas for help in rebuilding the school (and were shown the huge cracks in the wall, a real danger for the children studying inside). They also begged for lessons in sewing and in nutrition. Several of these women -- who were all very friendly and a lively group -- had received MPF some 5-6 years ago when their children were small, and wished they were receiving it now. The local padre, a Swiss, helps the women by financing the building materials for new cinder-block homes with corrugated metal roofs, which they know are more permanent and more sanitary than the woven straw-sided and thatched roofed houses they had before. Due to the drought they were unable to continue to plant vegetables, and several were going to other towns to wash clothes, in order to buy food for their families (and repay their debts to the padre). The padre also arranged for the donation of clothing by a Swiss charitable organization and the women were very grateful. The lack of water for agricultural pursuits was severe though there was a well which provided enough for household use and washing clothes. The women's major needs, as they stated them, were the repair of the school and learning more about sewing (so they could earn money by sewing for others) and also about the nutrition of their families. Apparently a Peace Corps volunteer had given them some lessons before she was transferred out and

they were anxious to continue. Their major problem of the moment was the "mechas" (burners) to run the pump which raised the water from the well to a water deposit at the level of their homes and which would permit them to replant the community vegetable gardens at the higher level. This appears to be a financial problem rather than availability shortage. It would seem that the women need some income-generating project to enable them to carry on their vegetable-growing activities. The idea of soap-making, as we had observed it in the Caribbean, was later supported by Lautaro's confirmation that soap is very high-priced.

In the evening we attended the "comuna" (town) meeting in Dos Mangas. Some 50 to 60 townspeople, including perhaps 25 women, attended the lengthy meeting, where the representative of the Seguro Social del Campesino (Social Security for Farmers) was gathering data to legalize the small medical dispensary which would be inaugurated on August 16th. The town had donated the upper floor of its meeting hall for the dispensary operations and the governmental officials had come to check out its suitability. If the center operates satisfactorily during one year, the Social Security will then consider building a more permanent site.

Lautaro showed two educational films, on proper handling of water supply and on avoiding illnesses carried by flies, mosquitoes and body lice, which the people seemed to enjoy. The rest of the evening, till almost 11 p.m., was devoted to the program for the visit of the Minister of Agriculture to the Santa Elena peninsula.

The big event of the Santa Elena peninsula on Sunday was the visit of the Minister of Agriculture, the first time a Minister of Agriculture had ever visited the area. In a concentration of community representatives, which lasted well over an hour, the 46 "comunas" presented their major problems to the Minister; after that there was a smaller work session

in which the presidents of the various "comunas" met with the Minister to discuss these problems and suggested solutions. This was followed by a reception by the farm groups to the Minister, and included lunch at a tourist hotel.

We attended only the open meeting with the Minister, but met with Lautaro afterwards and learned that all had gone well and the farmers groups were quite satisfied and optimistic about the help they might receive. From an extremely superficial analysis of the proceedings, it would seem that a major concern, in this time of drought, is for technical assistance and equipment for digging wells to provide the water needed for farming.

On Monday morning we returned to the MFM office for final discussion with Lautaro, who clarified some points on which there were still doubts, i.e. exactly what the ANP would include. The three major thrusts, according to Lautaro, are:

- 1) Formalizing the relationships with other government organizations which have a firm working basis. This will ensure that they follow through with their promised inputs in a legal manner, i.e. the "dispensarios," etc.
- 2) Reinforcing and strengthening farmer and/or housewives groups where they exist, or creating new ones where they do not, so that the beneficiaries may express their own priorities and participate in the planning of the ANP activities in their areas. Lautaro further explained his feeling (AND MINE!!) that if their priorities are a playground for the children (as is the case in Dos Mangas), this also contributes to the physical and social development of the children aided in the ANP; if the women's priority is to learn dress-making (as is the case in San Vicente) this can be an income-generation project and should also be included, even if not directly contributing to improved nutritional status. In other words, the ANP should be a real multi-sectoral effort and flexible enough to reach a compromise between the priorities of the beneficiaries and improved health/well-being/nutritional status of the community. In this particular area the activities include community education through film, talks,

pamphlets, etc. as well as the endeavors of the nutritionist in nutrition education.

- 3) Increasing food production, but channeled directly into improved utilization in the family, i.e. restart soya production, not for commercialization but for making soya milk for the children, since there is an acute shortage of cow's milk (although there appear to be many goats, apparently the use of goat's milk is not common).

Also, through the work with the women's groups (item 2 above), increased planting of family gardens could provide more fruits and vegetables for child feeding, and in conjunction with the nutrition education to be provided by the nutritionist, could certainly lead to improved nutritional status. Carolina, the new nutritionist, is well-qualified, understands the integrated approach and the importance of assessment and education. She lacks field experience, but makes up for this in her strong desire to help the campesinos (as she too was raised in a rural area).

In response to my request for quantified results of the ANP and agricultural programs to date, Lautaro provided a chart showing the tractor services for January - October 1979, as follows:

San Vicente de Loja	12 hectares	6 farmers
Aguadita	15 "	6 "
Dos Mangas	10 "	7 "
Colonche	12 "	6 "
Azucar	41 "	19 "
Loma Alta	9 "	3 "
Salanguilla	3 "	2 "
Guangala	4 "	2 "
Clementina	2 "	1 "
Sinchal	4 "	1 "
	<u>112 "</u>	<u>53 "</u>

However, he had no figures for comparison on how much land the farmers were planting prior to 1979. He estimated it to be about 65 hectares total. Since the farmers paid all costs related to use of the tractor, the only outlay from MFM/FFH (after initial cost of the tractor) were 300 sucres

(or U.S. \$12.00) for spare parts.

In further discussion of the visit Sunday of the Minister of Agriculture, Lautaro was jubilant. After the general "concentration" and the work groups and the reception, a small group (in which Lautaro had participated) had continued the discussions with the Minister and then with his staff until the wee hours. Their principal requests were for assistance in:

- 1) Legalization of title to the lands, so that first the "comunas" could have legal title and then the individual farmers could eventually own their farms. This problem dates from the colonization period, when Indians were not allowed to own land. Since this is primarily a local problem (in the peninsula of Santa Elena) and not nation-wide, the Minister has promised -- and is fulfilling this promise-- to move ahead on the matter. In fact, he brought several staff lawyers with him to further the work.
- 2) Infrastructure improvement -- Roads, water, electricity, etc. Since these sectors are not the exclusive domain of the Ministry of Agriculture, the Minister promised to try to obtain collaboration of the pertinent government sectors, but the group is far less optimistic about results. Their top priority at the moment, because of the drought, is for well-digging machinery, with a little technical assistance in perforation, as they already have some basic know-how.
- 3) Medical and social welfare services -- Again, not directly in the province of the Ministry of Agriculture, but the Minister promised to take it up with appropriate entities. (Note: The new dispensary services in Dos Mangas, under the ANP, may point the way to a future solution in other towns.)
- 4) Control of lumbering operations -- Wood-cutting has increased greatly during the drought since farmers cannot farm normally and turn to wood-cutting for employment, as Ecuadorean hardwoods have a good market. The indiscriminate chopping down of the trees further contributes to drought conditions and so a vicious circle is established. Assistance with water supply and control of wood-cutting would both help resolve the problems of drought.

Shortly after noon (but NOT after lunch -- for the third day in a row Lautaro "forgot" we had to eat!) we drove the 130 kilometers back to Guayaquil, accompanied by the nutritionist Carolina and two of the Rios brothers from San Vicente (the latter going into town to buy a fumigator to be attached to their tractor, and desiring Lautaro's advice on this major purchase). After they left us at Braniff, Kathryn and I (after LUNCH at 4 p m.) took a taxi to visit some of the slum areas of Guayaquil, in and around Guaso, as I wanted to compare the rural poverty we had seen with that of a major city. Much to our surprise, although the houses were mostly mud and wattle, the streets were dirt and pot-holed, and there was neither running water nor plumbing, still the people were clean and relatively well-dressed (like the farmers in Santa Elena). The taxi driver assured us that almost every home had a refrigerator and a hi-fi, and that there were enough jobs for all who really wanted to work.

LIFE INCOME GIFT BENEFITS

\$10,000 One Life Gift Annuity - payments beginning in year Annuity is purchased:

Age	Annuity Rate	Annual Payments	Tax Free Portion each year	
			Men	Women
85	11.2%	\$1,120	\$819	\$792
80	9.2	920	689	657
75	7.9	790	591	551
70	7.1%	\$ 710	\$514	\$471
65	6.6	660	451	410
60	6.2	620	394	357

Rates adopted by Conference on Gift Annuities
May 8, 1980.

\$10,000 One Life Annuity charitable tax deduction:

Age	Men	Women
85	\$5,494	\$4,216
80	4,971	3,821
75	4,443	3,442
70	\$3,885	\$3,031
65	3,331	2,615
60	2,905	2,318

EXAMPLES

Gift Annuity (One Life)

Mrs. Miller, age 75, buys a \$10,000 Gift Annuity with stock that has been bringing her \$500 per year in taxable dividends. She will receive in annuity payments \$790 of which \$551 is tax free every year. Mrs. Miller also receives a charitable tax deduction of \$3,442 in the year she signs the annuity agreement.

Deferred Gift Annuity

Miss Fay, 55, wants to supplement her retirement income at age 65. She purchases a deferred Gift Annuity now. She receives an income tax deduction now, during a peak earning year. Moreover, tax on interest accumulating during the intervening years is deferred until her annuity payments begin. At 65, these partially tax free payments will begin -- larger than if she had waited to sign an annuity agreement.

Two-Life Annuity (Joint and Survivorship)

Dr. Mack, 80, finds a way to give extra support to MFM/FFH while providing income, largely tax free, for himself and Mrs. Mack, 79, as long as either of them lives. A \$20,000 two-life Annuity gives them a tax deduction of \$7,252 this year. Both of them, and then the survivor, will receive annual payments of \$1,540 of which \$1,054 will be tax free.

Charitable Remainder Unitrust

Mr. Hunt purchased shares of his company stock over the years at a cost of \$30,000. They are now worth \$100,000. If he places them in a Unitrust (a) he will pay no tax on the \$70,000 capital gains (b) he can arrange for his wife, age 65, to receive annual life income of 8% of the Unitrust assets as revalued each year (c) he will receive a tax deduction of \$33,060 with 5-year carryover privilege (d) his estate gains a charitable deduction and there is no tax on the Trust assets in his wife's estate. At her death, remaining Trust assets will go to expand our self-help program.

These are illustrations. You are urged to consult your attorney or financial advisor regarding the impact of a Life Income Gift on your own finances and estate planning.

MEALS FOR MILLIONS/FREEDOM FROM HUNGER
FOUNDATION
1800 Olympic Boulevard, P.O. Drawer 680, Santa Monica, CA 90406

A LIFE INCOME GIFT

WHAT IT CAN DO FOR YOU
... AND FOR OTHERS



SELF-HELP FOR A HUNGRY WORLD

Planned Giving Office
815 Second Avenue - Suite 501
New York, NY 10017

WHAT IT CAN DO FOR YOU
... AND FOR OTHERS

Dear Friends:

I'm pleased to tell you about a new opportunity to make a Life Income Gift that is really a two-way investment.

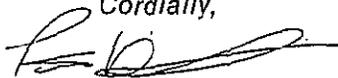
Your gift provides a guaranteed life income for you and/or another person, along with several kinds of tax savings. Your gift will be used to strengthen the capabilities of people to solve their own food and nutrition problems through life-giving, self-help development programs.

This opportunity includes various types of Gift Annuities and Charitable Trusts. Benefits are summarized in this brochure.

Bequests are still an important source of support for Meals for Millions/Freedom from Hunger, and we are most grateful to those who include the Foundation in their wills.

If you would like further information about Life Income Gifts, or an estimate of income payments and tax savings you could receive, please complete the attached coupon. Mail it to John Logan, our Manager of Planned Giving Services at the New York Office.

Cordially,



Peter J. Davies
President

With a Gift Annuity:

- You can provide guaranteed life income for any one or two persons.
- A large part of each payment is *tax free*.
- You receive a tax deduction when you sign an annuity agreement.
- You are free from investment costs and worries related to the assets used to fund your annuity.
- A portion of any capital gain on such assets is *tax exempt*; and there will be estate tax savings.
- **AND** the gift portion of your annuity goes to support our life giving, action projects.

With a Charitable Remainder Trust:

- Similarly, you provide a life income and receive an immediate tax deduction.
- You pay *no tax* on long term capital gains on assets used to fund the Trust.
- Your rate of return, from 5% to 8% or more, is determined in advance by you and the Trustee.
- The Trust will make fixed or variable payments -- depending on whether you prefer a fixed income or a possible hedge against inflation.
- There will be estate tax savings.
- **AND**, at death of last beneficiary, Trust assets become the property of Meals for Millions/Freedom from Hunger to fund our long range self-help programs.

For confidential, detailed information about your life income payments and tax savings, please mail this coupon.

NAME _____

M or F (Circle)

BIRTH DATE _____

ADDRESS _____

CITY _____

STATE _____

PHONE _____

ZIP _____

_____ Approximate amount of gift - investment being considered (\$5,000 minimum for Gift Annuity \$25,000 for Charitable Trust.)

_____ Gift might include securities or real estate.

_____ Birth date and sex (M or F) of 2nd person, if two-life Annuity or Trust.

MAIL TO: MEALS FOR MILLIONS/FREEDOM FROM HUNGER FOUNDATION
815 Second Avenue - Suite 501, New York, NY 10017

Or: Phone John Logan
(212) 986-4170



INSTITUTO ECUATORIANO DE SEGURIDAD SOCIAL

DIRECCION TELEGRAFICA IEESB • TELEFONO. 230 320 Y 847 400 • CAJILLA. 8
TELEX. 2280 • AVDA. 10 DE AGOSTO Y BOGOTA • QUITO • ECUADOR S. A.

(Ecuadorian Social Security Institute)

RECIBIDO
15 1380
FECHA _____

062-1-0536-80

Quito, Abril 22/80

Señor
Lautaro Andrade
~~MEALS~~ FOR MILLIONS FOUNDATION

Con muchísimo gusto queremos establecer una política de coordinación, la misma que redundaría en beneficio de los campesinos.

Cuando ustedes deseen podemos establecer los lineamientos generales de coordinación y para poder implementarlo firmaríamos un convenio, el que puede partir de la conversación que establezcamos cuando se realice la visita de las autoridades de su Institución.

Ruego comunicarme con anticipación, el día que puedan estar aquí.

De usted atentamente.,

Dr. Galo Cordero L.
Dr. Galo Cordero L.

JEFE DEL SEGURO SOCIAL CAMPESINO

(Translation)

GCZ/mcq.

It is with great pleasure that we advise you of our desire to establish a policy of coordination (with you) for the benefit of farmers. Whenever you are available we can (meet to) establish the general lines of coordination, and for implementation thereof we can sign an agreement, based on preliminary discussions to take place when our staff visits your institution. Please advise as to date you can meet with us.

AL CONTESTAR SERVASE MENCIONAR EL N° Y LA FECHA DE ESTA NOTA

Dr. Galo Cordero L.
Chief, Social Security for Farmers

Cooperative Institutions

- 1) Ministry of Agriculture and Livestock: Agricultural extension and development programs and forestry. Direct technical assistance for increasing production of fruit, vegetables and small animals. Land reform program. Forestry (nurseries of types of trees appropriate to the region).
- 2) Banco Nacional de Fomento (National Development Bank): credit to finance crops, for equipment, animals, fishing. Promoting culture of "higuerilla", oil-bearing seeds.
- 3) Instituto Ecuatoriano de Seguridad Social -- Division of Seguro Social del Campesino (Social Security for Farmers): Constructs and equips "dispensarios" (small mini-health posts). Provided one in Palmar in 1971, another in Barcelona in 1977, and now collaborating in one for Dos Mangas. These serve only the families which are members.
- 4) Banco Ecuatoriano de la Vivienda (Ecuadorian Housing Bank) and Junta Nacional de la Vivienda (National Board for Housing): Housing projects in 16 communities.
- 5) Ministry of Education: Primary schools in each community and a secondary school for agricultural and livestock technology in Manglaralto.
- 6) Ministry of Public Health: Hospital in Manglaralto, sub-center of health in Colonche, and three smaller health posts.
- 7) Empresa Electrica Peninsula de Santa Elena: Plan of rural electrification. Manglaralto already has electricity, Colonche does not.

- 8) Centro Agrícola Cantonal de Santa Elena: Cultivation of "higuerilla" (oil-bearing seeds) in 1500 hectares -- in collaboration with the Compañia CASTOR de Manta and the Banco Nacional de Fomento.
- 9) Comisión de Estudios para el Desarrollo de la Cuenca del Rio Guayas (Commission on Studies for the Development of the Rio Guayas basin): Pluviometric stations to study the rainfall, climate, wind, etc. Experiments with grape-planting and maracuja (passion fruit). Irrigation projects in Daule which impact on Colonche.
- 10) Municipio de Santa Elena (Santa Elena Municipal Government): Supervision and coordination, with emphasis on education, in 42 villages in Manglaralto and Colonche and assistance in electrification by supplying small generators.
- 11) Cuerpo de Paz (Peace Corps): Agricultural development: grapes and chick-peas, and other legumes. Nutrition, first-aid, handicrafts.
- 12) Instituto Ecuatoriano de Obras Sanitarias: Water supply in Salinas and Santa Elena, La Libertad, Ballenita. Wells perforated in Valdivia, raising the water to the highest hills and then it descends by gravity to La Libertad, etc. This is only an emergency program because the permanent program is under the Empresa Municipal de Agua Potable de Guayaquil, which has an agreement with the municipalities of Salinas and Santa Elena.
- 13) Meals for Millions: Technical assistance in agriculture, socio-organization to farmer groups (tractor, plow, harvester; soil mechanization, especially for soya production.
- 14) Fondo Ecuatoriano Populorum Progressio -- Centro Ecuatoriano de Servicios Agrícolas y Promoción Humana: Religious entities

which provide rural credit, technical assistance, utilization of water resources in Colonche (a dam) and handcrafts (shoe making) in Valdivia.

- 15) Instituto Ecuatoriano de Recursos Hidráulicos: Ecuadorean Institute of Water Resources): In Colonche, especially in San Vicente del Corozo and Salanguillo, a project for two dams. The dam for San Vicente will water 1000 hectares. Also provides technical assistance in agricultural practices, improved seeds, credit, legalization of lands, etc, all with the objective of increasing area of farming land, better utilization of land especially for short-term planting; utilization of a higher percentage of available labor; increased farm incomes. This dam will provide 30 million cubic meters of water and will benefit 623 families.
- 16) Juntas Parroquiales de Colanche y Manglaralto: Working for development in these areas, by collaborating in others' projects in their areas.
- 17) Misión de Ayuda Fraternal: Spanish Catholic volunteer organization, mainly catechizing but also working in health, education and labor groups.

The Inter-Institutional Coordinating Committee is comprised of representatives of the above for coordination and collaboration in solving principal problems of the area.

TRIP REPORT -- Honduras

After a very rough trip in an old propeller plane and an overnight in Panama we overnighted in Tegucigalpa and were then taken by the MFM/FFH representative, Zoila Alvarez, in a jeep to the project area on Olancho, a mountainous region of Honduras approximately 3 hours east of Tegucigalpa. The new road is almost completely paved and final surfacing was being done on the last 20-kilometer stretch. Since this is the rainy season, the countryside was verdant and lush, in direct contrast to the arid area of Ecuador we had just left. We passed through large corn-growing areas, with small patches of bananas; a limited amount of rice was planted in the wetter patches and some oil-bearing seeds were sparsely planted too. We saw only a few scattered mango trees and no other fruits or vegetables growing at all.

In Olancho we visited the regional office of the Ministry of Natural Resources, where we were briefed by Carmen Orellana (one of the nutrition education training participants of the Northeast Region Agricultural Division). She informed us that this institution worked in the field in teams of three extension agents: one a promoter of Family Education who provided information on nutrition, health and hygiene, production, and education in general. The major object of this person is to promote the incorporation of rural women into the life of the community. The second extensionist works with Rural Youth groups, and the third provides technical assistance to the farmers. All three work also in surveys of the communities and in giving educational talks on their respective subjects.

We were also briefed by Emiliana, who had worked in Olancho as a family education promoter, but was now in another area. She elucidated further on the activities in education and income generation: teaching the women jam and jelly making; gardening and poultry raising. Her work consisted mainly of

promoting home gardens, teaching health and hygiene, household improvement and especially improved food consumption.

Both women were enthusiastic about the results achieved in the collaborative efforts of the ANP towards incorporating the participation of the campesinos in resolving their own problems. They described a recent course for training midwives in San Nicolas, and the integration of the various sponsoring organizations. They were also very proud of a local radio program ("Comunicación Agrícola") which provided the farm families with information on health, agriculture and nutrition. This is a truly multisectoral integrated program and provides both education and entertainment to its listeners. Practically all the farmers have transistor radios (some rather large and expensive) and programs are geared to the listening hours of the men and of the women. Some of the nutrition talks by the MFM/FFH nutritionist had been broadcast, as well as some of the "socio-dramas."

We then visited the tiny MFM office in the Olancho hospital, and Zoila briefed us on the work being done by the ANP project in the area. As in Ecuador, the MFM project seeks to promote collaboration and integration of all agencies working in the area: health, education, agriculture, natural resources, etc. (See chart, Attachment 13.)

After a lunch of rice and leathery meat, we picked up the young MFM/FFH nutritionist Emma. Virginia, a nutritionist from Puerto Rico who is lending temporary assistance in project evaluation and who Zoila would like to hire on a more permanent basis, also came along. Bernardo, the community development worker, accompanied us too. All three seemed extremely competent in their respective work areas and very warmly received in the communities visited.

In the town of Zopilotepe we visited the CESAR (Centro de Salud Rural -- Rural Health Center) where the auxiliary nurse showed us the well-arranged dispensary and explained her

paramedical services to the community. We also talked with a few local farmers and a mother with a sick child who were in the waiting room. They were unanimous in their satisfaction with the service.

Next visit was to San Nicolás, a larger community where we visited some housewives making a local sweet cookie, which they then sell in the area; a milk distribution center ("lactário"), run by community women (the MFM/FFH representative helped them get powdered milk from CARE), which provides a glass of milk daily to some 60 children 0-5 years of age. We also visited the local primary school, with 280 students and 9 teachers, and observed the children's lavish use of water from the new pipe and faucet just installed as part of the town's primitive -- but ADEQUATE -- water supply system which the campesinos themselves had completed, in a cooperative effort, after the government had failed to do so over a period of 4-5 years. This is a basic part of the ANP project, and everybody was justifiably proud of the successful conclusion of their efforts. The schoolchildren and teachers had also just planted a few dozen fruit trees, donated by the Agricultural agency DARNÓ, as another input to the ANP project.

We stopped on the road to examine some 10 latrines (slabs and tube-seats) the community was building with materials donated by the Ministry of Health as its collaboration to the ANP effort. The following tabulation shows the number of wells and latrines completed since February 1980 (or almost completed) in the various rural towns of the Juticalpa region:

	Wells	Latrines
Zopilotepe	2	100
La Venta	2	-
El Chaparro	1	17
La Cruz	2	17
Las Parras	1	11
Guacamayas	-	30
El Tablon	-	5
San Nicolás	1	-
Junquillo	1	6

	Wells	Latrines
El Jobo	1	-
Las Joyas	1	-
Guayabillas	-	46
	<u>12</u>	<u>232</u>

We then continued on to visit Maria, the local health "guardiana," very lively and enthusiastic about her work (on a volunteer basis) in behalf of the community. Her house, despite the pigs and chickens and dogs underfoot, was well arranged and very clean. We noted the improvements she had made in the kitchen as a result of Emma's "charlas" (talks) and that she covered the food gourds with cloths to keep the flies off the food. She had also recently improved her kitchen by lining the mud walls with a mixture of sand and clay (or cement?) to make them smooth and easier to keep clean.

We left Bernardo in San Nicolás, where he was meeting with the community coordinating committee, and went on to the village of Las Llaves to see their community garden and chicken-raising projects. The narrow twisting roads between villages are rocky, deeply rutted and potholed; we were more than thankful the jeep had 4-wheel drive to get us through the mud and streams we had to ford.

By the time we returned to pick up Bernardo, it was getting dark and we were glad to get back onto the paved Tegucigalpa-Olancho road before the torrential rain made the country roads a morass. The "hotel" in Olancho left a great deal to be desired, but we rested very soundly (having the best "suite" at \$5 each).

On Thursday we got off to an early start, picked up Virginia and Emma, and proceeded to Junquillo where Emma was giving another "charla" (talk) to her regular group of 6-8 farm women, this time on foods to eat during pregnancy. The group met in the humble but relatively spacious home of two families living together. Again children, pigs, chickens and dogs were underfoot, and cattle kept coming to the porch for salt, but the

place was quite clean. Emma was very good in her talk and had them tell her what they had learned at the previous meeting. The women, though shy before all the visitors, "knew their stuff!" Zoila had gone in the jeep to pick up the foods for the monthly distribution, a special food assistance program which will run for 6 months, for target groups of pregnant and lactating women, and children 0-5 years of age. The women collect a monthly ration of powdered milk, rice, wheat, WSB and cooking oil, received through CARE/Honduras. The food distribution program is more of a teaching tool than permanent food assistance; in addition to learning how to prepare and use the donated foods, the women learn in the nutrition education classes what they can produce (or utilize) of home-grown items to replace them. Emma had made up for each community an adaptation of the Morley growth charts, coloring the respective malnutrition levels green (in Honduras representing HOPE), red (for danger) and yellow (signifying illness). She had made tiny flags out of pins and masking tape, with the names of all the village children, and each mother moved her child's flag on the chart after the periodic height/weight checks to control their growth and development -- an interesting and very effective methodology!

Our last visit was to El Chaparro, the poorest community visited on the entire trip, because they had very little land of their own. A rich absentee landowner ("latifundario") owned almost all the arable land and had fenced it off from the campesinos. The 10 houses were absolutely miserable shacks; the 13 children between 0-5 were classic cases of malnutrition and parasite infection. Through community efforts with MFM/FFH assistance they had patched up the ramshackle school for the 40 school-age children and were anxiously awaiting the teacher the Education office had promised to send. We visited Esmeralda, a lively and animated mother of three

pitiful kids, who had learned enough in the health care area to put merthiolate on her uncle's machete-slashed arm to ward off infection, and who hoped their request for a milk distribution program (through the Junta and the Coordinating Committee) would soon receive favorable response. We also visited the home of Laura Gomez, where three or four stunted, infected and apathetic children were left in the care of a blind grandmother, holding an emaciated baby who looked as if it might not last out the day. This village was relatively new in the project, but the three houses we visited all had small vegetable gardens started, and a well and latrine program was about to get under way. The agricultural agency DARNO had just begun an experimental soya planting project, although Zoila was not sure she approved (since increasing the quantities of corn, rice and beans which they already consumed might provide equivalent nutritional impact at much lower educational costs.) This was an emotionally disturbing visit, although we were cheered by the knowledge that the ANP had improved the quality of life so markedly in other villages that it surely would have an impact here too!

Since we had visited five of the six villages currently active in the ANP project and there was some problem in utilizing the jeep the next day, we returned to Tegucigalpa by bus in the afternoon (after finding no food at the hotel because we had returned too late.)

OLANCHO PROGRAM● Juticalpa

- El Chaparro (soy project)
- child care (new) (H)
- gardens (NR)
- housing (NR)
- nutrition (MFM)

Junquillo

- child care (new) (H)
- talks (MFM)
- food distribution (CARE/MFM)

● Guayabillas

- child care (new) (H)
- talks (MFM)

✗ La VentaZopilotepe

- "CESAR" (Rural Health Center) (H)
- health promoters (wells and latrines)
- courses (H)
- talks (MFM)
- Housewives club (NR)

✗ Las Parras

- La Cruz
- gardens (NR)
- talks (MFM)

Housewives club (NR) Guacamayas

- gardens (NR)
- talks (MFM)

● San Nicolás

- WATER SYSTEMS (all)
- gardens (NR)
- Housewives club (NR)
- Family education (NR)
- "Bienestar social"
- community support (MFM)
- school garden (Ag)
- latrines (H)

✗ EL Tablón● Las Llaves

- talks (MFM)
- Housewives club (NR)
- garden (NR)
- chicken-raising (NR)

KEY

(H) Ministry of Health: latrines + wells, vector control (malaria), and garbage control.

(Ag) - DARNO - soy project.

(NR) - Family education, gardens, improved housing.

BEST AVAILABLE

PROJECT MANAGEMENT SYSTEM
Meals for Millions/Freedom from Hunger Foundation

PHASE I - PROJECT DEVELOPMENT

Project Request or Proposal

from the field -- proponent (agency, government individual, MFM/FFH staff) to Vice President for Program who reviews for relevance, and assigns Project Manager.

Project Manager Report

Project Manager prepares report on the request - how the request fits MFM/FFH criteria and distributes the report to the staff to study and develop questions that must be addressed before decision to proceed.

Program Meeting (I)

Staff responds to Project Manger Report.

Field Visit(s)

Project Manager makes one or more field visits to determine whether MFM/FFH should proceed with the project.

Trip Report(s)

Project Manager prepares trip report(s) based on field visit(s), and presents the trip report(s) to staff.

Program Meeting (II)

Staff responds to trip report(s). Decision reached on project.

Request for Program Committee (Board) Concurrence

Project Manager prepares a request for Program Committee Concurrence for approval by the Vice President for Program and the President.

Program Committee Meeting

Vice President for Program submits the Request for Concurrence to the Board Program Committee for their information, suggestions and their concurrence with the conclusion that the project fits MFM/FFH Project criteria.

Funding Proposal

Project Manager and Director of Development prepare funding proposal for submission to potential sources of funding.

Funding Prospectus

Director of Development prepares Funding Prospectus identifying resources and project-ing probability of successful funding.

Financial Committee Approval

President submits the Program Committee Concurrence, Prospectus to the Financial Committee for approval.

BEST
AVAILABLE

The following Project Management System has been prepared by the program staff of Meals for Millions/Freedom from Hunger Foundation. It is a recommended format aimed at improving our ability to achieve the Foundation's goals.

PHASE I -- PROJECT DEVELOPMENT

A. Project Request or Proposal

A project request may come to MFM/FFH in a number of different ways. In each case we are calling the institution or individual who requests our assistance "the proponent." The proponents may be, for example, agencies, governments, former training school or workshop participants, or MFM/FFH staff members who have identified a need in the field.

B. Report

The Project Manager first prepares a summary report on the form, "Project Request Report" (see attachment), which describes the project and evaluates its relation or "fit" with MFM/FFH's project criteria. Before a proposed project may be considered, it must:

(1) be consistent with MFM/FFH's goals: The primary goal of the Foundation will be to provide people in developing communities with the technical, material and educational assistance they need to develop their own capabilities to use the resources around them to improve their nutrition. In particular, MFM/FFH will help these communities utilize appropriate food and nutrition knowledge and technologies to improve the nutritional status of their most vulnerable groups:

(2) be within the limits of the Foundation's financial, human and technical resources;

BEST
AVAILABLE

Project Manager's trip report) pertaining to the proposed project.

The staff will be asked to give suggestions on the format of the Request for Concurrence which will be presented to the Board's Program Committee.

G. Request for Program Committee Concurrence

After the staff determines that a project fits the Foundation's criteria, the Project Manager will prepare a Request for Concurrence that will be presented (after approval by the Vice President for Program and the President) to the Board's Program Committee. This request (see attached form) will include a description of the proposed projects, a list of MFM/FFH criteria, and an analysis of how the project meets these criteria. It will also include a budget summary, a solicitation of suggestions from the Board's Program Committee, and a request for concurrence in the conclusion that the project does, in fact, meet the Foundation's criteria.

The Vice President for Program, with the approval of the President, will submit this Request for Concurrence to the Chairperson of the Program Committee.

H. Program Committee Meeting

A Program Committee meeting may be called at any time in order to review the Request for Concurrence. Concurrence may be sought by mail or telephone if it is impossible for the members to meet, and mailed or delivered to the Vice President for Program.

I. Funding Proposal

Once the Program Committee's concurrence is obtained, the Project Manager, with the cooperation of the Director of Development, prepares a funding proposal. This is the document that will be used to seek funds for the project.

B. Report (contd)

(3) not have a high cost to benefit ratio -- (cost in terms of financial, human and technical resources);

(4) have the potential for involvement and support of indigenous organizations, with the roles of each participant clearly defined;

(5) strengthen the capabilities of the indigenous organization in order that our assistance can be withdrawn.

The Project Manager will include in this report information on the proponent, the community, etc.

C. Program Meeting (I)

The project report is presented to the entire program staff for approval and suggestions on how to proceed. The course of action will be summarized on the form, "Project Report," (attached).

D. Field Visit

A plan of action is suggested by the staff at the program meeting. This plan may include the need for a site visit to answer questions as to whether to proceed with the project.

E. Trip Report

A report which contains answers to the questions mentioned above will be prepared and presented to the program staff by the Project-Manager. The report will be reviewed by the program staff, and it may be determined that another field visit is necessary.

F. Program Meeting (II).

The program, public relations and fund raising staff will participate in a meeting designed to give information (including the

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J. Funding Prospectus

The Director of Development prepares a prospectus for funding. It includes the amounts projected from existing restricted and non-restricted funds, from collaborating agencies, and from outside funding sources, as well as an estimate of the probability of successful funding.

K. Finance Committee Approval

The Vice President for Program submits to the President the Program Committee Conference, the Funding Proposal, the Funding Prospectus, and details of any anticipated contractual agreements. The President reviews the documents and submits them to the Finance Committee, requesting approval to raise funds and begin implementation of the project.

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REQUEST FOR PROGRAM COMMITTEE CONCURRENCE

1. Project Description (location, target population, indigenous agency, plan of action - briefly stated)
2. How this Project fits MFM/FFH Project Criteria:
 1. Consistent with MFM/FFH goals: The primary goal of the Foundation will be to provide people in developing communities with the technical, material and educational assistance they need to develop their own capabilities to use the resources around them to improve their nutrition. In particular, Meals for Millions/Freedom from Hunger Foundation will help these communities utilize appropriate food and nutrition knowledge and technologies to improve the nutritional status of their most vulnerable groups;
 2. within the limits of the Foundation's financial, human and technical resources;
 3. does not have a high cost to benefit ratio (cost in terms of financial, human and technical resources);
 4. has the potential for involvement and support of indigenous organizations with the roles of each participant clearly defined;
 5. strengthens the capabilities of the indigenous organization in order that our assistance can be withdrawn.
3. Budget summary (include personnel, travel, materials, etc.)
4. Suggestions by Board Program Committee
5. Please indicate by your signature that the proposed project is consistent with MFM/FFH Project Criteria.

Signature _____
Member, Program Committee

Date _____

PROJECT REQUEST REPORT

Proponent _____ Date Received _____

Project Manager _____

Summary of Proposed Project (location, description of community, etc.)

How Project fits MFM/FFH Criteria:

1. Consistent with MFM/FFH goals: The primary goal of the Foundation will be to provide people in developing communities with the technical, material and educational assistance they need to develop their own capabilities to use the resources around them to improve their nutrition. In particular, Meals for Millions/Freedom from Hunger Foundation will help these communities utilize appropriate food and nutrition knowledge and technologies to improve the nutritional status of their most vulnerable groups;
2. within the limits of the Foundation's financial, human and technical resour
3. does not have a high cost to benefit ratio (cost in terms of financial, human and technical resources);
4. has the potential for involvement and support of indigenous organizations with the roles of each participant clearly defined.
5. strengthens the capabilities of the indigenous organization in order that our assistance can be withdrawn.

PHASE II -- PROJECT MANAGEMENT

Following the Program Committee's concurrence to proceed with the development of a project, and the approval of the Finance Committee to raise funds and begin project implementation, the project manager will proceed with the management system outlined below. Indicated field visits are the minimum required for each project and other field visits will be made as necessary.

PROJECT INITIATION

The project manager prepares a summary sheet on the project - FORM I. This form called the Project Goal and Objective Statement states the goal(s) and the objectives of the project as presented to the Board in the project description.

SITE FIELD VISIT

The project manager meets with the project field staff in the field to develop a six month project activity schedule - FORM II, as an expansion of the project goal and objective statement. This form will be revised by the project field staff every 3 months.

MONTHLY STATUS REPORTS

The project field staff will prepare Monthly Status Reports - FORM III, to be reviewed by the project manager.

OBJECTIVE REVIEW
(SITE VISIT)

The project manager and project field staff meet once every six months to prepare the Project Objective Review - FORM IV. During this meeting each objective is discussed for continuing relevance.

PROGRAM STAFF MEETING

The project manager shares the project objective review with the program staff once every six months. During this meeting program staff is updated and asked for suggestions.

ANNUAL EVALUATION

The project manager and project field staff prepare an annual evaluation which reviews the status of goals and objectives. This report is shared with program staff (during a program staff meeting), funders, and the Board.

TERMINATION REPORT

The project manager and project field staff prepare a final report which evaluates the successes and failures of the project. This report is shared with the program staff, funders, and the Board.

The following project management system has been prepared by the program staff of Meals for Millions/Freedom from Hunger Foundation. It is a recommended format aimed at improving our ability to achieve the Foundation's goals.

PHASE II -- PROJECT MANAGEMENT

A. Project Initiation

The Project Goal and Objective Statement is the basic definition of the project's purpose. Goals and Objectives at the time of the project initiation should be consistent with the goals and objectives included in the initial funding proposal.

B. Site Field Visit

The project manager and the project field staff will use the project goal and objective statement as a guide to prepare specific activities to be followed over a six month period.

The project field staff will review these activities at three month intervals to assess their current relevancy to the project's development. When necessary the project manager will attend these three month review sessions to assist the project field staff.

C. Monthly Status Reports

The monthly status report which is prepared by the project field staff will review the status of project activities programmed for the month. The project field staff must indicate if activities are on schedule and must also report any significant problems or obstacles in completing activities as well as decisions needed to complete tasks scheduled. Dates for completing project activities must also be noted in the monthly status report.

D. Objective Review

The project manager and the project field staff will meet at the project site at six month intervals to review project objectives. Objectives will be revised at these reviews to reflect changes that have taken place since the objectives were originally stated. As objectives are completed or added, they will be indicated on the project objective review sheet.

E. Program Staff Meeting

The project manager will lead a project review with the program staff at six month intervals using the objective review as a guide. In this way the program staff will be kept informed as to the project's development and will also have an opportunity to ask questions and make suggestions regarding the project.

F. Annual Evaluation

The project evaluation which is prepared by the project manager and project field staff will be prepared in the field and later shared with program staff, project funders, and the MFM/FFH Board. Criteria for the project evaluation as well as the final evaluation statement will be included in this document.

G. Termination Report

When a decision has been made by the project manager, project field staff, and program director to terminate a project because of the completion of the project's goals or for any other reason, the project manager and project field staff will prepare a final evaluative report of the project. This termination report with the other documents prepared by the project manager and project field staff will provide a history of the project's development and progress since its initiation. The final report will be made available to program staff, project

fundere (at the direction of the Director of Development), and the Board of Trustees.

Copies of all project documents prepared are to be distributed by the project manager to the MFM/FFH program director and a copy is to be placed in the project file for use by the program staff.

It is the responsibility of the program director to request needed project materials from the project manager which will be used in preparing a project report for the MFM/FFH Board. The Board should indicate to the program director what information they would like to have for review of all projects.

PROJECT GOAL AND OBJECTIVE STATEMENT
(Prepared once per project)

TITLE _____

PROJECT MANAGER _____

DATE REVIEWED BY BOARD _____

DATE GOAL(S) INITIATED IN THE FIELD _____

OBJECTIVES (AT ONSET)

Project Title _____
Date _____
Submitted by _____

SIX MONTH ACTIVITY SCHEDULES
(Revised every 3 months)

A. OBJECTIVE

Activities	Starting Date	Project Completion
------------	---------------	--------------------

- 1.
- 2.
- 3.
- 4.
- 5.

B. OBJECTIVE

Activities	Starting Date	Project Completion
------------	---------------	--------------------

- 1.
- 2.
- 3.
- 4.
- 5.

C. OBJECTIVE

Activities	Starting Date	Project Completion
------------	---------------	--------------------

- 1.
- 2.
- 3.
- 4.
- 5.

Project Title _____
Date _____
Submitted by _____

MONTHLY STATUS REPORT
(Fill out every month)

Please number Objectives A, B, etc., also Activities 1, 2, etc.,
for easy reference.

STATUS OF ACTIVITY
(Indicate On Target,
Behind, Ahead, using
reference numbers)

TARGET DATE FOR COMPLETION
(Indicate dates and revised
dates)

DISCUSSION

OTHER ITEMS

Project Title _____
Date _____
Submitted by _____

PROJECT OBJECTIVE REVIEW
(To be completed every 6 months)

Please letter Objectives A, B, C, etc., for each reference.

CURRENT OBJECTIVES

REVISED OBJECTIVES
(If any)

DISCUSSION
(If revised, why?)

Very Brief Résumés of Technical Staff

The President of MFM/FFH, Peter Davies, has had long years of experience in development programs both overseas and in the U.S. After obtaining a Master of Public Administration degree at Harvard, mainly in agricultural economics, economic policies and government, he spent a year at the Council on Foreign Relations and then joined McGraw-Hill Publishing Company, where he worked his way up to assistant editorial director (which provides him with an ease and clarity of writing which is important to the president of a voluntary agency). He then worked for a year in India as Deputy Managing Director of a 68 million dollar fertilizer complex and marketing program, before a 6-month assignment at the White House in the office of the Special Assistant to the President for Trade Policy. He then joined A.I.D. and had assignments as Chief, Private Enterprise Division; in Thailand as Deputy Assistant Director of the Office of Rural Affairs, and then as Assistant Director of the A.I.D. mission there; as Chief of the Office of Food for Development and subsequently of a combined office of Health, Nutrition and Food for Development at the A.I.D. mission in Brazil, and then Deputy Director of the Office of Population and Civic Development of the Latin American Bureau in Washington. From 1971 until joining Meals for Millions in 1976, as President, he was Program Director of the IPPF (International Planned Parenthood Federation). Adding to the above broad spectrum of experience his personal enthusiasm and dynamism which made him convincing in selling ideas and fundraising, it is evident that he is "the right man in the right job."

The person under consideration as V.P. for Program has a long history of overseas voluntary agency experience as country director in three nations of Latin America, and the

highest references regarding his professional and managerial capabilities. If this relationship should develop positively, he will definitely be a welcome addition to the MFM managerial staff.

Director of Development, Michael Hayes, after study at the American Community School in Beirut, Lebanon, and an A.B. from Colgate University, took a Master's degree at Boston University's School of Public Communication. After a stint as a reporter, he became Assistant Director of Public Information for the Fresh Air Fund, Assistant Director of Development at Lesley College in Cambridge, Mass. and a fundraising consultant for the Fundación Ecuatoriana de Desarrollo and Centro del Muchacho Trabajador in Quito, Ecuador, before joining MFM/FFH.

The Assistant Director of Development is a young Philippine woman, Cecelia Brainard, who handles donor relations and services; helps raise funds, handles donor accounting and reports and coordinates direct mail activities. She also has both academic qualifications and experience in media production.

The Administrative assistant, Sondra Farha, coordinates all aspects of program development and keeps the V.P. for program informed of all program activities. She directs and supervises the workflow of the office staff to meet the operating needs of the Foundation. She also plans, develops and coordinates information on such projects as the Training School, and manages Santa Monica office expenditures and corresponding bank account.

The regional directors are all exceptionally well qualified: Leslie Tomanson, for Africa, had over four years of experience in Mali with the Peace Corps before becoming the Technical Assistance Coordinator for VITA in 1975 and then

an additional two years with that organization as Sahel Program Officer in Ougadougou, Upper Volta, where he worked in close collaboration with the Société Africaine d'Etudes et de Développement (SAED) and assisted the National Council of Negro Women. He brings to MFM a deep feeling for African development and a strong desire to make a worthwhile contribution.

A summer intern, Betsy Brown, has come from the Fletcher School of Law and Diplomacy and the Nutrition Institute of Tufts University in Medford, Mass. She has been lending effective collaboration as Assistant African Program Director and has coordinated experiments in solar-based food processing technologies for use at the village level in Africa, based on previous experience as a Peace Corps volunteer in Togo. When she returns to her studies in the fall, she will be replaced on a permanent basis.

Jung (John) Seo, a Korean, is the current project director for Korea, but plans to move to the U.S. in the near future, where he will become director for projects in Asia. With a background in teacher training and in law, experience working with A.I.D./Korea and seven years in the Korean army (which was attached to the 8th U.S. Army), he has a wide range of experience and competence, attested to by a series of commendatory letters from A.I.D. and military testimonials.

The regional staff for the U.S. appears to be equally competent. Anne Warner, Program Director for Healthy Lifestyle for Seniors, in Santa Monica, has a B.A. in Human Development and is working on an M.P.H. in Health Administration. She had considerable experience as a teacher of adult education, of yoga in holistic health programs, and of bi-lingual education before joining MFM in 1978. She now directs the

innovative and integrated health program for senior citizens which is designed as a model project to be disseminated to local and national health agencies.

In Tucson, Arizona, MFM/FFH maintains staff for the Papago Indian project. The project director, Cynthia Anson, has almost completed her Ph.D. in anthropology and had previously done graduate work in that field at Indiana University. After two years of work and research in Belgium and Zaire, and a teaching stint at the University of in Seattle, she began work with MFM/FFH in 1977 in Tucson to plan and implement a Papago Food Production project on the Indian reservation there. Her academic specialization and experience in food production, distribution and consumption systems at local, regional and national levels; peasant economy and society; modernization and directed development with special reference to women in development, have provided MFM with considerable expertise in these areas.

Gary Nabhan and Jane Barnett are two members of the Tucson staff with strong backgrounds in the agricultural sector. Gary has wide experience in ecology, ethnobotany, and community agriculture with special emphasis on new crops for arid lands. He has had many grants for plant exploration and has written extensively on agricultural water use, individual crops, and agroecosystems. Jane has a strong background in basic horticulture, vegetable culture, citrus fruits, plant propagation, soil fertility and chemistry, international agriculture, and natural resource management. Although she is relatively new to the project, she is currently helping with the community garden project and has collected insect specimens and advised the gardeners on insect problems.

Susan Terence is a health educator and communications media specialist who has considerable experience as an

instructor, writer, playwright, actor, dancer, and in other forms of expression and learning experiences. She has developed puppet shows and other forms of teaching that have been highly successful. The Director of Training is Kathryn Shack, a nutritionist with an MPH from UCLA where she studied with Dr. Derrick Jelliff, a world authority on population, health and nutrition, breastfeeding and international programs. She also has an M.S. degree in Nutrition from UC Davis, where she worked with Dr. C.O. Chichester and specialized in nutrition in developing countries, with her thesis work a nutrition survey of a Guatemalan village. Her field experience includes a Peace Corps assignment in Nigeria where she taught biology, zoology, and botany; work in Guatemala for ROCAP in research on a protein-rich beverage; work as a senior dietitian at a New Jersey state hospital and as a social worker with the Bureau of Children's Services in Bridgetown, New Jersey. Since joining Meals for Millions in 1975, she has traveled and worked extensively on all three underdeveloped continents as well as in various areas of the Pacific such as Papua, New Guinea; Fiji and Western Samoa. She has a compelling desire to involve village people in participating in the improvement of their "quality of life" and is doing an outstanding job in the management and evaluation of LDC and U.S. nutrition education training; the design and implementation of overseas workshops on this subject which stress participatory approaches and material development; and the teaching of nutrition and nutrition education components of the FNI courses. (NOTE: From my personal experience in having worked with Kathryn over several years in my own counterpart rôle in the A.I.D. Office of Nutrition, I can attest to the fact that she is doing an outstanding job.)

The training coordinator is Joanne Burke, who has a Masters in International Administration with emphasis on

program design and evaluation, management, world issues, cross-cultural communication, and community development. Her professional experience prior to joining MFM included work as a teacher and office administrator at an alternative high school based on the idea that students need to be involved in and responsible for their education. She also was a counselor in a therapeutic halfway house for recovering alcoholics, in England. She has brought to MFM many administrative, organizational, teaching-supervisory and counseling skills which are put to good use in the training program.

The information specialist backstopping both field and training programs is Patti Butzer, with an M.A. in Library Science and a B.A. in psychology. Although she had relatively little experience before joining MFM in 1975, Patti has developed a high level of expertise in providing the technical and general information required by the various projects.

At the FNI, Ted Brown, Plant Manager, had seven years of technical experience in U.S.-based food processing plants and three years of technical experience in an international private voluntary organization, before joining MFM. Within the FNI he has progressed from maintenance engineer responsible for the repair and maintenance of all equipment to the physical plant manager who is supervising the operation of the Santa Monica facilities including the building, premises, vehicles, machinery and equipment. He assists in the training programs by demonstrating food processing technologies. After attending a seminar in Muncie, Indiana, on appropriate technologies, he was promoted to Appropriate Technologist and is currently assisting in the U.S. and overseas training programs by demonstrating and instructing Third World participants in the use of specialized equipment and providing technical assistance to on-going rural development projects overseas.

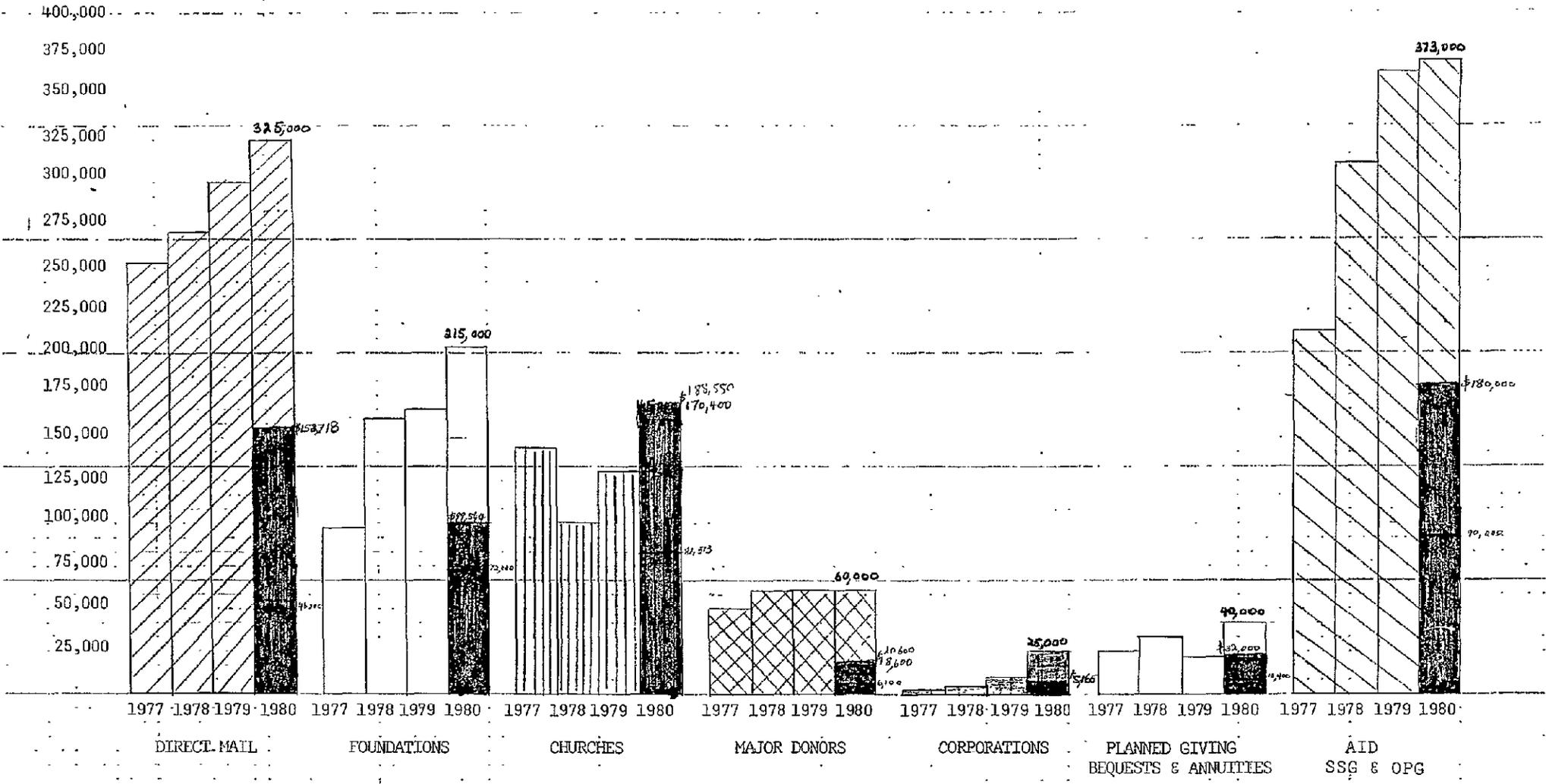
He is assisted by Toni Gear, Lab and Pilot Plant technician, who has a background in U.S. Army supply and is learning community-level food processing on the job.

Dr. Glenn Patterson, the community-level food technologist currently based in Barbados, will be brought to Santa Monica at the end of the year, to add his expertise to the FNI staff as well as the training program.

In résumé, the staff members are all extremely well-qualified for their respective functions, and all appear to be highly motivated and effective. Additional comments regarding staff will be found in the final conclusions and recommendations.

1977, 1978, 1979 AND PROJECTED 1980 INCOME BY SOURCE

(Excluding PACT and Other Miscellaneous Income)



MEALS FOR MILLIONS/FREEDOM FROM HUNGER FOUNDATION

Grants for Period: 1/1-6/30/80

<u>Foundation</u>	<u>Purpose</u>	<u>Amount</u>
Myrtle L. Atkinson	Cambodia	\$ 5,000
New Land	General	2,500
Trull	Papago Project	2,000
Jessie Smith Noyes	Training School	12,500
Scherman	General	20,000
Elizabeth Firth Wade	Food & Nutrition Institute	1,000
 <u>Church</u>		
United Church Board for World Ministries	Korea \$20,000 Cambodia 6,000	Philippines 2,000 General 2,000
Episcopal Church Presiding Bishop's Fund	Cambodia Ecuador	40,000 30,000
United Methodist Committee on Relief	Korea Ecuador	35,000 30,000
Women's Fellowship Congregational Church	General	1,000
 <u>Corporations</u>		
TRW	General	1,320
Hughes Aircraft	General	2,215
McDonnell Douglas	Healthy Lifestyle	500
Lockheed Employees	Healthy Lifestyle	600
Santa Monica Bank	Healthy Lifestyle	250
Foremost-Mckesson	Food & Nutrition Institute	2,500
 <u>Other</u>		
PACT	Nutrition Education Training	25,000
* NCAT	Papago Indian	1,500
* USDA	Leaf Protein	5,834.03
Save the Children	Nutrition Education	2,000

* Public sector

PARTNER FOR DEVELOPMENT

**In the spirit of helping people to help themselves
Meals for Millions/Freedom from Hunger Foundation
Board of Trustees invites you
to become a**

Gifts of Securities

You may wish to make a gift of securities. Your gift will be valued at the mean of the market on the day of mailing or delivery. To assure effective handling, please observe the following procedures:

1. Securities that have increased in value since purchase make excellent gifts because (a) the tax deductible contribution is their current value and (b) capital gains are not taxed.
2. Sign certificates and have signature guaranteed by a broker or officer of a commercial bank. Leave assignment spaces blank.
3. Send certificate by registered mail. Write cover letter confirming the securities gift to Meals for Millions/Freedom from Hunger Foundation.

You can also perpetuate the good work you have begun through a Life Income gift or by remembering Meals for Millions/Freedom from Hunger in your will. For more information write to: John Logan, Meals for Millions/Freedom from Hunger Foundation-815 Second Avenue—Suite 501-New York, NY 10017.

Meals for Millions/Freedom from Hunger Foundation Board of Trustees established Partners for Development to recognize the Foundation's principal benefactors around the nation—those who contribute \$1,000 or more each year.

Through their leadership contributions, Partners for Development not only enable the Foundation to share vital food technology, but by their example, encourage others to join them.

Twice a year, MFM/Freedom from Hunger's President reports to his "Partners" the programs made possible by their generous support.



What Your Gift Will Do

- \$10,000** will buy raw materials to produce high protein foods in villages in the poorer nations.
- \$5,000** will train village health leaders and fund projects to prevent malnutrition among young children in Ecuador and Honduras.
- \$2,000** will send a student from a developing country to our Food and Nutrition Institute Training School in Santa Monica.
- \$1,000** will provide one year's equipment for training and food production programs with Papago Indians in Arizona.

DONOR'S RECORD

Total Donation \$ _____

First Payment

Amount Date

\$ _____

Balance

Amount Date

Meals for Millions/Freedom from Hunger Foundation

1800 Olympic Blvd., P.O. Box 680, Santa Monica, CA 90406

...an R.S.V.P.



Yes, I wish to join Partners for Development with my tax deductible donation of \$_____ My first payment of \$_____ is enclosed.

The balance will be paid as follows: _____

Signature _____ Date _____

NAME _____

ADDRESS _____

Sanford Goldstein & Company

Certified Public Accountants

*60 East 42nd Street
New York, N. Y. 10017*

*Sanford Goldstein
Robert L. Manger*

(212) 986-3025

*California Office
233 Wilshire Boulevard
Santa Monica, California 90401
(213) 451-9871*

To The Board of Trustees of
Meals For Millions Foundation

We have examined the balance sheet of Meals For Millions Foundation as of December 31, 1978 and 1977, and the related statements of support, revenue and expenses and changes in fund balances and of functional expenditures for the years then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the aforementioned financial statements present fairly the financial position of the Meals For Millions Foundation at December 31, 1978 and 1977, and the results of its operations and changes in fund balances for the years then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year. The principles are in accordance with the Audit Guide for Voluntary Health and Welfare Organizations.

Respectfully submitted,

Sanford Goldstein & Company
Certified Public Accountants

March 1, 1979.
New York, New York

MEALS FOR MILLIONS FOUNDATION
BALANCE SHEET
DECEMBER 31, 1978 AND 1977

	<u>1978</u>		
	<u>UNRESTRICTED</u>	<u>RESTRICTED</u>	<u>LAND, BUILDING & EQUIPME FUND</u>
	<u>FUNDS</u>	<u>FUNDS</u>	
<u>ASSETS:</u>			
Cash	18,890	117,348	
Account Receivable	25,000		
Marketable Securities-			
At Donated Value	3,000		
Due From Unrestricted			
Funds		26,455	
Prepaid Expenses	2,570		
Land, Building & Equip-			
ment-At Cost Less			
Accumulated Depreciation			
of \$33,697 (Note 3)			94,116
Food Production Equipment			
Net Realizable Value			6,300
Other Assets	1,045		
	<u>50,505</u>	<u>143,803</u>	<u>100,416</u>
<u>LIABILITIES & FUND BALANCES:</u>			
Accounts Payable			
Mortgage Payable (Note 3)			54,779
Due To Restricted Funds	26,455		
Fund Balances	<u>24,050</u>	<u>143,803</u>	<u>45,637</u>
	<u>50,505</u>	<u>143,803</u>	<u>100,416</u>

See Accompanying Notes To Financial Statements

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<u>1978</u> TOTAL ALL FUNDS	<u>1977</u> TOTAL ALL FUNDS
136,238	170,390
25,000	
3,000	
26,455	
2,570	2,052
94,116	93,806
6,300	6,300
1,045	2,973
<u>294,724</u>	<u>275,521</u>
54,779	2,299
26,455	57,154
<u>213,490</u>	<u>216,068</u>
<u>294,724</u>	<u>275,521</u>

MEALS FOR MILLIONS FOUNDATION
 STATEMENT OF SUPPORT, REVENUE AND EXPENSES AND
 CHANGES IN FUND BALANCES FOR THE YEARS ENDED
DECEMBER 31, 1978 AND 1977

	1978		
	UNRESTRICTED FUNDS	RESTRICTED FUNDS	LAND, BUILDING & EQUIPMENT FUND
<u>PUBLIC SUPPORT & REVENUE:</u>			
Contributions	373,469	595,038	
Bequests	39,104		
Interest Income	4,638		
Miscellaneous	2,107		
	<u>419,318</u>	<u>595,038</u>	<u>- 0 -</u>
<u>EXPENSES:</u>			
<u>Program Services:</u>			
(Development of Programs and Project Costs) (Note 6)	225,968	560,173	
<u>Supporting Services:</u>			
Management & General	87,914		
Fund Raising	137,752		
Depreciation			5,127
	<u>451,634</u>	<u>560,173</u>	<u>5,127</u>
Excess (Deficiency) of Public Support & Revenues Over Expenses	(32,316)	34,865	(5,127)
<u>OTHER CHANGES IN FUND BALANCES:</u>			
<u>Property & Equipment:</u>			
Acquisitions-Unrestricted Funds	(5,437)		5,437
Repayment of Mortgage in kind Contribution of Equipment	(2,375)		2,375
Fund Balances- January 1, 1978 and 1977	<u>64,178</u>	<u>108,938</u>	<u>42,952</u>
Fund Balances- December 31, 1978 and 1977	<u>24,050</u>	<u>143,803</u>	<u>45,637</u>

See Accompanying Notes To Financial Statements

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	<u>1978</u> TOTAL ALL FUNDS	<u>1977</u> TOTAL ALL FUNDS
	968,507	859,724
	39,104	21,096
	4,638	2,448
	<u>2,107</u>	<u>10,497</u>
	<u>1,014,356</u>	<u>893,765</u>
	786,141	619,662
	87,914	77,210
	137,752	138,565
	<u>5,127</u>	<u>4,238</u>
	<u>1,016,934</u>	<u>839,675</u>
	(2,578)	54,090
		(5,750)
	<u>216,068</u>	<u>167,728</u>
	<u>213,490</u>	<u>216,068</u>

.27
.27

.27)

137
375

952

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MEALS FOR MILLIONS FOUNDATION
STATEMENT OF SUPPORT, REVENUE AND EXPENSES AND
CHANGES IN FUND BALANCES OF RESTRICTED FUNDS
FOR THE YEAR ENDED DECEMBER 31, 1978

	<u>Develop- ment Pro- gram Grant</u>	<u>Tech- nology Transfer Grant</u>	<u>Food & Nutri- tion In- stitute</u>	<u>Nutrition Workshop</u>	<u>Southern Nutrition Program (New York)</u>
Designated Contributions	186,989	21,540	86,944	2,997	28,100
Authorized Transfers	_____	<u>1,500</u>	<u>5,000</u>	_____	_____
Total	186,989	23,040	91,944	2,997	28,100
Expenses (See Schedule)	<u>201,280</u>	<u>14,780</u>	<u>40,871</u>	<u>7,531</u>	<u>25,100</u>
Excess (Deficiency) of Revenues Over Expenses	(14,291)	8,260	51,073	(4,534)	2,900
Fund Balances - January 1, 1978	<u>14,291</u>	<u>7,644</u>	_____	<u>(511)</u>	_____
Fund Balances - December 31, 1978	<u>-0-</u>	<u>15,904</u>	<u>51,073</u>	<u>(5,045)</u>	<u>3,100</u>

See Accompanying Notes To Financial Statements

BEST
AVAILABLE

	<u>Santa Monica Project</u>	<u>Korea</u>	<u>Ecuador Agricultural Project</u>	<u>Honduras</u>	<u>Borsook Fund</u>	<u>All Others</u>	<u>Total</u>
n Sout wes Prog (Ne Pa	14,747	185,125	12,555	37,130	4,204	14,217	595,038
28,5	<u>5,031</u>	<u>25</u>		<u>11,461</u>	(6,500)	(16,517)	
28,5	19,778	185,150	12,555	48,591	(2,296)	(2,300)	595,038
.25,8	<u>13,857</u>	<u>158,208</u>	<u>40,941</u>	<u>34,591</u>		<u>22,267</u>	<u>560,173</u>
) 2,	5,921	26,942	(28,386)	14,000	(2,296)	(24,567)	34,865
)		<u>8,006</u>	<u>38,048</u>		<u>10,557</u>	<u>30,617</u>	<u>108,938</u>
) <u>3,</u>	<u>5,921</u>	<u>34,948</u>	<u>9,662</u>	<u>14,000</u>	<u>8,261</u>	<u>6,050</u>	<u>143,803</u>

MEALS FOR MILLIONS FOUNDATION
STATEMENT OF FUNCTIONAL EXPENSES - UNRESTRICTED FUNDS
FOR THE YEAR ENDED DECEMBER 31, 1978

	<u>Management and General</u>	<u>Fund Raising</u>
Salaries	69,154	44,591
Payroll Taxes	3,083	2,469
Employee Benefits	4,050	3,312
Insurance	1,834	
Outside Services	259	
Rent	6,660	
Utilities	434	
Brochures & Newsletters		3,851
List Maintenance		7,837
Bulk Mailing		22,158
Postage	4,534	21,421
Telephone	15,316	
Equipment Rental	6,978	
Printing	5,447	22,047
Dues & Subscriptions	1,190	110
Consulting & Professional Fees	10,775	6,850
Meetings & Seminars	1,231	56
Travel	11,879	2,867
Interest	4,552	
Taxes & Licenses	525	
Supplies	3,288	52
Repairs & Maintenance	4,934	
Miscellaneous Expense	350	131
Data Processing	842	
Project Grants		
Home Office Support	(69,401)	
	<u>87,914</u>	<u>137,752</u>

See Accompanying Notes To Financial Statements

<u>Program Information</u>	<u>Program Development</u>	<u>Total</u>
4,337	112,302	230,384
262	5,744	11,558
482	8,818	16,662
		1,834
100	443	802
		6,660
		434
		3,851
		7,837
2,089		24,247
1,592	15	27,562
	573	15,889
	568	7,546
4,709	618	32,821
58	150	1,508
	6,116	23,741
	721	2,008
101	7,384	22,231
		4,552
		525
442	987	4,769
		4,934
	101	582
		842
	67,256	67,256
		(69,401)
<u>14,172</u>	<u>211,796</u>	<u>451,634</u>

MEALS FOR MILLIONS FOUNDATION
MAJOR CONTRIBUTORS (USAID, FOUNDATIONS AND CHURCHES)
FOR THE YEAR ENDED DECEMBER 31, 1976

<u>Name</u>	<u>Amount</u>	<u>Program Grants</u>
United States Agency for International Development	\$136,989	Development Program
	58,547	Operational Program - Korea
	25,000	Program Development
Private Agencies Collaborating Together, Inc.	72,435	Korea Comprehensive Model Rural Nutrition
	12,500	Ecuador Agriculture
	2,500	Training School Videotape
	2,219	Technology Transfer
	1,580	Nutrition Education Workshop
	556	Papua New Guinea Women's Clubs
	329	Resource Center
Clayton Fund	10,000	Technology Transfer
Wright Foundation	5,000	Honduras Applied Nutrition
Food For India Fund	3,200	India
General Service Foundation	8,500	Technology Transfer
Spitzer Trust	3,000	Unrestricted
International Foundation	20,000	Honduras Applied Nutrition
M. McDonald Foundation	4,000	Southwest Program
Missie Smith Noyes Foundation	32,000	Food and Nutrition Institute
W. Memorial Trust	10,000	Unrestricted
Public Welfare Foundation	10,000	Southwest Program
Wexman Foundation, Inc.	5,000	Unrestricted
C. and Mary J. Skaggs Foundation	25,000	Food and Nutrition Institute
Anonymous	11,200	Santa Monica Healthy Lifestyle for Seniors

BEST
AVAILABLE

MEALS FOR MILLIONS FOUNDATION
MAJOR CONTRIBUTORS (USAID, FOUNDATIONS AND CHURCHES)
FOR THE YEAR ENDED DECEMBER 31, 1978

<u>Name</u>	<u>Amount</u>	<u>Program Grants</u>
Christian Church/Disciples of Christ	\$ 2,000	Honduras Applied Nutrition
Episcopal Church Presiding Bishop's Fund	12,000	Food and Nutrition Institute
Cincinnati United Against Hunger	10,000	Food and Nutrition Institute
United Church Board for World Ministries	28,790	Korea Comprehensive Model Rural Nutrition
	8,000	Honduras Applied Nutrition
	6,000	Philippines Rural Life Center
	4,250	Papago Indian Agriculture
	2,940	Multi-Purpose Food Shipments
	525	Jamaica
	4,075	Unrestricted
United Methodist Committee on Relief	10,000	Korea Comprehensive Model Rural Nutrition
United Presbyterian Church in the USA	10,069	Nutrition Education Consumer Outreach

MEALS FOR MILLIONS FOUNDATION
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 1978

1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The Foundation maintains its books on the accrual basis of accounting. The Foundation follows the practice of capitalizing all expenditures for capital assets; the fair value of donated fixed assets is similarly capitalized. Depreciation of the building, furniture and fixtures, and vehicles is provided over the estimated useful lives of the assets on the straight-line method. All contributions are considered to be available for unrestricted use unless specifically restricted by the donor. Contributions are recorded only as received except for government grants which are granted for specific time periods.

2) RESTRICTED FUNDS

All restricted funds were used for the purpose for which they were granted.

3) LAND, BUILDING & EQUIPMENT

Land, Building & Equipment are comprised of the following:

Land	\$ 45,764
Building	59,240
Furniture & Fixtures	16,467
Vehicles	<u>6,342</u>
	\$127,813
Less Accumulated Depreciation	<u>33,697</u>
Net	\$ <u>94,116</u>

All fully depreciated assets are removed from the accounts.

MEALS FOR MILLIONS FOUNDATION
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 1978

The mortgage payable, secured by a deed of trust on the real estate, is payable to the bank at \$573 per month including interest at 8% per annum. The final payment is payable March, 1992.

4) COMMITMENT

The Foundation leases office space in New York on a month to month basis at an annual rate of \$7,560.

5) PACT

During 1978, the Foundation received payments on grants from Private Agencies Collaborating Together, Inc. (PACT) for the following purposes: \$12,500 - Ecuador Agricultural Project, \$72,435 for Korea - Comprehensive Model Rural Nutrition Program, and \$7,184 for supportive activities.

6) PROGRAM SERVICES

The Foundation used from its unrestricted funds as follows:

Food and Nutrition Institute	\$21,731
Southwest Program (Necop/Papago)	16,283
Santa Monica Project	15,338
Korea	87,165
AID Support Grant	12,616
All Others (Jamaica)	4,000
General Program Development & Information	<u>68,835</u>
	<u>225,968</u>

7) FOREIGN PROJECT GRANTS

Expenditures disbursed by foreign projects are reported upon by the local offices of international accounting firms.

*Sanford Goldstein & Company**Certified Public Accountants**60 East 42nd Street
New York, N. Y. 10017**Sanford Goldstein
Robert L. Manger**(212) 986-3025**California Office
233 Wilshire Boulevard
Santa Monica, California 90401
(213) 451-9871*

To The Board of Trustees of
Meals For Million/Freedom
From Hunger Foundation

We have examined the balance sheet of Meals For Million/Freedom From Hunger Foundation as of December 31, 1979 and 1978, and the related statements of support, revenue and expenses and changes in fund balances and of functional expenditures for the years then ended. Our examination was made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the aforementioned financial statements present fairly the financial position of the Meals For Millions/Freedom From Hunger Foundation at December 31, 1979 and 1978, and the results of its operations and changes in fund balances for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis. The principles are in accordance with the Audit Guide for Voluntary Health and Welfare Organizations.

Respectfully submitted,

Sanford Goldstein & Company
Certified Public Accountants

February 22, 1980
New York, New York

Sanford Goldstein & Company
Certified Public Accountants

MEALS FOR MILLIONS/FREEDOM FROM HUNGER FOUNDATION
BALANCE SHEET
DECEMBER 31, 1979 and 1978

	<u>1979</u>		
	<u>UNRESTRICTED</u>	<u>RESTRICTED</u>	<u>LAND,</u>
	<u>FUNDS</u>	<u>FUNDS</u>	<u>BUILDING &</u>
			<u>EQUIPMENT FU</u>
<u>ASSETS:</u>			
Cash	86,089	104,499	
Accounts Receivable			
Marketable Securities - (Market Value \$3,606, December 31, 1979)	3,108		
Due From Restricted Funds	20,018		
Prepaid Expenses	3,737		
Land, Building & Equipment - At Cost - Less Accumulated Depreciation of \$35,616 in 1979 and \$33,697 in 1978 (Note 3)			109,494
Food Production Equipment - Net Realizable Value			6,300
Other Assets	<u>1,800</u>		
	<u>114,752</u>	<u>104,499</u>	<u>115,794</u>
<u>LIABILITIES & FUND BALANCES:</u>			
Accounts Payable	32,247		
Mortgage Payable (Note 3)			52,208
Due To Unrestricted Funds		20,018	
Fund Balances	<u>82,505</u>	<u>84,481</u>	<u>63,586</u>
	<u>114,752</u>	<u>104,499</u>	<u>115,794</u>

See Notes To Financial Statements

<u>1979</u> TOTAL ALL FUNDS	<u>1978</u> TOTAL ALL FUNDS
190,588	136,238 25,000
3,108	3,000
3,737	2,570
109,494	94,116
6,300	6,300
<u>1,800</u>	<u>1,045</u>
<u>315,027</u>	<u>268,269</u>
32,247	
52,208	54,779
<u>230,572</u>	<u>213,490</u>
<u>315,027</u>	<u>268,269</u>

Sanford Goldstein & Company
Certified Public Accountants

MEALS FOR MILLIONS/FREEDOM FROM HUNGER FOUNDATION
STATEMENT OF SUPPORT, REVENUE AND EXPENSES AND
CHANGES IN FUND BALANCES FOR THE YEAR ENDED
DECEMBER 31, 1979 and 1978

	<u>1979</u>		
	<u>UNRESTRICTED</u>	<u>RESTRICTED</u>	<u>LAND,</u>
	<u>FUNDS</u>	<u>FUNDS</u>	<u>BUILDING &</u>
			<u>EQUIPMENT F</u>
<u>PUBLIC SUPPORT & REVENUE:</u>			
Contributions	678,013	568,992	
Bequests	21,100		
Interest Income	4,946		
Miscellaneous	22,405		
	<u>726,464</u>	<u>568,992</u>	<u>-0-</u>
<u>EXPENSES:</u>			
<u>Program Services:</u>			
(Development of Programs and Project Costs) (Note 6)			
Direct Costs	5,386	952,837	
Program Grants To Restricted Funds	324,523	(324,523)	
	<u>329,909</u>	<u>628,314</u>	<u>-0-</u>
<u>Supporting Services:</u>			
Management & General	129,368		
Fund Raising	189,819		
Depreciation			964
	<u>649,096</u>	<u>628,314</u>	<u>964</u>
Excess (Deficiency) of Public Support & Revenues Over Expenses	77,368	(59,322)	(964)
<u>OTHER CHANGES IN FUND BALANCES:</u>			
<u>Property and Equipment:</u>			
Acquisitions - Unrestricted Funds	(16,342)		16,342
Repayment of Mortgage	(2,571)		2,571
Fund Balances - January 1, 1979 and 1978	<u>24,050</u>	<u>143,803</u>	<u>45,637</u>
Fund Balances - December 31, 1979 and 1978	<u>82,505</u>	<u>84,481</u>	<u>63,586</u>

See Notes To Financial Statements

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<u>1979</u> TOTAL ALL FUNDS	<u>1978</u> TOTAL ALL FUNDS
1,247,005	968,507
21,100	39,104
4,946	4,638
<u>22,405</u>	<u>2,107</u>
<u>1,295,456</u>	<u>1,014,356</u>
958,223	786,141
<u>958,223</u>	<u>786,141</u>
129,368	87,914
189,819	137,752
<u>964</u>	<u>5,127</u>
<u>1,278,374</u>	<u>1,016,934</u>
17,082	(2,578)
<u>213,490</u>	<u>216,068</u>
<u>230,572</u>	<u>213,490</u>

MEALS FOR MILLIONS/FREEDOM FROM HUNGER FOUNDATION
STATEMENT OF SUPPORT, REVENUE AND EXPENSES AND
CHANGES IN FUND BALANCES OF RESTRICTED FUNDS
FOR THE YEAR ENDED DECEMBER 31, 1979 and 1978

	<u>APPLIED NUTRITION PROGRAM</u>		
	<u>Honduras</u>	<u>Ecuador</u>	<u>Healthy Lifestyle For Seniors - Santa Monica</u>
Designated Contributions	55,060	5,168	15,220
Program Grants From Unrestricted Funds	<u> </u>	<u>7,766</u>	<u>22,158</u>
Total	55,060	12,934	37,378
Expenses (See Schedule)	<u>46,288</u>	<u>22,596</u>	<u>43,299</u>
Excess (Deficiency) of Revenues Over Expenses	8,772	(9,662)	(5,921)
Fund Balances - January 1, 1979	<u>14,000</u>	<u>9,662</u>	<u>5,921</u>
Fund Balances - December 31, 1979	<u>22,772</u>	<u>-0-</u>	<u>-0-</u>

See Notes To Financial Statements

<u>Korea</u>	<u>Southwest Program</u>	<u>Papua</u>	<u>A.N.P. Program Development</u>
383,658	6,970	3,000	4,400
<u> </u>	<u>70,185</u>	<u>1,985</u>	<u>17,081</u>
383,658	77,155	4,985	21,481
<u>382,324</u>	<u>80,184</u>	<u>4,985</u>	<u>21,481</u>
1,334	(3,029)	-0-	-0-
<u>34,948</u>	<u>3,029</u>	<u>-0-</u>	<u>-0-</u>
<u>36,282</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>

MEALS FOR MILLIONS/FREEDOM FROM HUNGER FOUNDATION
STATEMENT OF SUPPORT, REVENUE AND EXPENSES AND
CHANGES IN FUND BALANCES OF RESTRICTED FUNDS
FOR THE YEAR ENDED DECEMBER 31, 1979 and 1978

FOOD AND NUTRITION INSTITUTE PROGRAMS

	<u>Resource Center</u>	<u>Jamaica</u>	<u>Training School</u>	<u>Village Texturizer</u>
Designated Contributions		25	18,000	246
Program Grants From Unrestricted Funds	<u>28,927</u>	<u>18,699</u>	<u>60,490</u>	<u>7,183</u>
Total	28,927	18,724	78,490	7,429
Expenses (See Schedule)	<u>28,927</u>	<u>18,724</u>	<u>129,563</u>	<u>23,333</u>
Excess (Deficiency) of Revenues over Expenses	-0-	-0-	(51,073)	(15,904)
Fund Balances - January 1, 1979	<u>-0-</u>	<u>-0-</u>	<u>51,073</u>	<u>15,904</u>
Fund Balances - December 31, 1979	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>

See Notes To Financial Statements

<u>Nutrition Workshop</u>	<u>Oil Seed</u>	<u>Leaf Protein</u>	<u>F.N.I. Program Development</u>	<u>All Others</u>	<u>Total 1979</u>	<u>Total 1978</u>
38,525		2,392	25,212	11,116	568,992	595,038
<u>16,660</u>	<u>2,012</u>	<u>21,074</u>	<u>50,303</u>	_____	<u>324,523</u>	_____
55,185	2,012	23,466	75,515	11,116	893,515	595,038
<u>50,140</u>	<u>2,012</u>	<u>23,466</u>	<u>75,515</u>	<u>-0-</u>	<u>952,837</u>	<u>560,173</u>
5,045	-0-	-0-	-0-	11,116	(59,322)	34,865
<u>(5,045)</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>14,311</u>	<u>143,803</u>	<u>108,938</u>
<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>25,427</u>	<u>84,481</u>	<u>143,803</u>

MEALS FOR MILLIONS/FREEDOM FROM HUNGER FOUNDATION
STATEMENT OF FUNCTIONAL EXPENSES - RESTRICTED FUNDS
FOR THE YEAR ENDED DECEMBER 31, 1979 and 1978

	<u>APPLIED NUTRITION EXPENSES</u>		
	<u>HONDURAS</u>	<u>ECUADOR</u>	<u>HEALTHY LIVES FOR SENIORS SANTA MONI</u>
Project Salaries			19,892
Home Office Salaries	11,295	4,462	1,464
Employee Benefits	776	306	1,859
Payroll Taxes	629	249	1,301
Professional Fees			14,453
Temporary Help			35
Supplies	170	39	712
Telephone	81		376
Postage			4
Shipping & Mailing			
Occupancy			
Printing & Duplication			106
Books & Publications	17	7	305
Equipment Rental & Maintenance			
Insurance			43
Other Office Expense	2,476	971	443
International Travel	3,760	2,232	
U.S. Travel	76		1,658
Conference & Meetings	8		630
Grants & Awards	27,000	14,330	
Miscellaneous Expense			18
	<u>46,288</u>	<u>22,596</u>	<u>43,299</u>

See Notes To Financial Statements

LIFESTYLE
NIORS -
MONICA

KOREA

SOUTHWEST
PROGRAM

PAPUA

A.N.P. -
PROGRAM
DEVELOPMENT

92	10,026	46,328		
464	33,989	6,240	732	9,900
859	4,232	3,940	50	680
301	2,170	3,179	41	552
453	8,667	3,850		513
35				
712	563	3,706	31	11
376	586	1,041		5
4		339		
	158	41		22
		825		
106		1,512		
305	6	354		16
	97	215		57
43		25		
443	7,496	1,409	163	2,186
	16,337		968	2,245
658	657	6,832		2,183
630	100	34		111
	297,240	11	3,000	3,000
18		303		
<u>299</u>	<u>382,324</u>	<u>80,184</u>	<u>4,985</u>	<u>21,481</u>

Sanford Goldstein & Company
Certified Public Accountants

MEALS FOR MILLIONS/FREEDOM FROM HUNGER FOUNDATION
STATEMENT OF FUNCTIONAL EXPENSES - RESTRICTED FUNDS
FOR THE YEAR ENDED DECEMBER 31, 1979 and 1978

FOOD AND NUTRITION INSTITUTE PROGRAM

	<u>Resource Center</u>	<u>Jamaica</u>	<u>Training School</u>	<u>Village Texturizer</u>
Project				
Salaries		12,300		
Home Office				
Salaries	20,463	3,172	63,168	12,794
Employee				
Benefits	1,405	903	4,337	879
Payroll Taxes	1,141	931	3,521	713
Professional				
Fees	90		6,732	
Temporary Help				
Supplies			2,139	389
Telephone		23	630	149
Postage			32	
Shipping & Mailing			37	88
Occupancy				
Printing & Duplication			302	432
Books &				
Publications	1,114		620	
Equipment Rental				
& Maintenance			1,816	141
Insurance			552	
Other Office				
Expenses	4,714	712	13,920	2,827
International				
Travel		163	6,171	4,012
In-Country Travel				
U.S. Travel		520	24,480	726
Conference & Meetings			1,101	8
Grants & Awards				175
Miscellaneous Expense			5	
Home Office Support				
	<u>28,927</u>	<u>18,724</u>	<u>129,563</u>	<u>23,333</u>

See Notes To Financial Statements

<u>Nutrition Workshop</u>	<u>Oil Seed</u>	<u>Leaf Protein</u>	<u>F.N.I. Program Development</u>	<u>Total 1979 (All Programs)</u>	<u>Total 1978 (All Programs)</u>
				88,546	115,968
19,034	1,429	8,227	39,323	235,692	
1,307	98	565	2,700	24,037	6,890
1,061	80	459	2,192	18,219	8,853
3,699			1,319	39,323	49,344
			40	75	
76		126	183	8,145	4,125
360	44	23	313	3,631	2,299
3			22	400	1,124
			510	856	
				825	
			21	2,373	1,669
920		4	14	3,377	
			44	2,370	
				620	2,323
4,201	321	1,803	8,716	52,358	24,393
8,064		10,786	11,129	65,867	72,384
1,722			742	2,464	
944	40	473	6,717	45,306	
8,749			30	10,771	3,212
			1,500	346,256	197,100
		1,000		1,326	1,088
					69,401
<u>50,140</u>	<u>2,012</u>	<u>23,466</u>	<u>75,515</u>	<u>952,837</u>	<u>560,173</u>

Sanford Goldstein & Company
Certified Public Accountants

MEALS FOR MILLIONS/FREEDOM FROM HUNGER FOUNDATION
STATEMENT OF FUNCTIONAL EXPENSES - UNRESTRICTED FUNDS
FOR THE YEAR ENDED DECEMBER 31, 1979 and 1978

	<u>Management and General</u>	<u>Fund Raising</u>
Home Office Salaries	62,401	50,513
Employee Benefits	4,285	2,816
Payroll Taxes	3,478	3,468
Professional Fees	15,306	11,550
Supplies	190	
Telephone	40	
Postage	50	29,627
Postage Due		4,352
Shipping & Mailing		28,310
Data Processing	6,474	6,810
Printing & Duplication	3,090	38,680
Books & Publications	82	37
Insurance	553	75
Other Office Expenses	15,903	11,377
U.S. Travel	15,536	1,901
Conference & Meetings	1,935	303
Miscellaneous Expense	45	
Program Grants		
Home Office Support		
	<u>129,368</u>	<u>189,819</u>

See Notes To Financial Statements

<u>Program Services</u>	<u>Total 1979</u>	<u>Total 1978</u>
	112,914	230,384
	7,101	16,662
	6,946	11,558
100	26,956	23,741
305	495	4,769
7	47	15,889
	29,677	27,562
	4,352	
293	28,603	24,247
	13,284	842
115	41,885	32,821
	119	3,851
	628	1,834
29	27,309	34,798
2,645	20,082	22,231
1,892	4,130	2,008
	45	582
324,523	324,523	67,256
		(69,401)
<u>329,909</u>	<u>649,096</u>	<u>451,634</u>

MEALS FOR MILLIONS/FREEDOM FROM HUNGER FOUNDATION
MAJOR CONTRIBUTORS FOR THE YEAR ENDED DECEMBER 31, 1979

<u>NAME</u>	<u>AMOUNT</u>	<u>PROGRAM GRANT</u>
ted States Agency for ernational Development	\$300,000 77,269	Unrestricted Program Services Operational Program - Korea
ivate Agencies Collabo- ing Together, Inc.	102,523 24,000 2,300	Comprehensive Model Rural Nutrition - Korea Nutrition Education Workshop - Central America Nutrition Education Training Center - Fiji
y of Santa Monica	3,000	Healthy Lifestyle for Seniors - Santa Monica
d For India Fund	2,200	India
pster Trust	3,000	Unrestricted
ional Center for Appropriate hnology	5,695	Unconventional Desert Farming: Conversion to Low Water-and- Energy-Consumptive Methods
sie Smith Noyes Foundation	18,000	Food and Nutrition Institute
Memorial Trust	40,000	Comprehensive Model Rural Nutrition - Korea
lic Welfare Foundation	30,000	Applied Nutrition - Honduras
erman Foundation	5,000 7,000	Relief & Rehabilitation - Cambodia Unrestricted
. and Mary J. Skaggs ndation	15,000	Food and Nutrition Institute
ymous	10,150	Healthy Lifestyle for Seniors - Santa Monica.

MEALS FOR MILLIONS/FREEDOM FROM HUNGER FOUNDATION
MAJOR CONTRIBUTORS FOR THE YEAR ENDED DECEMBER 31, 1979
(CONTINUED)

<u>NAME</u>	<u>AMOUNT</u>	<u>PROGRAM GRANT</u>
es Aircraft	\$ 3,780	Unrestricted
ex Corporation	2,500	Nutrition Education Workshop - Central America
stian Church/Disciples hrist	2,000	Applied Nutrition - Honduras
dination in Development.	4,400	Nutrition Survey - Mexico
opcal Church Presiding op's Fund	20,000	Applied Nutrition - Honduras
ed Church Board for d Ministries	30,000	Comprehensive Model Rural Nutrition - Korea
	3,000	Applied Nutrition - Honduras
	3,000	Rural Life Center - Philippines
	4,000	Unrestricted
	2,000	Nutrition Education Workshop - Central America
ad Methodist Committee alief	40,000	Comprehensive Model Rural Nutrition - Korea
ad Presbyterian Church ge USA	10,000	Nutrition Education Workshop - Central America

MEALS FOR MILLIONS/FREEDOM FROM HUNGER FOUNDATION
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 1979

1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accounts of the Foundation are on the accrual basis. The Foundation follows the practice of capitalizing all expenditures for capital assets and the fair value of any donated fixed assets. Fixed assets are depreciated over the estimated useful lives of the assets on the straight-line method. All contributions are considered to be available for unrestricted use unless specifically restricted by the donor. Contributions are recorded only as received except for government grants which are granted for specific time periods.

2) RESTRICTED FUNDS

All restricted funds were used for the designated purpose of such grants.

3) LAND, BUILDING & EQUIPMENT

Land, Building & Equipment are comprised of the following:

Land	\$ 45,765
Building	59,240
Furniture & Fixtures	37,218
Vehicles	<u>2,887</u>
	\$145,110
Less Accumulated Depreciation	<u>35,616</u>
Net	<u>\$109,494.</u>

All fully depreciated assets are removed from the accounts.

MEALS FOR MILLIONS/FREEDOM FROM HUNGER FOUNDATION
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 1979
(CONTINUED)

The mortgage payable, secured by a deed of trust on the real estate, is payable to the bank at \$573 per month including interest at 8% per annum. The final payment is payable March, 1992.

4) COMMITMENT

The Foundation leases office space in New York on a month to month basis at an annual rate of \$8,316.

5) PACT

During 1979, the Foundation received payments on grants from Private Agencies Collaborating Together, Inc. (PACT) for the following purposes: \$102,523 for Korea - Comprehensive Model Rural Nutrition Program, \$24,000 - Nutrition Education Workshop - Central America, and \$2,300 - Nutrition Education Training Center - Fiji.

6) PROGRAM SERVICES

The Foundation used from its unrestricted funds as follows:

Applied Nutrition Program	\$119,175
Food and Nutrition Institute Program	<u>205,348</u>
	<u>\$324,523</u>

7) FOREIGN PROJECT GRANTS

Expenditures disbursed by foreign projects are reported upon by the local offices of international accounting firms.

Sanford Goldstein & Company

Certified Public Accountants

*60 East 42nd Street
New York, N. Y. 10017*

Sanford Goldstein

Robert L. Mangoo

(212) 986-3025

California Office

233 Wilshire Boulevard

Santa Monica, California 90404

(213) 451-9871

April 17, 1978

To The Board of Trustees of
Meals For Millions Foundation

We have examined the balance sheet of Meals For Millions Foundation as of December 31, 1977, and the related statements of support, revenue and expenses and changes in fund balances and of functional expenditures for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the aforementioned financial statements present fairly the financial position of the Meals For Millions Foundation at December 31, 1977, and the results of its operations and changes in fund balances for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year. They are in accordance with the Audit Guide for Voluntary Health and Welfare Organizations.

Respectfully submitted,

Sanford Goldstein & Company
Certified Public Accountants

MEALS FOR MILLIONS FOUNDATION
 BALANCE SHEET
DECEMBER 31, 1977

<u>Assets</u>	<u>Unre- stricted Funds</u>	<u>Restricted Funds</u>	<u>Land, Building & Equipment Fund</u>	<u>Total Funds</u>
Cash	61,452	108,938		170,390
Miscellaneous Receivables	1,500			1,500
Prepaid Expenses	2,052			2,052
Land, Building & Equipment- At Cost Less Accumulated Depreciation of \$28,570 (Note 3)			93,806	93,806
Food Production Equipment- Net Realizable Value			6,300	6,300
Other Assets	<u>1,473</u>			<u>1,473</u>
Total	<u>66,477</u>	<u>108,938</u>	<u>100,106</u>	<u>275,521</u>
<u>Liabilities & Fund Balances</u>				
Accounts Payable	2,299			2,299
Mortgage Payable (Note 3)			57,154	57,154
Fund Balance	<u>64,178</u>	<u>108,938</u>	<u>42,952</u>	<u>216,068</u>
Total	<u>66,477</u>	<u>108,938</u>	<u>100,106</u>	<u>275,521</u>

See Accompanying Notes To Financial Statements

MEALS FOR MILLIONS FOUNDATION
STATEMENT OF SUPPORT, REVENUE, AND EXPENSES AND CHANGES IN
FUND BALANCES FOR THE YEAR ENDED DECEMBER 31, 1977

	Unre- stricted Funds	Restricted Funds	Land, Building & Equipment Fund	Total All Funds
<u>Public Support & Revenue:</u>				
Contributions	327,678	521,489		849,167
Bequests	21,096			21,096
Rent Income	5,400			5,400
Interest Income	2,448			2,448
Miscellaneous	4,790		307	5,097
Dr. Henry Borsook Fund Dinner (Net of Expenses)		10,557		10,557
	<u>361,412</u>	<u>532,046</u>	<u>307</u>	<u>893,765</u>
<u>Expenses:</u>				
<u>Program Services:</u>				
(Development of Programs and Project Costs) (Note 6)	90,634	529,028		619,662
<u>Supporting Services:</u>				
Management & General	77,210			77,210
Fund Raising	138,565			138,565
Depreciation			4,238	4,238
	<u>306,409</u>	<u>529,028</u>	<u>4,238</u>	<u>839,675</u>
Excess (Deficiency) of Public Support & Revenues Over Expenses	55,003	3,018	(3,931)	54,090
<u>Other Changes In Fund Balances:</u>				
<u>Property & Equipment</u>				
Acquisition and Sales-				
Unrestricted Funds	(905)		905	
Repayment of Mortgage	(2,029)		2,029	
In Kind Contribution of Food Production			(5,750)	(5,750)
Fund Balance-				
January 1, 1977 (Adjusted) (Note 8)	<u>12,109</u>	<u>105,920</u>	<u>49,699</u>	<u>167,728</u>
FUND BALANCES DECEMBER 31, 1977	<u>64,178</u>	<u>108,938</u>	<u>42,952</u>	<u>216,068</u>

See Accompanying Notes To Financial Statements

L. Goldstein & Company
Independent Public Accountants

MEALS FOR MILLIONS FOUNDATION
 STATEMENT OF SUPPORT, REVENUE, AND EXPENSES
 AND CHANGES IN FUND BALANCES OF RESTRICTED FUNDS
 FOR THE YEAR ENDED DECEMBER 31, 1977

	Develop- ment Program Grant	Tech- nology Trans- fer Grant	Inter- national Inst- itute of Protein Food Tech- nology	Nutrition Education Consumer Outreach Program	Ecuador Agricul- tural Project	Ecuador Market- ing/ Enter- prise Project	India	Korean Project	Ghana	Nutrition Workshop	All Others	Total
Designated Contributions	214,920	17,025	66,967	55,065	106,800	70	4,970	22,573	4,738	25,331	3,030	521,489
Expenses (See Schedule)	<u>217,020</u>	<u>18,702</u>	<u>71,897</u>	<u>57,997</u>	<u>80,250</u>	<u>8,737</u>	<u>2,798</u>	<u>35,617</u>	<u>4,738</u>	<u>25,842</u>	<u>5,430</u>	<u>529,028</u>
Excess (Deficiency) of Revenues Over Expenses	(2,100)	(1,677)	(4,930)	(2,932)	26,550	(8,667)	2,172	(13,044)		(511)	(2,400)	(7,539)
Fund Balances - January 1, 1977 (Adjusted) (Note 8)	<u>16,391</u>	<u>9,321</u>	<u>4,930</u>	<u>3,218</u>	<u>11,498</u>	<u>8,667</u>	<u>19,774</u>	<u>21,050</u>			<u>11,071</u>	<u>105,920</u>
Fund Balances - December 31, 1977	<u>14,291</u>	<u>7,644</u>	<u>-0-</u>	<u>286</u>	<u>38,048</u>	<u>-0-</u>	<u>21,946</u>	<u>8,006</u>	<u>-0-</u>	<u>(511)</u>	<u>8,671</u>	<u>98,381</u>

See Accompanying Notes To Financial Statements

Pearlman Goldstein & Company
Certified Public Accountants

MEALS FOR MILLIONS FOUNDATION
STATEMENT OF FUNCTIONAL EXPENSES-RESTRICTED FUNDS
YEAR ENDED DECEMBER 31, 1977

	Develop- ment Program Grant	Tech- nology Trans- fer Grant	Inter- national Institute of Protein Food Tech- nology	Nutrition Education Consumer Outreach Program	Ecuador Agricul- tural Project	Ecuador Market- ing/ Enter- prise Project	India	Korean Project	Ghana	Nutrition Workshop	All Others	Total
Salaries	123,116		10,310	6,875								140,301
Payroll Taxes	6,936		1,398	402								8,736
Employee Benefits	9,869		1,914	547								12,330
Insurance			2,083									2,083
Outside Services	104	3,998	603	512				134		1,320	25	6,693
Rent	10,486											10,486
Utilities			2,321									2,321
Freight		72	750									822
Purchases-Food Material		920	1,988								2,222	4,730
Postage		4	553	41								598
Telephone				102								102
Printing		2,477	133							6,535		9,145
Dues & Subscriptions			1,274									1,274
Consulting & Pro- fessional Fees	1,700		900					200	1,530		900	5,230
Meetings & Seminars	1,220		787				31			20		2,058
Travel	32,217	5,744	13,721	1,823			1,767	5,564	3,208	10,271	186	74,501
Vehicle Expense			2,625									2,625
Supplies		2,506	2,895	1				748		151	32	6,333
Repairs & Maintenance	3,894	229	4,762		39			118			30	9,033
Miscellaneous	38	22	526					70			5	700
Student Housing & per Diem			18,354									21,899
Equipment Purchases				8,500	5,291							15,760
Home Office Support	27,440	2,730	4,400	39,394	59,160	8,737	1,000	24,293		4,000		67,330
Project Grants (Note 7)				57,997	80,250	8,737	2,798	35,617	4,738		2,030	134,401
	<u>217,020</u>	<u>18,702</u>	<u>71,897</u>	<u>57,997</u>	<u>80,250</u>	<u>8,737</u>	<u>2,798</u>	<u>35,617</u>	<u>4,738</u>	<u>25,842</u>	<u>5,430</u>	<u>529,028</u>

See Accompanying Notes To Financial Statements

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Sanford Goldstein & Company
Certified Public Accountants

MEALS FOR MILLIONS FOUNDATION
STATEMENT OF FUNCTIONAL EXPENSES--UNRESTRICTED FUNDS
YEAR ENDED DECEMBER 31, 1977

	Manage- ment & General	Fund Raising	Program Services	Total
Salaries	59,679	58,438	62,588	180,705
Payroll Taxes	2,967	2,903	2,531	8,401
Employee Benefits	5,701	5,588	4,564	15,853
Insurance	3,520	38		3,558
Outside Services	614	113	818	1,545
Rent	7,560			7,560
Utilities	614		282	896
Freight			11	11
Brochures & Newsletters		4,637	201	4,838
List Maintenance		8,281		8,281
Bulk Mailing		20,601	645	21,246
Postage	4,672	16,722	1,053	22,447
Telephone	12,201		465	12,666
Equipment Rental	3,991		111	4,102
Printing	4,833	14,707	1,784	21,324
Books & Subscriptions	160	65	72	297
Consulting & Professional Fees	8,513	3,000	5,544	17,057
Meetings & Seminars	1,038	76	94	1,208
Travel	16,051	2,705	3,100	21,856
Vehicle Expense	221	247		468
Interest	4,354			4,354
Taxes & Licenses	962	55		1,017
Supplies	4,016	361	190	4,567
Repairs & Maintenance	2,737			2,737
Miscellaneous Expense	136	28	227	391
Project Grants			6,354	6,354
Home Office-Support	(67,330)			(67,330)
	<u>77,210</u>	<u>138,565</u>	<u>90,634</u>	<u>306,409</u>

See Accompanying Notes To Financial Statements

MEALS FOR MILLIONS FOUNDATION
MAJOR CONTRIBUTORS (USAID, FOUNDATIONS AND CHURCHES)
FOR THE YEAR ENDED DECEMBER 31, 1977

<u>Name</u>	<u>Amount</u>	<u>Program Grants</u>
United States Agency For International Development	\$214,920	Development Program
Private Agencies Collaborating Together, Inc.	2,369	Ghana
	22,573	Korea
	50,000	Ecuador Agriculture
Shmanson Foundation	2,500	International Institute of Protein Technology
	500	Unrestricted
Compton Foundation	5,000	Nutrition Workshop
	400	Unrestricted
Food For India Fund	4,600	India
General Service Foundation	17,000	Technology Transfer
International Foundation	6,000	International Insti- tute of Protein Technology
Essie Smith Noyes Foundation	32,010	International Insti- tute of Protein Technology
ew Memorial Trust	10,000	Unrestricted
Public Welfare Foundation	5,000	Nutrition Education Consumer Outreach Program
Cherman Foundation, Inc.	5,000	Unrestricted
Full Foundation	5,000	Unrestricted

Sanford Goldstein & Company
Certified Public Accountants

MEALS FOR MILLIONS FOUNDATION
MAJOR CONTRIBUTORS (USAID, FOUNDATIONS AND CHURCHES)
FOR THE YEAR ENDED DECEMBER 31, 1977

<u>Name</u>	<u>Amount</u>	<u>Program Grants</u>
United Church Board for World Ministries	\$ 2,000	International Institute of Protein Technology
	5,000	Nutrition Workshop
	1,000	Honduras Health Worker Training
	2,369	Ghana
	5,000	Dr. Henry Borsook Fund
	1,000	Kenya weaning foods
	12,131	Unrestricted
United Presbyterian Church in the USA	25,000	Nutrition Education Consumer Outreach Program
	10,000	Nutrition Workshop
Episcopal Church Presiding Bishop's Fund	7,000	International Insti- tute of Protein Food Technology
	5,000	Nutrition Workshop
	25,000	Nutrition Education Consumer Outreach Program
Church World Service	56,800	Ecuador Agriculture

MEALS FOR MILLIONS FOUNDATION
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 1977

1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The Foundation maintains its books on the accrual basis of accounting. The Foundation follows the practice of capitalizing all expenditures for capital assets; the fair value of donated fixed assets is similarly capitalized. Depreciation of the building, furniture and fixtures, and vehicles is provided over the estimated useful lives of the assets on the straight-line method. All contributions are considered to be available for unrestricted use unless specifically restricted by the donor. Contributions are recorded only as received.

2) RESTRICTED FUNDS

All restricted funds were used for the purpose for which they were granted.

3) LAND, BUILDING & EQUIPMENT

Land, Building & Equipment are comprised of the following:

Land	\$ 45,764
Building	59,240
Furniture & Fixtures	11,030
Vehicles	<u>6,342</u>
	\$122,376
Less Accumulated Depreciation	<u>28,570</u>
Net	\$ <u>93,806</u>

All fully depreciated assets are removed from the accounts.

The mortgage payable, secured by a deed of trust on the real estate, is payable to the bank at \$573 per month including interest at 8% per annum. The final payment is payable March, 1992.

MEALS FOR MILLIONS FOUNDATION
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 1977

4) COMMITMENT

The Foundation leases office space in New York on a month to month basis at an annual rate of \$7,560.

5) PACT

During 1977, the Foundation received payments on grants from Private Agencies Collaborating Together, Inc. (PACT) for the following purposes: \$50,000 - Ecuador Agricultural Project, \$22,573 for Korea - Comprehensive Nutrition Program and \$2,369 for Ghana.

Ecuador Agricultural Project - In support of Meals For Millions efforts to introduce soybeans as a cash crop in the Santa Elena area of Ecuador and to promote the development of farmer groups.

The Comprehensive Nutrition Program - Korea - In support of Meals For Millions efforts to develop a low cost high protein food in collaboration with Korean institutions.

Ghana - A feasibility study for Ghana weaning foods.

6) PROGRAM SERVICES

The Foundation used from its unrestricted funds \$13,584 in support of the International Institute of Protein Food Technology project and \$22,414 in support of Ecuador Marketing/Enterprise project.

MEALS FOR MILLIONS FOUNDATION
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 1977

7) IN KIND CONTRIBUTION

The Foundation contributed food production equipment valued at \$5,750 to the World Foods Service General Conference of Seventh Day Adventists for their Cairo Beverage Project.

8) FOREIGN PROJECT GRANTS

Expenditures disbursed in Korea and Ecuador will be reported upon by the local offices of international accounting firms. Grants to the Ecuador and Korean projects are shown in this audit, plus expenses incurred in the United States.

Certain cash balances in foreign bank accounts totalling \$18,619 were carried on the records of the Foundation at December 31, 1976. These accounts will be included in the above mentioned reports and have been transferred from the records.

9) OTHER DESIGNATED PROJECTS (RESTRICTED FUNDS)

Included in other designated projects were designated contributions of \$1,000 for Kenya weaning foods, \$1,000 for Honduras Health Worker Training and \$442 for Multi-Purpose Food. Expenses incurred were \$1,000 for Kenya, \$1,030 for Honduras and \$2,222 for the purchase and shipment of Multi-Purpose Food.

ATTITUDE TOWARDS SELF-HELP

1973	1978	1973	1978
None		Indifferent	This community should be regarded as progressive in the sense that the gone outside of their community to initiate contacts with institutions individuals who might be of assistance to them. They visit and write r to MFM, FEPP, BNF, IERAC* *Instituto Ecuatoriano de Reforma Agraria y Colonización (Agrarian Reform & Colonization Institute)
None	Electricity	Feeling was one of pessimism, farmers were actually leaving the zone.	Community is optimistic. One of the principal reasons is that a dam has built in the site and although no provision is established for taking w farmers have been able to pump water out using their own equipment.
None	Electricity is now being installed in the community.	Indifferent	The agricultural group is quite aggressive in contacting other institutio In June the committee was preparing to send a delegation to the capital discuss land rights in their area.
None	Electricity, hospital.	Optimistic	Optimistic. Two carpenter shops operate in community.
None	Municipal electric plant.	Optimistic	Aggressive
Health Center	Electricity, doctor, telephone.	Optimistic	The agricultural groups are made up primarily of men in their 20s. They are hard working and optimistic.
1975 Health Center	1978 Municipal electric plant.	1975 Optimistic	1978 A shop teaching cabinet making now exists. This is a very poor communit Work has begun on a dam for the area which greatly improves living cond:

1978	1973		1978		1973		1978		BY LEASE AND OTHER CARRIES	
	1973	1978	1973	1978	1973	1978	1973	1978	1973	1978
tractor with implements, pumps for irrigation, pumps for spraying chemicals (portable), manual seeders..	5	30	A few portable radios.	Radios, electric generators, refrigerators, sewing machines, record players, tape recorders.	Subsistence	Permits purchase of a few items other than just base necessities such as mentioned under personal property.	None	Operation of agricultural equipment, tractors, plow, disc, etc. diets, nutrition, homemaking, self-help community org.		
Several tractors with implements. Irrigation equipment (4 have spray type). Completely mechanized.	50	450	A few radios & 1 refrigerator.	Radios, refrigerators, 2 rockolas, electric plants, televisions, private vehicles.	" " " "	" " " "	None	" " " "		
Access to MFM equipment; tractor, plow, etc. Several farmers own their own pumps & back-pack sprayers.	20	80	Radios, refrigerators.	Radios, refrigerators, sewing machines.	" " " "	" " " "	None	" " " "		
Tractor with implements, irrigation equipment, 10% of farmers have back-pack sprayers.	80	300	Radios, refrigerators.	Televisions, sewing machines, record players.	" " " "	" " " "	None	" " " "		
10% of farmers have irrigation pumps & back-pack sprayers.	15	150	Radios	Televisions, generators, etc.	" " " "	" " " "	None	" " " "		
Few farmers own pumps, back-pack sprayers.	40	400	" "	" " " and including gas stoves.	" " " "	" " " "	None	" " " "		
Back-pack sprayers, and seeders.	1978 50	1978 20	1975 " "	1978 " " "	1975 " " "	1978 " " " "	1975 None	1978 " " " "		

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+ Hectares under Permanent Cultivation - Figures listed here reflect lands used primarily for growing traditional grain crops, soya, and fruits and vegetables. In addition, farmers also work other mountain lands where they may grow crops such as bananas and plantains.

HOUSING		INSTITUTIONS IN ZONE*		AGRICULTURE		COMMUNITY AGRICULTURE
1973	1978	1973	1978	1973	1978	1973
Cane	Bamboo, 4 of cement blocks, several of wood.	None	MFM, PC, MAG, CEDEGE, FEPP, INIAP, BNF.	Traditional hoe, machete. No use of chemicals or fertilizers.	Trained in use of modern technical equipment. They now use fertilizers, pesticides, credit for agricultural development.	Hoes, machetes, rented a pump for irrigation from Centro Agricola (private sector group).
Cane	Several cement and wood houses.	INERHI	MFM until 1975, PC, BNF, MAG**, CEDEGE***, IERAC, INERHI.	Traditional	" " " " "	Traditional
Cane	Cement blocks, wood.		MFM, MAG, BNF, FEPP, IERAC, PC.	Traditional	" " " " " Two MFM trained tractor operators have left the community.	Traditional
Cane and food.	Wood and cement.	BNF	BNF, MFM, MAG, FEPP, IEOS.	Traditional and some chemicals.	Highly technified approach to farming.	Traditional
Cane	Wood and cement block.	Ecuadorian army working in reforestation.	MFM, PC, BNF, MAG, IERAC.	Traditional	" " " " "	2 irrigation pumps
Cane and food.	Cement blocks and wood and cane.	Ecuadorian army working in reforestation.	MFM, BNF, MAG, FEPP, INERHI, CEDEGE.	Traditional	" " " " "	Traditional equipment
1975 Cane	1978 Wood	1975 BNF	1978 MFM, MAG, FEPP, INERHI.	1975 Traditional	1978 Some limited modern equipment	1975 Irrigation pumps

** MAG is presently building an office/home in site, value \$22,000

*** CEDEGE permanent experimental station

COMMUNITY	ORGANIZATION		INFRASTRUCTURE		TRANSPORTATION TO SITE	
	1973	1978	1973	1978	1973	1978
San Vicente de Loja	None	Precooperative of farmers, committee of farmers (8), Mother's Club (12), committee for improvement of San Vicente de Loja, committee for fathers of family.	The most reliable method of entering the community was by foot or river.	There is now a permanent road covered by gravel.	Boat or foot	Two vehicles daily to Libertad (city on peninsula).
Azucar	Inactive comuna (archaic community structure dating back to the colonial period).	Active comuna.	Dirt road	Permanent gravel road.	1 daily charcoal vehicle.	Several vehicles in and out per day.
Dos Mangas	Comuna	Functioning comuna group. Committee of farmers (17 members).	Dirt road	Asphalt	Lumber trucks	Regular bus service (cooperative)
Sinchal - Barcelona	None	3 precooperatives, Women's Club, 4-F Club.	Gravel road	Asphalt road	Public transport	Same
Loma Alta	Disorganized comuna.	Organized comunas, agricultural committee.	Road part of year because of wash outs.	Gravel road 80% finished, bridge installed.	Inconsistent transport	Regular serv by bus or tr
Colonche	Disorganized comuna.	2 groups of organized farmers, Women's club, 4-F Club.	Seasonal road	Asphalt	Regular transport	Same
Salanguillo	1975 Comuna organization	1978 Committee of farmers, committee for improve-ment of the village.	1975 Seasonal road	1978 About 60% is now covered with gravel.	1975 Inconsistent transport	1978 Regular service

* Institutions in Zone - MFM-Meals for Millions, PC-Peace Corps, MAG-Ministry of Agriculture, CEDEGE-Study Commission for the Development of River Guaya. FEPP-Ecuadorian Foundation of the People's Progress. INIAP-National Institute of Agricultural Research. ENP-National

Evaluation of the Small-Scale Caribbean
Food Technology Collaborative Programme
with the Women and Development Unit

Project Manager: Patrick Widner

Caribbean Technical Projects Officer: Glenn W. Patterson

Dates Covered: October 1, 1979 - March 30, 1980

This is an evaluation of the Caribbean programme for the first six (6) months of its implementation. The Activity Record Chart given in Appendices I and II was used to keep an on-going record of all these activities which the programme was involved in. A separate set of charts is kept for each country worked in. As additional pages for each country are completed, copies will be sent to the California and New York MFM/FFH Offices for updating the evaluation and for fund raising efforts. It is used to help form the summary of the activities given in Appendix III.

GOAL - To assist lesser developed Caribbean countries in reducing or eliminating malnutrition in young children, and pregnant and lactating women.

OBJECTIVES

- A. Develop an on-going relationship with WAND where the programme will have:
 - (i) a system developed to manage and evaluate WAND's and MFM/FFH's inputs and outputs;
 - (ii) criteria or guidelines to follow for selecting projects and other activities;

- B. Emphasize input to projects and other activities within the LDC's of the Caribbean, which are directed towards reducing or eliminating malnutrition in young children, pregnant and lactating women. Improvement of self-

sufficiency and socio-economic status will also be objectives of these projects and activities, but will take a lower priority.

- C. Provide direct technical assistance (coupled with project development, if necessary) to establish organised groups, institutions or agencies who are involved in individual and community development.
- D. Form, coordinate, make available to interested parties and manage a nutrition, and food processing and preservation resource bank of information, persons and organizations to assist in projects and other activities. Test, adapt, document and disseminate appropriate food technologies from other regions or territories so/can be used by Caribbean persons.
- E. Provide assistance in food, nutrition and health but which are not related but help support objective A - D.
- F. Activity not directly related to any of the above objectives.

COMMENTS ON OBJECTIVES

Below is a brief summary of the degree to which each objective was met or not met and some ideas on how to ensure we better accomplish each in the future.

OBJECTIVE A - The relationship with WAND has developed well and an office and associated procedures have been set up. Management and evaluation of the programme has been implemented as evidenced by this first evaluation. A description of the programme's background, areas of assistance and project selection guidelines, has been made and distribution to interested parties started.

OBJECTIVE B - Nearly 16% of the activities dealt with meeting this objective. We had chosen two countries, Antigua and St. Vincent; to concentrate our activities in. With the exception of Barbados, which

is the base country, we have managed to accomplish that part of the objective. Continued emphasis has been made to deal with activities leading toward reducing or eliminating malnutrition. Some agencies, institutions and people, have also asked for assistance in other areas but these requests are usually directed to other more competent resources. In involvement with projects dealing with improved self-sufficiency and socio-economic status through development of income-generating activities, for example, care must be taken to ensure that a strong nutritional improvement component is built in as well.

OBJECTIVE C - Almost 24% of the eighty-one (81) activities dealt with providing direct technical assistance. This is a very important part of the outreach and follow-up programme which WAND and MFM/FFH should stress even more in the future. More interest and motivation result which in turn brings about a stronger self-help component and nutritional improvement, using local resources. We must continue to make sure we can provide that direct technical assistance through, among other things, having qualified field staff and good base office back-up staff support, to provide additional information and assistance. We should strive to build on our record of providing good follow-up.

OBJECTIVE D - To meet some of this objective, a bibliography of Small-Scale Food Technologies available at the WAND/MFM/FFH Barbados Office has been made up and is being distributed to interested agencies and institutions. WAND is also compiling a resource list of persons and organisations. Time and facilities have not permitted a lot of testing and adapting of technologies. Part of this will be

overcome through collaboration with Caribbean Development Bank (on a grant to set up and test small-scale solar drying sites in four (4) countries) and CADEC (to help them plan and implement an appropriate technology testing and adaptation facility). Both collaboration efforts were initiated by those two agencies and resulted in their knowing of our expertise, interest and overall objectives for the region. We should be as supportive as possible of these activities and look forward to other collaborative efforts/which we have already been approached. These will be made known to California and New York Offices as they develop.

OBJECTIVE E - This objective is included here to indicate the need for field staff to:-

- (a) help coordinate some activities of other persons or groups;
- (b) conduct feasibility studies on possible projects;
- (c) provide some training in project development;
- (d) facilitate putting people in contact with people and
- (e) gathering background information on people, organisations, and related areas which will help make a field person more effective in future projects and activities.

As field persons become more familiar with the region and countries they are responsible for, less time will have to be spent on this objective. This emphasizes the importance of having a resident field person as opposed to one who does not live in the region being served and is not familiar with local, cultural, social, economical, political, religious, personal and personnel factors which must be known to provide meaningful and positive, long lasting results.

OBJECTIVE F - Only 2.1% of the activities related to areas not connected to the food and nutritional aspects we are concerned with. These non-related activities dilute out the effectiveness of a programme.

With any new programme, it is sometimes difficult to resist getting involved with activities not covered by our objectives. As the Caribbean programme continues to develop and grow, it is important to have clear cut objectives, activities and/or project selection criteria, and policies which will help guide all persons to those areas we are most qualified to assist in.

There is a lot more that can be done in nutritional improvement through small-scale or community level technical assistance.

Having clear plans, as mentioned above, staff and financial support will help make our effectiveness and impact that much greater. The number and type of activities shown in Appendix II, exemplify and support the need for MFM/FFH to direct more efforts to expanding and strengthening our ability to offer assistance in the community level food technology areas which have strong nutritional improvement and self-help components.

Appendix I

Explanation of Activity Record Chart

Date: Date when activity was performed

Activity: General summary of major type of activities which were performed.

Institution
Agency: or Group: The name of the institution, agency or group with whom or for whom the activity was done.

Community or
Area: No. of participants (B, PB, O) (F, M, C)
The community or area where the activity was done and the number of participants B = Beneficiaries, PB = possible beneficiaries, O = "Other" (applies to information sources, advisors, none project participants and those project carriers who are not part of target population (young children pregnant and lactating women).
and F = Female, M = Male, C = Children.

Time (hrs) How (PMT): Time in hours spent on activity and whether done by P = personal visit, M = mail or T = telephone.

Planned Follow-up: What follow-up activity is planned and who is to do it.

FU Done: If checked indicates the planned follow-up has been done or completed.

Objective: Indicates which objective the activity met or helped accomplish.

SUMMARY OF ACTIVITIES

Appendix III

The following gives a brief summary of the activities recorded

up to March 30, 1980

Number of Participants

	Female		Male		Children		%
● Beneficiaries	Antigua	- 7	St.Vincent	- 29	St.Vincent	- 50	
	St.Vincent	- 85					
		<u>92</u>		<u>29</u>		<u>50</u>	9.2
<hr/>							
Possible Beneficiaries	Antigua	- 73	Antigua	- 25	Antigua	- 140	
	Barbados	- 26	Barbados	- 15	Haiti	- 120	
	Dominica	- 33	Dominica	- 18			
	St. Kitts	- 14	St.Lucia	- 150	St.Lucia	- 500	
	St.Lucia	- 251	St.Vincent	- 60			
	St.Vincent	- 81					
		<u>478</u>		<u>268</u>		<u>760</u>	80.9
<hr/>							
Other	Antigua	- 31	Antigua	- 20	X		
	Barbados	- 26	Barbados	- 25			
	Dominica	- 4	Dominica	- 2			
	Haiti	- 2	Jamaica	- 1			
	Jamaica	- 1	St.Kitts	- 3			
	St.Kitts	- 7	St.Lucia	- 7			
	St.Lucia	- 10	St.Vincent	- 32			
	St.Vincent	- 13					
	Other countries	- 1					
		<u>95</u>		<u>90</u>		<u>0</u>	9.9
<hr/>							
	35.7		20.8		43.5	18.62	
<hr/>							

Time Spend (hours)

	Personal	Mail	Telephone
Country			
Antigua	137½	X 3	X 2
Barbados	379	2	6
Dominica	40	10	X 1
Haiti	X	2	1
Jamaica	23	1½	X
St. Kitts	25	X	1
St. Lucia	43	X 1	X
St. Vincent	140½	4	X 2
Other Countries		1	X
Total	788	24½	16
%	95.1	3.00	1.9

Number of Activities Devoted to Each Objective

	<u>Objectives</u>					
	A	B	C	D	E	F
No of Activities	5	31	46	41	67	4
%	2.6	16.0	23.7	21.1	34.5	2.1

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INFORME DE LA EVALUACION

I. DATOS GENERALES.

A. Introducción.

En el presente informe damos a conocer datos objetivos y organizados que nos permitan conocer el estado actual de los subprogramas de: "Crecimiento y Desarrollo", "Control Prenatal" y "Vacunación", y ya que es actividad prioritaria del P.N.A., velar por el mejoramiento del estado nutricional de los grupos vulnerables (embarazadas, lactantes y niños menores de cinco años), se dan así lineamientos generales para la realización de paulos para elaborar el anteproyecto de las actividades a realizar en el Centro de Salud y en su área de influencia, las actividades irán orientadas a resolver los problemas detectados y a la resolución de los mismos.

B. Responsables

- a. Auxiliar de enfermería
- b. Supervisora de área
- c. Coordinadora de Educación Nutricional (M. ...)

II. ENCABEZAMIENTO.

A. Objetivosa. General

- Incrementar acciones y corregir fallas en los subprogramas de: Crecimiento y Desarrollo.
- Conocer la cobertura de la clínica de Crecimiento y Desarrollo.
- Determinar cualitativamente las mujeres embarazadas que asisten a control.
- Detectar problemas de atención y cobertura de los subprogramas de Control Prenatal, crecimiento y desarrollo y vacunación.
- Dar lineamientos generales que sirvan de pauta para elaborar el anteproyecto de las actividades a realizar en el CESAR de Zonilotepe y su área de influencia.

B. Metodología

Primeramente se elaborará un plan de evaluación; éste contendrá los pasos a seguir en tal actividad. Utilizaremos en la evaluación los siguientes instrumentos:

- Evaluación de la Clínica de Crecimiento y Desarrollo realizada el año pasado.
- Estudio socioeconómico y antropométrico del CESAR de Zonilotepe y su área de influencia.

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- Archivo del CESAR de Zopilotepe.
- Evaluación de la auxiliar de enfermería.

Una vez analizada la evaluación anterior y los datos antropométricos procedimos a acondicionar la entrevista del desempleo de la Auxiliar de Enfermería.

- Elaboramos formularios que en función de los objetivos integrarían datos que serían utilizados para elaborar conclusiones.
- Una vez que tuvimos los formularios con los datos, sacamos totales y se elaboró un cuadro que contiene los datos en forma integrada.
- Después elaboramos gráficas que nos dan una visión global de la cobertura del CESAR y establece comparaciones de cobertura entre una y otra aldea.
- Después analizamos los problemas que encontramos.
- Por último elaboramos el presente informe que determina conclusiones y recomendaciones.

C. Limitaciones encontrada.

No supimos proveer la magnitud del problema de las fuentes de los datos a recolecionar y tuvimos que esforzarnos mucho para tener datos los más cerca de la realidad y con esto la actividad se prolongo cuatro días.

III. CUERPO O CONTENIDO.

A. Presentación textual y gráfica de los datos: (cuadro No. 1)

NIÑOS QUE FUERON ESTUDIADOS Y LOS QUE ASISTEN A CONTROL

No.	Lugar	Pob. Estimada	Población estudiada					Población que asiste a control				
			GI	GII	GIII	N	T	GI	GII	GIII	N	T.
1.	El Junquillo	13	1	2	-	4	13	-	-	-	-	-
2.	El Bijagual	60	14	7	1	27	49	1	1	-	4	7
3.	El Chaparro	27	11	-	-	13	24	1	1	-	1	3
4.	La Cruz	51	16	5	-	29	50	2	1	1	1	3
5.	Las Parras	42	12	4	-	23	39	2	1	1	7	9
6.	Guayabillas	94	32	13	-	39	184	5	5	-	14	24
7.	Zopilotepe	183	66	16	1	83	166	42	16	1	77	136
8.	San Nicolás	234	71	23	3	88	185	19	15	1	39	74
9.	La Venta	133	52	13	1	63	131	20	6	1	30	57

N.	Lugar	Pob. Esti mada	Población estudiada					Población que asiste a control				
			GI	G.II	G.III	N	T	GI	G.II	G.III	N	T
10	Las Llaves	104	35	5	1	40	81	19	5	1	13	33
11	El Tablón	23	9	1	-	12	22	5	1	-	3	9
12	Guacamaya	43	19	6	-	15	40	7	2	-	12	21
TOTAL . . .		1,007	344	95	7	438	384	123	52	4	201	380

Este cuadro permite establecer una comparación entre los niños detectados y estudiados, la población estimada y los niños que asisten o que están registrados en la Clínica de Crecimiento y Desarrollo, podemos observar que:

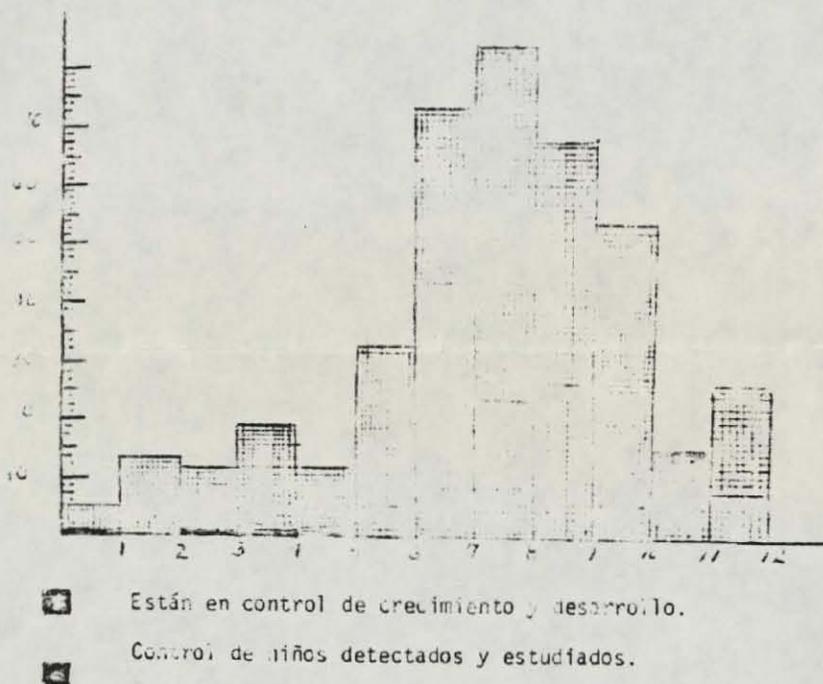
La cobertura de la Clínica de Crecimiento y Desarrollo en relación con la población estimada es de 37.74% o sea que un 62.26% no asiste a controles.

De los niños estudiados y que tenían primer grado de desnutrición sólo asisten a control el 35.76% en segundo grado asisten a el 54.74% y en tercer grado asiste a control el 57.14%. De los niños normales asisten a control ~~45~~

Asisten a control un 45.89%.

Cuadro No. 2

COBERTURA DEL CESAR RESPECTO A LOS NIÑOS DESNUTRIDOS DE 1 GRADO.

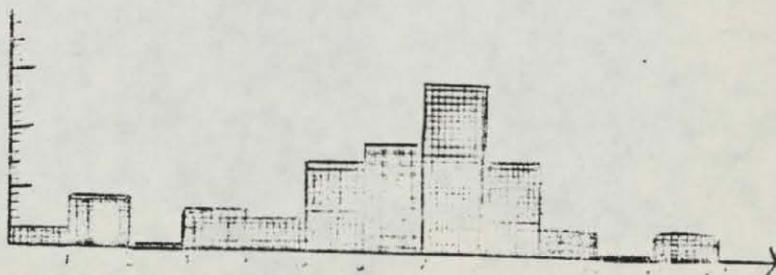


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Por medio de esta gráfica podemos captar visualmente la cobertura del CESAR de Zopilotepe y establecer una comparación en cada aldea. Esta capacitación no es real ya que es una comparación entre la cobertura y la población estudiada que consiste en un 87.8% de la población estimada.
Los números siguen el mismo orden del cuadro No. 1.

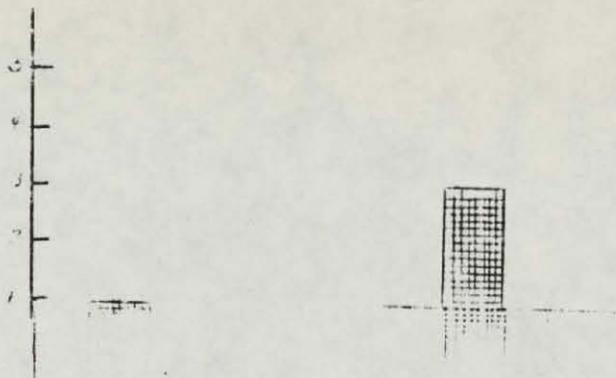
CUADRO No. 3

COBERTURA DEL CESAR EN NIÑOS DESNUTRIDOS, EN SEGUNDO GRADO



CUADRO No. 4

COBERTURA DE NIÑOS DESNUTRIDOS G III



Es de hacer notar que fueron estudiados siete casos de desnutrición en G III y en la Clínica asisten cuatro niños que nosotros consideramos como casos nuevos ya que estos no todos habían sido estudiados este mismo caso ha sucedido en los demás cuadros.

CUADRO No. 5

TOTAL DE NIÑOS QUE PADECEN ALGUN GRADO DE DESNUTRICION

No.	LUGAR	GI	GII	GIII	T.
1	El Junquillo	5	-	-	5
2	El Bijagual	16	4	1	21
3	El Chaparro	8	1	-	9
4	La Cruz	16	5	-	21
5	Las Parras	9	3	-	12
6	Guayabillas	31	10	-	41
7	Zopilotepe	42	16	1	59
8	San Nicolás	38	22	2	63
9	La Venta	34	11	1	46
10	Las Llaves	51	10	2	63
11.	El Tablón	9	1	-	10
12	Guacamaya	15	6	-	21
	TOTAL	273	89	7	369

El total de niños desnutridos se ha concluido tomando como base los niños detectados y estudiados, después los que asisten a control de crecimiento y desarrollo el cual incluye los niños que nacieron en el período desde el estudio.

El siguiente cuadro nos permite establecer una comparación entre la población estimada la estudiada y la que asiste a control de crecimiento y desarrollo.

Podemos notar que la población que asiste a control en comparación con la detectada es de una cobertura amplia pero en comparación con la población estudiada es extremadamente baja.

En tiempo anterior no se contaba con ninguna información de la población de mujeres embarazadas y lactantes del área. Estas como pertenecen a los grupos vulnerables de la población son objeto de interés y estudio del PNA, los datos encontrados son pocos pero nos sirven de punto de apoyo para encontrar datos más reales y confiables.

Encontramos que:

El 22.87% de las mujeres en control han abortado; el 13.33% están determinadas como embarazadas de alto riesgo por encontrarse en edad extrema mayor de 36 años.

El 31.43% ha presentado algún tipo de complicación durante el embarazo como hemorragia, cólico, etc.

El 70.57% sólo han asistido a un control o sea al control inicial sin contar que este primer control no es confiable ya que no se realiza en forma completa.

En 12 aldeas el total de mujeres embarazadas en controles es 75 personas. Calculamos que esta cantidad puede triplicarse ya que cobertura es mínima.

III. ETAPA FINAL

Notas:

El Programa de Epidemiología no fue evaluado ya que se cuenta con informes mensuales de este programa al cual se le brinda una atención bien marcada, además estamos a punto de implementar en el programa un sistema de control de la vacunación realizada. Todas las acciones a tomar que contempla este informe se llevarán a cabo en forma coordinada.

PROJECT STATUS REPORT (PRSR)

Project : Wonweong County Model Nutrition
Education Project

Date : May 13, 1980

Submitted by : *Chun Hyang Jung*
Jung, Chun Hyang
NE Supervisor

Objectives :

1. Social Workers Training
2. Pamphlet
3. Poster
4. Start Project Evaluation

Status of Objectives :

Target Date for Completion :

- | | |
|------------------|-----------------------|
| 1. On Target | Apr. 23, 1980 |
| 2. Behind Target | May 30, 1980(Revised) |
| 3. Behind Target | May 30, 1980(Revised) |
| 4. On Target | Apr. 9, 1980 |

Obstacles, Recommendations and Decisions Needed :

1. Social Workers Training

Conducted Social Workers training on 23rd of April at Wonju Catholic Center. 28 Workers attended and given 3 hours nutrition lecture on nutritional value and metabolism of PROTEIN. Following the training, MFM Project Director and County Nutrition Officer were joined the class and had free discussions on project implementation, especially on NIC activities.

2,3. Pamphlet & Poster

Green vegetable cooking recipes for pamphlet and standard menu guide for poster were under preparation. Those will be completed before June. Pamphlet will be used for village cooking demonstration classes and poster will be used to assist providing balanced diet by village housewives.

4. Project Evaluation

After the first meeting held on Apr. 9th(refer to March report), we provided various materials needed for evaluation work and sent it to each member. They will review our materials and set up the evaluation scope and organize overwhole schedule before next meeting. We hope the field survey would be conducted until May or early June. We have hired Miss Haing Bo Kim, Former Editor of Korea Journal of Dietetic Association as a part time coordinator to assist the Committee evaluation work from May to August.

5. Others

a. Nutrition Education Activities

o by MFM Nutritionists

NIC Training : 98 leaders(8 Myun)
NE Demonstration village : 130 housewives(7 villages)
NE Demonstration School : 31 parents and 7 teachers
Kanhahan Farmer's Training School : 638 trainees(1 hour x 3 classes)
Sinlim Pr. School : 50 parents, 98 children
Radio broadcasting : 5 min. daily at KBS for 25 times

o by County Social Worker

Villagers : 156 housewives(4 Myun)

b. Children's Painting Exhibition Tour

Sponsored by Wonju Education Board, the selected children's painting were displayed at nine different location as follows.

Date : Mar. 17 - Apr. 10, 1980
No of children visited : 4,392 children

c. Nutrition Education Material Development

Developed 3 kinds of Flannel Graphs of special nutrition - infant feeding, nutrition for preschool children, pregnant and lactating mother-, nutrition deficiencies and food hygiene which will be used for the village nutrition classes by MFM and County Social Workers.

d. Hire of New Nutritionist

Miss Hong, Kyung Euy, replacement of Ms. Min was hired and working at Wonju Office from April 21, 1980. She is incharge of assisting NIC activities mainly and I hope, her position will be remained as one of plant staff after 1980. (See Attachment # 1)

PROJECT STATUS REPORT(PRSR)

Project : Wonseong County Model Nutrition Education Project.

Data : July 10, 1980

Submitted by : Chun, Chin Young
Chung, Chin Young
NE Supervisor

Objectives

1. Social Workers Training
2. CDF Training
3. Dietary Survey by Social Workers
4. Anthropometry
5. Project Evaluation

<u>Status of Objectives</u> :	<u>Target Date for Completion</u> :
-------------------------------	-------------------------------------

- | | |
|-----------------|---------------|
| 1. On Target | June 25, 1980 |
| 2. Continuation | June 30, 1980 |
| 3. On Target | May 30, 1980 |
| 4. On Target | June 27, 1980 |
| 5. Continued | |

Obstacles, Recommendations and Decisions Needed :

1. Social Workers Training

Conducted Social Workers training on the June 25 at Won In Dong Office. 29 Workers attended and given 3 hours nutrition lectures on vitamins and metabolism of energy. Flannel Graphs has been distributed for each Myun Health Branch Office to assist nutrition classes conducted by social workers.

2. CDF Training

We started civil defense forces training in Wonseong County by MFM nutritionists. Conducted the training during the period of June at primary schools and agricultural cooperative office as follows,

- | | | |
|---------|---|---------------|
| Group 1 | : | 11:00 - 11:30 |
| Group 2 | : | 14:30 - 15:00 |
| Group 3 | : | 17:00 - 17:30 |

The training program for civil defense forces will be continued until the month of August. Topic of the training is basic nutrition and health. Following the training, CDF members had free discussions on the title of nutrition for mother and child. 1,519 CDF troops have received the training during the month of June.

3. Dietary Survey by Social Workers.

Wonseong County Social Workers surveyed 250 families, 100 primary school children, 6 primary school teachers and 31 social workers to collect dietary information and to learn surveying method for preschoolers, pregnant and lactating women, collected datum are under analysis and it will be used for social workers training as well as NE training materials for future.

4. Anthropometry

The 10th of anthropometric survey for approximately 350 preschool children, pregnant and lactating women was conducted by the county social workers during the month of June. The analysis of data will be made a comparison with basic data of 1978 and 1979.

5. Project Evaluation

The 1st field survey was analyzed by each survey controller of the computer processed at KIST. Besides the 1st field survey, CDF evaluation forms was prepared by the evaluation committee member. (See attachment 1.) The 2nd field survey was conducted on the 27th of June. (See attachment 2.) The 3rd field survey (Medical Check-up) will be made from 9th of July to 16th of July. (See attachment 3.) The data will be analyzed after computer processed at KIST.

6. Other

a. Hire of New Nutritionist (Replacement to Mr. Om)

Mr. Shin, Tae Won, replacement of Mr. Om was hired and assigned at Wonju office effective as of June 19, 1980. (See attachment 4.) I think he is reliable and devoted worker going about his work with good common sense.

b. Evaluation committee meeting was held on the 20th of June at the MFM office. Attendance talked about the project evaluation. They have exchange their progress about 1st, 2nd and 3rd survey.

c. Training for Women School Teachers will be conduct from 28th of July to 31th of July at Wonju Education Board Office. Originally it was plan to held the training at ORD-Suwon, however, due to this time rearrangement for Wonseong Project. MFM and Education Board decided to conduct the training at Wonju instead Suwon-ORD.

d. Nutrition Education Conducted by MFM Nutritionists.

CDF Training	:	1,519 Persons
NE Demonstration School	:	7 Teachers
Radio Broadcasting	:	5 Min. Daily at KBS for 25 Times.