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PD-MAN-058

ISN=46541

MEALS FOR MILLIONS/FREEDOM FROM HUNGER FOUNDATION

Matching Grant

No. PDC-0206-G-SS-2045-00

SECOND ANNUAL REPORT

TO

THE AGENCY FOR INTERNATIONAL DEVELOPMENT

DECEMBER 30, 1983

Meals for Millions/Freedom from  
Hunger Foundation  
P.O. Box 2000  
Davis, California 95617

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## 1. INTRODUCTION

The Matching Grant, awarded to Meals for Millions (MFM) by the Agency for International Development, became effective in February 1982. The amount of the grant was \$1,850,000 over a three year period. Implementation of the program outlined in the Matching Grant proposal was initiated in January 1982 and since that time, MFM has made excellent progress towards the achievement of the goal, the purpose and the outputs projected. Six Applied Nutrition Programs are now in operation, the Korea ANP has been institutionalized and is being carried on by a local organization called MFM/Korea, and three more ANPs are in various stages of planning and development.

This report briefly describes each country program supported by the Matching Grant and covers the period January to December 1983. Also included in this report is a summary of the status and progress towards achieving the indicators listed in the logical framework and a financial review showing the relative expenditures and the match of private funds to AID funds.

Highlights of 1983 are as follows: a) In Sierra Leone analysis of the baseline survey was completed, the detailed program plans finalized, and several activities initiated. b) Management Sciences for Health (contracted by AID) conducted an extensive evaluation of the Honduras Applied Nutrition Program which revealed that the program is admirably achieving its objectives. c) Dramatic changes in the Ecuador ANP became inevitable as a result of the sudden end of a debilitating seven year drought. With abundant rain MFM staff could greatly expand and improve many food production activities. d) In Thailand, all community activities were greatly extended, solidifying and expanding community participation in the program. e) The transition from a two-year food and nutrition training program to a comprehensive Applied Nutrition program in Kenya is nearly complete. The June final evaluation workshop of the training program showed participants and community members had greatly benefitted from the overall program. Activities in the ANP began with a relocation of the office from Nairobi to the target area near Kisumu. f) MFM moved into its new international headquarters in

Davis, California in February 1983. Resources available through various departments at the University of California, Davis have greatly improved MFM's capacity for providing technical support to the overseas programs.

The remainder of this report outlines program activities in Sierra Leone, Kenya, Thailand, Honduras, Ecuador, and Antigua and briefly describes several of the key strategies MFM used in the implementation of Applied Nutrition Programs. Various appendices provide in-depth information on some aspects presented briefly in this report.

## 2. THE MEALS FOR MILLIONS PROGRAM

Meals for Millions seeks to:

- a) strengthen the capabilities of people in developing communities to solve their own food and nutrition problems;
- b) to do so within the framework of the communities' existing economy and culture;
- c) give special emphasis to the nutritional needs of infants, children and pregnant and lactating women; and,
- d) advance and perfect the "participatory" or self-help approach to achieve lasting development.

Applied Nutrition Programs (ANPs) are the framework for MFM's overall program. MFM's development of an Applied Nutrition Program is based on the detailed strategy set forth by Michael C. Latham, M.D. in Planning and Evaluation of Applied Nutrition Programs. MFM has adapted this basic strategy to meet the needs identified in each program area. Section 8 of this report describes how MFM has adapted Latham's strategy for implementing an ANP and Sections 8.1 through 8.5 describe some of the key elements in the implementation process.

In general, Applied Nutrition Programs are comprehensive, interrelated educational activities with the aim of improving the nutritional status of local populations, particularly mothers and children. Their guiding principles are coordination among different agencies and institutions and the active participation of the people themselves. Family members are brought into the program through schools, health centers, clubs, and community organizations. National food and nutrition policies are linked with field activities at regional, community and family levels through coordination of the available human and material resources.

An ANP emphasizes an integrated approach to overcoming the nutritional problems resulting from multiple interrelated social and biological causes. Integrating and linking various community services is cost effective, allowing MFM to greatly extend program activities

beyond the scope of its own resources and strengthen the service delivery capability of local organizations. An important aim of MFM's Applied Nutrition Programs is to establish a self-sustaining process which will continue once we withdraw our support.

The development and implementation of an ANP follows five stages:

Stage 1. Doing a feasibility survey and preliminary planning.

Stage 2. Defining objectives, collecting baseline data and doing more detailed planning.

Stage 3. Initiating program operations.

Stage 4. Evaluating.

Stage 5. Expanding the program to other communities.

All ANP interventions are based on identified community needs and are geared to improving the nutritional status of local communities by increasing the capabilities of local people to meet their own basic needs. Some of the activities which are frequently included in MFM's ANPs are as follows:

a) Health

Training health personnel in nutrition, nutrition surveys and investigations; preventive measures against infectious diseases; nutrition and cookery demonstrations at MCH centers or clinics.

b) Education

School gardens (horticultural activities); animal production (poultry, rabbits, pigs, fish); food and nutrition education; community participation in food and nutrition activities in school.

c) Agriculture

Increasing production and use of animal protein:

Poultry - hens, ducks, geese; fishing; small animal production; meat production; cattle, goats, sheep.

Increasing production and use of vegetable protein, vegetables and fruits:

Increasing indigenous legumes; introducing new legumes; improving crops with fertilizers, rotation, pest control, improved seed, irrigation; increasing production of vegetables and fruits; home and community gardens and orchards; demonstration projects.

General methods, which include increasing availability of calories:

teaching ecologically sound, low-cost, bio-intensive gardening; improving food storage and pest control; food production and processing; improved transport and marketing chains.

d) Community Development

Nutrition education of the public, food storage in the home; organization of women's groups, youth clubs.

e) Cooperatives

Use of cooperatives for improving agriculture; supplying fertilizers, tested seed, insecticides. Retail cooperatives; general stores.

Working with local agencies, MFM emphasizes the following specific capabilities for its ANPs:

a) Training and technical assistance

- program design and evaluation
- small-scale food production
- processing and preservation technologies
- training for staff

b) Material Assistance

- equipment
- small grants to community groups

c) Nutrition Education

- comprehensive educational programs for communities
- development of nutrition education materials.

### 3. PURPOSE AND IMPLEMENTATION OF MFM MATCHING GRANT

The overall goal of the Matching Grant program is to strengthen the capabilities of developing communities to solve their own food and nutrition problems. Progress in achieving such capabilities is measured in terms of improved nutritional status, increased community participation, and increased self-sufficiency. The program purpose is to develop, implement and support Applied Nutrition Programs that provide people in selected rural developing communities with the technical, material and educational assistance they need to organize themselves and develop their capabilities to use the resources around them to solve their own food and nutrition problems.

To achieve this goal and this purpose, MFM has stated it would:

- a) Consolidate its present activities in each country, as appropriate, into an Applied Nutrition Program (ANP).
- b) Expand those ANPs which are already established in Ecuador and Honduras. Korea will be phased out (completed in 1983).
- c) Develop new ANPs in Antigua, Sierra Leone and Thailand during 1982 (accomplished); and Kenya, St. Kitts and/or other carefully selected Caribbean Islands, and Nepal during the following two years, 1983-1984. (Kenya's ANP is now being implemented; a feasibility study conducted in St. Kitts did not reveal adequate need for an ANP; negotiations for an ANP in Nepal are still underway.)
- d) Provide intensive nutrition education to the communities and community level workers included under each ANP as the need is determined.
- e) Design and develop training courses and workshops to respond to the needs of the community level workers and beneficiaries involved in ANPs.
- f) Develop a participatory educational strategy for nutrition education for community level food technology.

- g) Provide food technology assistance to the communities included under each ANP in response to assessed needs.
- h) Continue to develop and test appropriate food technology transfer techniques.
- i) Develop and expand the activities of the MFM Resource Center, which is responsible for collecting, documenting and disseminating information on nutrition education, small-scale food production, processing and preservation.
- j) Provide support to those on-going project activities that cannot be appropriately included in an Applied Nutrition Program.

#### 4. SUMMARY OF PROGRAM STATUS AND INDICATORS

During 1983, Meals for Millions made significant progress towards the goal, purpose and outputs as stated in the August 1981 Matching Grant Proposal to AID. External evaluations of the Ecuador and Honduras ANPs indicate that the programs are achieving objectives admirably, having measurable impact on target communities, and that progress is being made toward the institutionalization of program activities.

The goal of the Matching Grant program is to strengthen the capabilities of developing communities to solve their own food and nutrition problems. In terms of meeting the goal, the 1983 evaluation of the Honduras ANP showed significant improvement of the nutritional status of the 0-5 year old children in seven of the nine target communities. Some of those communities showed greater improvement than others. A longitudinal study of 100 children (randomly selected from the target group) over four years showed a 70% reduction in second and third degree malnutrition from 10% to 3%. An analysis of the entire population of the 0-5 year old children under nutritional surveillance indicates a 24% reduction in second and third degree malnutrition from 11.6% to 8.8%. Increased food production in Antigua, Ecuador, Thailand, and Kenya indicates progress towards the goal of promoting community self-sufficiency. It is still too early to make any valid conclusions on the reduction of malnutrition among the vulnerable groups in all the ANP target areas except Honduras.

The purpose of the Matching Grant program is to develop, implement and support Applied Nutrition Programs that provide people in selected rural developing communities with the technical, material, and education assistance they need to organize themselves and develop their capabilities to use the resources around them to solve their own food and nutrition problems.

Towards achieving this purpose, MFM has expanded program activities in Ecuador, Honduras, and Antigua; initiated a full-range of nutrition-oriented community development projects in the Thailand and Sierra Leone ANPs; and begun the implementation of the Kenya ANP. A feasibility study conducted in St. Kitts showed the need was not great. Negotiations for ANPs in Nepal and Togo are underway. A total of three new ANPs are to be

implemented in 1984. Within each of the existing Applied Nutrition Programs excellent progress is being made towards goals, purposes and outputs. There has been excellent collaboration from the local government agencies, other PVOs in the program areas, and from the people in the communities where we are working. External and internal evaluations confirm these facts and suggest areas for improvement and modification.

Regarding the purpose indicators, all of the programs have been designed for replicability, local participation in planning and evaluation, and local insitutionalization. Local participation in all programs is excellent and community level workers are being trained. Each program also has a combination of nutrition education, income raising projects and nutrition-oriented community development activities designed to improve nutritional status. With the exception of the Honduras program (see pages 34 to 40 of this report), it is too early to evaluate any of these indicators definitively.

At the level of outputs, MFM has made tremendous progress. Three new ANPs have been implemented and the baseline data surveys completed for each - Antigua, Thailand and Sierra Leone. The baseline survey for the Kenya ANP is scheduled to be conducted in January 1984. Nutrition education projects have been designed and implemented in Honduras, Thailand, Sierra Leone, and Kenya. Based on the Ecuador evaluation recommendation, the nutrition education component of the Ecuador program is currently being reorganized and strengthened.

With the exception of the Kenya ANP which is just beginning, all ANPs have implemented numerous small scale development projects.

The staff of the Sierra Leone ANP, one of the newest ANPs, began a latrine construction program. Funds have been provided for 36 latrines over two years. The latrine construction project is closely linked to a training program for community workers and villagers on environmental sanitation and health. Various agricultural projects are to be implemented in 1984 including a major rice seed multiplication production effort. A vegetable garden project has been launched in one of the ten project communities and will be expanded to other communities in 1984.

Twenty-three small-scale community development projects resulted from the Kenya Food and Nutrition Training Program (1981-1983). The types of projects include:

- 14 vegetable gardening projects
- 3 combination vegetable gardening and rabbit raising projects
- 2 poultry keeping projects
- 2 rabbit raising projects
- 2 beekeeping projects.

Six of these projects have been so successful that MFM will continue to support them for one additional year beyond the two year training program.

Community development projects in the Thailand ANP include: duck raising, (5 villages) soybean production (46 villages) vegetable gardening (60 villages) development of fish ponds and raising fish (44 villages) parasite control, various kitchen improvement projects, and environmental sanitation efforts. (The target area encompasses 83 villages.) All projects have been implemented in the two demonstration villages - one in each district of the target area of Lampang Province.

In Honduras, all community development projects were expanded beyond the 1982 levels. Agricultural training and technical assistance activities increased, a revolving loan fund now supports the construction of silos, production of basic grains and other horticulture projects; and experimentation and demonstration activities at the training center have expanded in nature and scope. All activities are closely linked to a comprehensive Primary Health Care Program.

In Ecuador, 1983 saw a tremendous expansion of food production projects due to a sudden end of a seven year drought. MFM staff assisted farmers in planting certified corn, soy and rice seed for the first time in the target area. Sixty-one farmers established a cooperative and twenty-three poultry producers formed an association. These groups as well as an effective revolving loan fund and newly established credit services for small farmers in the area facilitate the implementation or expansion of community development projects.

In Antigua, agricultural activities continue to be a focus of the program. Three large community gardens with a combined area of 13 acres

have been established. Twenty-four individuals are involved in backyard garden projects and many more are planned for 1984. A revolving loan fund provides valuable support to the small scale farmers primarily for irrigation materials and equipment. A tractor, purchased in 1982, continues to operate on a loan basis at a fixed cost per acre and has enabled farmers to greatly expand their area of cultivation. Fourteen beekeepers with a total of 92 hives have formed an association which meets regularly to share expertise and plan activities.

A summary of the outputs is as follows:

Applied Nutrition Programs (progress to date)

- 3 baseline surveys completed for 3 new ANPs.
- 3 needs assessments completed of ANP target groups.
- 4 major nutrition education projects have been designed and are now being implemented.
- Expansion in Ecuador from 9 to 15 communities.
- Expansion of Honduras ANP planned for 1984.

Training Activities (by country)

Kenya (Food and Nutrition Training Program)

- 25 community workers trained in implementation of small-scale community development projects for nutritional improvement.
- 23 nutrition-related projects implemented as a result of skills learned in training.
- Each of the community workers conducted approximately five training sessions for their community members to pass on skills learned. MFM staff had direct input into two of each of the five training sessions.
- MFM/Kenya staff conducted three follow-up training sessions for the 25 community workers.
- The staff of six selected community development projects (of the 23 mentioned above) received additional training in project planning, financial management, project monitoring and evaluation.

Sierra Leone ANP

- Orientation training sessions held at national and local levels to explain ANP concepts and plans.
- Community workers (school teachers) trained to conduct the baseline data/needs assessment survey.

- Training for ANP staff in training techniques and materials development.
- Training for community workers and community members in environmental sanitation, including the construction, use and care of latrines.

#### Thailand ANP

- Intensive training for ANP Task Force in 1982-83.
- Training for 66 school teachers and 49 sub-district level government workers in the following areas: nutrition education, nutritional surveys, environmental sanitation, appropriate technology, and community development. (Regular sessions held monthly, intensive training conducted bi-annually.)
- Training for ANP staff in program monitoring and evaluation.
- On-going training for community members for each of the following community development activities:
  - backyard gardens
  - soybean production
  - duck raising
  - establishing and maintaining fish ponds
  - building water filtration tanks
  - water filtration molds
  - food storage cabinets
  - improved cooking stoves
  - village and street cleaning
- Training for Village Development Committees established in each village in the target area.

#### Honduras ANP

Note: Training in nutrition, health and agriculture is an integral part of the Honduras ANP and is conducted at the ANP training center in Zopilotepe in the target area. This center may serve as a pilot school for a government supported rural vocational training program whereby thirteen rural schools would be expanded to include specialized training for teachers.

- Training for community agriculture leaders in all aspects of agricultural production. (Goal is to have two such leaders per village in the target area.)
- Weekly training in health, nutrition, and sanitation for mothers attending the health center.

- Training in home improvement techniques for women's groups.
- On-going training for community farmers in various agricultural techniques.
- Training for ANP Program Director in implementing a revolving loan fund.

#### Ecuador ANP

- On-going training for farmers in growing corn, soy rice and plantains.
- Training in poultry raising and marketing strategies for poultry producers.
- Training for ANP staff on implementing a comprehensive nutrition education and growth surveillance program.
- Training for small farmers in getting and using credit for agricultural improvements.

#### Antigua ANP

- Comprehensive training on beekeeping.
- On-going training for gardeners in various aspects of horticulture.
- Intensive training for farmers on techniques for integrated pest management.
- Training for community workers on "Materials Development for Nutrition Education". (Conducted in collaboration with the Caribbean Food and Nutrition Institute and the Antigua Ministry of Health.)

#### Technology Transfer

The following technologies have been successfully introduced in the programs indicated:

- . Pit latrines - Sierra Leone, Honduras
- . Water filtration tanks and molds - Thailand
- . Certified grain seeds - Ecuador, Honduras, Antigua
- . Solar stills - Ecuador
- . Solar dryers and/or solar cookers - Antigua, Sierra Leone
- . Soap and chalk making techniques - Antigua
- . Small tractor - Antigua
- . Rototiller - Honduras
- . Integrated pest management techniques - Antigua, Honduras, Kenya
- . Soybean production - Thailand

- . Fish ponds - Honduras, Sierra Leone, Thailand
- . Improved cooking stoves - Honduras, Thailand, Kenya
- . Food storage cabinets - Thailand, Honduras, Kenya
- . Silos and other grain storage techniques - Honduras, Kenya, Ecuador
- . Mechanical corn sheller - Ecuador
- . Digital device for measuring moisture in grains - Ecuador
- . Construction and use of bamboo trash baskets - Thailand
- . Fruit production techniques - Honduras, Ecuador, Antigua
- . Reforestation and other soil conservation techniques - Honduras
- . Beehives and beekeeping - Antigua
- . Rice seed multiplication - Sierra Leone
- . Small animal production techniques (rabbits, poultry, swine, ducks, etc.) - Thailand, Honduras, Ecuador, Kenya
- . Growth monitoring techniques - Honduras, Ecuador, Kenya, Sierra Leone, Thailand, Antigua
- . Nutritional survey techniques - Honduras, Ecuador, Kenya, Sierra Leone, Thailand, Antigua

One new aspect of MFM's program which is important in food technology transfer is the establishment of biointensive demonstration and test gardens. MFM's program horticulturist developed two gardens near MFM's Davis headquarters to further test and refine basic biointensive gardening practices. All MFM's Applied Nutrition Programs have strong gardening components and field staff consistently requested more information than was available. By developing the gardens and by visiting the programs, MFM's horticulturist has greatly increased our technical support capabilities in agriculture. (See Appendix 10.1 for further details.)

#### Resource Center

The main functions of the Resource Center at MFM headquarters are to: 1) respond to requests for information; 2) publish materials for use in MFM programs; and 3) publish materials documenting various aspects of the Applied Nutrition Programs. The following is a summary of Resource Center activities:

- . Responses to requests for information - 211 in 1983, 183 in 1982.
- . Materials published for use in MFM programs:
  - 1982 - Two newsletters on food and nutrition training

- . One technical bulletin on solar drying
  - 1983 - One newsletter on food and nutrition training (see Appendix 10.10).
    - One newsletter on gardening (see Appendix 10.11).
    - One technical bulletin on establishing a revolving loan fund (see Appendix 10.6).
    - Informal, in-house newsletter (see Appendix 10.12).
- . Materials published documenting aspects of the Applied Nutrition Programs:
  - 1982 - Evaluation of the Ecuador ANP
  - 1983 - Summary of Ecuador's revolving loan fund (see Appendix
- . Materials currently in preparation for publication:
  - Technical bulletin on the puffing machine
  - Case study on the Honduras ANP
  - Case study on the Kenya Food and Nutrition Training Program
  - Case study of the Ecuador ANP
  - Korea evaluation report
  - Honduras evaluation report
  - Documentation of the development and implementation of the Sierra Leone Baseline Data/Needs Assessment Survey.

5. PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

OBJECTIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS																				
<p><b>Program Goal:</b></p> <p>TO STRENGTHEN THE CAPABILITIES OF DEVELOPING COMMUNITIES TO SOLVE THEIR OWN FOOD AND NUTRITION PROBLEMS.</p>	<p><b>Measures of Goal Achievement:</b></p> <p>IMPROVED NUTRITIONAL STATUS</p> <p>INCREASED PARTICIPATION OF COMMUNITIES IN IDENTIFYING THEIR FOOD AND NUTRITIONAL PROBLEMS AND DEVELOPING SOLUTIONS TO THEM</p> <p>INCREASED SELF-SUFFICIENCY IN FOOD AND NUTRITION</p>	<p>CASE STUDIES BY INTERNATIONAL AGENCIES</p> <p>GOVERNMENT STATISTICS</p> <p>CENSUS REPORTS</p> <p>COMMUNITY MEDICAL REPORTS</p> <p>HEALTH/NUTRITION SURVEYS</p>	<p>Assumptions for achieving goal targets:</p> <p>POLITICAL SITUATION IN COUNTRIES REMAINS VIABLE</p> <p>NO MAJOR CIVIL CONFLICTS IN PROGRAM AREA</p> <p>CLIMATIC CONDITIONS DO NOT CHANGE RADICALLY</p> <p>NO DRASTIC CHANGE IN POPULATION !!</p>																				
<p><b>Program Purpose:</b></p> <p>TO DEVELOP, IMPLEMENT AND SUPPORT APPLIED NUTRITION PROGRAMS THAT PROVIDE PEOPLE IN SELECTED RURAL DEVELOPING COMMUNITIES WITH THE TECHNICAL, MATERIAL AND EDUCATIONAL ASSISTANCE THEY NEED TO ORGANIZE THEMSELVES AND DEVELOP THEIR CAPABILITIES TO USE THE RESOURCES AROUND THEM TO SOLVE THEIR OWN FOOD AND NUTRITION PROBLEMS.</p>	<p>Conditions that will indicate purpose has been achieved: End of project status:</p> <p>LOCAL INSTITUTIONS AND GROUPS IN TARGET COMMUNITIES SUPPORT AND ADAPT (INSTITUTIONALIZE) WFF/FF APPROACH TO ASSISTING DEVELOPING GROUPS WITHIN 3-8 YEARS</p> <p>APPLIED NUTRITION PROJECTS WILL BE SELF-SUSTAINING AFTER PILOT IMPLEMENTATION - 3-8 YEARS</p> <p>LOCAL GROUPS ARE PARTICIPATING IN PROJECT EVALUATIONS</p> <p>AT LEAST 5 APPLIED NUTRITION PROJECTS EXIST AFTER 3 YEARS THAT SHOW A DEMONSTRABLE POSITIVE EFFECT ON THE NUTRITIONAL STATUS OF THE TARGET GROUPS INVOLVED</p> <p>COMMUNITY LEVEL WORKERS IN PROJECT AREAS ARE TRAINED AND COMPETENT TO DESIGN AND IMPLEMENT FOOD AND NUTRITION PROJECTS</p>	<p>PROJECT REPORTS</p> <p>ON-SITE VISITS AND SURVEYS</p> <p>EVALUATION REPORTS</p> <p>PLANNING DOCUMENTS</p>	<p>Assumptions for achieving purpose:</p> <p>FOOD AND NUTRITION PROBLEMS CAN BE DEALT WITH SUCCESSFULLY BY COMMUNITY GROUPS</p> <p>COMMUNITIES ARE WILLING TO COOPERATE AND WORK TOGETHER</p> <p>LOCAL GOVERNMENTS ALLOW DEVELOPMENT INITIATION AT COMMUNITY LEVEL</p> <p>NATURAL LEADERS EXIST IN DEVELOPING COMMUNITIES</p> <p>PARTICIPATION OF COMMUNITY GROUPS IS ACTIVE NOT PASSIVE</p>																				
<p><b>Outputs:</b></p> <p><u>APPLIED NUTRITION PROGRAMS (ANPs)</u></p> <ul style="list-style-type: none"> <li>- Baseline surveys for new ANPs</li> <li>- Needs assessments of target groups</li> <li>- Nutrition education projects</li> <li>- Small development projects</li> <li>- On-going ANPs expanded</li> </ul> <p><u>FOOD AND NUTRITION TRAINING</u></p> <ul style="list-style-type: none"> <li>- Training courses for community workers in ANPs</li> <li>- Follow-up training</li> <li>- Training manual developed</li> </ul> <p><u>FOOD TECHNOLOGY TRANSFER PROJECTS</u></p> <ul style="list-style-type: none"> <li>- Appropriate food technologies identified, evaluated, and tested for target groups</li> <li>- Technical assistance provided to help target groups and institutions in program areas</li> <li>- Demonstration of appropriate food technologies</li> </ul> <p><u>RESOURCE CENTER ACTIVITIES EXPANDED</u></p> <ul style="list-style-type: none"> <li>- Dissemination of program information</li> <li>- Publication of program case studies</li> <li>- Publication of newsletter</li> <li>- Publication of technical bulletins</li> <li>- Publication of training manual</li> </ul>	<p><b>Magnitude of Outputs:</b></p> <p><u>APPLIED NUTRITION PROGRAMS</u></p> <ul style="list-style-type: none"> <li>- Baseline surveys completed for three new ANPs</li> <li>- One needs assessment completed in one target group/year one, and two completed in years two and three</li> <li>- At least two major nutrition education projects are designed and implemented during three years</li> <li>- 25-40 small-scale development projects in food production are implemented</li> <li>- On-going ANPs in Ecuador and Honduras are expanded to include all of the villages in program target areas</li> </ul> <p><u>TRAINING</u></p> <ul style="list-style-type: none"> <li>- A minimum of 10 training courses for community workers are designed and implemented</li> </ul> <table border="1" data-bbox="522 1072 808 1159"> <thead> <tr> <th rowspan="2"></th> <th colspan="3">No. of Training Courses</th> </tr> <tr> <th>1982</th> <th>1983</th> <th>1984</th> </tr> </thead> <tbody> <tr> <td>Office</td> <td>2-4</td> <td>2</td> <td>1-2</td> </tr> <tr> <td>Latin America/Caribbean</td> <td>1-4</td> <td>2</td> <td>1-2</td> </tr> <tr> <td>Asia/Pacific</td> <td>3</td> <td>1</td> <td>1-2</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>- 80% of participants successfully completing training courses</li> <li>- 20% of participants in training courses later become involved in developing nutrition-oriented development projects</li> <li>- 20 nutrition related projects implemented as a result of skills learned in training</li> </ul> <p><u>FOOD TECHNOLOGY TRANSFER</u></p> <ul style="list-style-type: none"> <li>- A minimum of 10-15 different appropriate food technologies are successfully being utilized by developing groups in the target areas by the end of 3 years</li> <li>- 3 new appropriate food technologies are identified, tested and adopted during 3 years</li> <li>- Number of requests for short-term technical assistance responses to satisfactorily increased from 10 to 20 per year</li> </ul> <p><u>RESOURCE CENTER</u></p> <ul style="list-style-type: none"> <li>- Number of requests received for information on appropriate food technology increased from 100 to 200</li> <li>- Case study documentation and evaluation of Ecuador, Honduras and Korea programs</li> <li>- Newsletter on food and nutrition published (2 each year)</li> <li>- Technical bulletins on appropriate food technologies (2-4 each year)</li> <li>- Training manual "how to" published</li> </ul>		No. of Training Courses			1982	1983	1984	Office	2-4	2	1-2	Latin America/Caribbean	1-4	2	1-2	Asia/Pacific	3	1	1-2	<p>BASELINE SURVEY REPORTS</p> <p>PROJECT REPORTS</p> <p>REPORTS ON TRAINING COURSES AND WORKSHOPS</p> <p>MONTHLY PROGRAM ACTIVITIES REPORTS</p> <p>FIELD TRIP/ON-SITE VISITS</p> <p>EVALUATION REPORTS</p> <p>TECHNICAL DOCUMENTS WRITTEN AND PUBLISHED</p> <p>RESOURCE CENTER DOCUMENTATION</p> <p>PUBLICATIONS</p> <p>QUARTERLY PROGRAM REVIEWS</p> <p>CASE STUDIES IN EXISTENCE</p>	<p>Assumptions for achieving outputs:</p> <p>TRAINING, FOOD TECHNOLOGY AND ANPs ARE RELEVANT, EFFECTIVE AND CULTURALLY APPROPRIATE</p> <p>PARTICIPANTS SELECTED FOR TRAINING BENEFIT IN POSITIONS AND AREAS WHERE THEY COULD INFLUENCE AND EFFECT CHANGE</p> <p>COOPERATION OF LOCAL AGENCIES IS POSSIBLE</p>	
	No. of Training Courses																						
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Latin America/Caribbean	1-4	2	1-2																				
Asia/Pacific	3	1	1-2																				
<p><b>Inputs:</b></p> <p><u>FUNDS FOR TRAINING AND EDUCATIONAL COURSES</u></p> <p><u>FUNDS FOR LOCAL AND INTERNATIONAL TRAVEL</u></p> <p><u>FUNDS FOR PROJECT SUPPORT</u></p> <p><u>LOCAL PARTICIPATION</u></p> <p><u>PERSONNEL</u></p> <p><u>MANAGERIAL STAFF</u></p> <ul style="list-style-type: none"> <li>- Program Director</li> <li>- Associate Program Director</li> <li>- Regional Director Africa</li> <li>- Regional Director Asia</li> <li>- Regional Director Latin America/Caribbean</li> </ul> <p><u>TECHNICAL STAFF</u></p> <ul style="list-style-type: none"> <li>- Director of Training</li> <li>- Nutritionist</li> <li>- Director of Food Technology</li> <li>- Food Technology Specialist</li> <li>- Director of Resource Center</li> <li>- Information Specialist</li> <li>- Program Assistant</li> </ul>	<p><b>Dissemination Target (Budget) (\$000):</b></p> <table border="1" data-bbox="522 1672 808 1825"> <thead> <tr> <th></th> <th>1982</th> <th>1983</th> <th>1984</th> </tr> </thead> <tbody> <tr> <td>A.I.D. MATCHING GRANT</td> <td>600</td> <td>600</td> <td>750</td> </tr> <tr> <td>OTHER GOVERNMENT</td> <td>180</td> <td>175</td> <td>270</td> </tr> <tr> <td>WFF/FF</td> <td>915</td> <td>1,117</td> <td>1,273</td> </tr> <tr> <td><b>TOTAL</b></td> <td><b>1,595</b></td> <td><b>1,892</b></td> <td><b>2,293</b></td> </tr> </tbody> </table>		1982	1983	1984	A.I.D. MATCHING GRANT	600	600	750	OTHER GOVERNMENT	180	175	270	WFF/FF	915	1,117	1,273	<b>TOTAL</b>	<b>1,595</b>	<b>1,892</b>	<b>2,293</b>	<p>FINANCIAL REPORTS</p> <p>FIELD OFFICE REPORTS</p> <p>ANNUAL AUDIT</p> <p>PERSONNEL REPORTS</p>	<p>Assumptions for providing inputs:</p> <p>FUNDS ARE AVAILABLE WHEN NEEDED</p> <p>QUALIFIED PERSONNEL AVAILABLE AS PROGRAMMED</p> <p>NO MAJOR SHIFT IN INFLATION OR OTHER ECONOMICS</p> <p>ADEQUATE COORDINATION OF PERSONNEL AND ACTIVITIES IS MAINTAINED</p> <p>BUDGET LEVEL PROJECTED IS ADEQUATE TO MEET ALL ACTIVITIES AND CONTINGENCIES</p>
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## 6. COUNTRY REPORTS

This section of the report includes summaries of each of Meals for Millions' programs included under the Matching Grant. The report covers program activities from January to December 1983. Appendices provide more detailed information on various aspects presented here.

### 6.1 Africa

Africa is the most recent program area for Meals for Millions. In Sierra Leone, an Applied Nutrition Program is well underway. The baseline data/needs assessment survey has been analyzed, detailed planning completed, and many project activities are being implemented. In Kenya, the two-year Food and Nutrition Training Program concluded in June this year with a final evaluation workshop for the 25 participants, 21 community members and six supervisors of community workers. Six of the small community development projects resulting from this training program have been selected for an additional year of MFM assistance. The Kenya Training Program has undoubtedly been one of MFM's most successful long-term training efforts. The Kenya Applied Nutrition Program is in the early stages of implementation. The baseline data/needs assessment survey is scheduled to begin January 1984. MFM's main collaborating agency for the ANP is the Lake Basin Development Authority which has already provided valuable assistance in program planning.

#### 6.1.1 Sierra Leone Applied Nutrition Program

The Sierra Leone ANP is located in an area of the country which a 1978 national nutrition survey identified as the most severely affected by malnutrition. The target area is the ten communities of the Safroko Limba Chiefdom in the Northern Province. MFM is implementing the program in collaboration with the Bombali District Primary Health Care Program (PHC) which has strong national and local government support.

The goal of the Sierra Leone ANP is to improve the nutritional status of the 0-5 year old children and pregnant and lactating women in the Safroko Limba Chiefdom in the Northern Province of Sierra Leone. The objectives are to: a) Survey the nutritional problems and obtain baseline data; b) Develop nutrition education and training materials; c) Design and implement training programs for village health workers, traditional leaders,

extension workers, and community members; d) implement nutrition linked community development projects; e) Monitor the nutritional status of the 0-5 year old children in the target area; f) Strengthen the capabilities to carry out self-help programs through existing groups and the formation of new groups; and g) Coordinate development activities in conjunction with the Bombali District Primary Health Care Working Committee.

The needs assessment/baseline data survey was conducted in two phases. The first phase, completed in December 1982, covered six communities, the second phase, completed in March 1983, covered four communities in the target area. (See the following Appendices: a. Summary of the Analysis of Phase I - Appendix 10.4; b. Summary of the Analysis of Phase II - Appendix 10.5; c. "Analysis of the Nutritional Status in Six Communities in Sierra Leone: - Appendix 10.6.)

The problems identified in both phases of the survey were very similar and included: a) lack of food, b) lack of adequate health care, c) no transport to health center and market, d) inadequate housing, e) lack of employment and education, and f) lack of good drinking water. The following is a tabulation of the nutritional assessment of the 0-5 year old children in the target area:

Comparison of Phases I and II of  
Sierra Leone Baseline Data/Needs Assessment Survey\*

	Phase I	Phase II	Overall MFM Survey
Normal	47%	52.8%	49%
1st Degree	33%	21.7%	30%
2nd Degree	18%	23.6%	20%
3rd Degree	2%	1.9%	1%

\* Using the Gomez Classification:

- Normal - 85% weight for age
- 1st Degree - 76 - 85% weight for age
- 2nd Degree - 61 - 75% weight for age
- 3rd Degree - less than 60% weight for age

The above table shows that there is only a slight difference in the nutritional status of the children assessed in the two phases of the survey. The combined Phase I and II results show a higher incidence of malnutrition in the target area than was reported in the 1978 Sierra Leone national nutrition survey.

Once the analysis of the survey was completed, MFM staff finalized detailed plans for the program interventions. Based on the survey information, the major components of the ANP are as follows:

- a) Nutrition education materials development covering basic nutrition, agriculture, sanitation and health.
- b) Training courses for Ministry of Health and Primary Health Care staff, extension workers and community members (which includes village health workers and traditional birth attendants).
- c) Sanitation projects, i.e. well construction and building of latrines.
- d) Agricultural projects - gardening, small animal production, fish ponds, rice production, food storage.
- e) Appropriate technologies such as fuel efficient improved stoves and agricultural machinery.
- f) Nutritional monitoring of the 0-5 year old children in each of the ten target communities.

Originally, MFM staff included an adult literacy program in the list of activities. However, so far there is very little community support for this type of activity.

#### ANP Community Development Activities During 1983

Community Meetings. Meetings have been held in the target communities to provide community members with: a) an overview of the ANP concept, b) feedback on the survey results, c) an opportunity to discuss the program-design (the proposed activities). An outgrowth of these meetings was the formation of a nutrition committee and a sanitation committee in the communities. Each committee is composed of: the section chief or the town chief, the Primary Health Care trained traditional birth attendant, the village health worker, one man, and one woman.

The responsibilities of these committees are to: a) provide the day-to-day management of various community development activities, b) report to MFM staff any problems, and c) serve as link to educate other community members.

Immunization Project. Results of the baseline data survey showed that very few of the 0-5 year old children in Safroko Limba Chiefdom had been immunized. Following discussions between Meals for Millions, the Ministry of Health, and Primary Health Care about launching an immunization program, Foster Parents Plan International financed the vaccination of children in the target area communities. Primary Health Care will assume responsibility for maintaining the vaccination program which can be monitored in part through the MFM nutritional surveillance program.

Health Workers Training. In March the Ministry of Health and the Primary Health Care Program organized a training course for 27 village health workers and traditional birth attendants from the Safroko Limba Chiefdom. MFM worked with the MOH and PHC to include nutrition topics in the course. As a result, the following four topics were included in the training program: a) food taboos and customs, b) weaning foods, c) malnutrition - treatment and prevention, and d) the haybox cooker.

Environmental Sanitation Program. A high priority for many community leaders was the construction of pit latrines. MFM staff combined the construction of pit latrines with a multi-stage environmental sanitation training program. The five stages included: a) training of the Sierra Leone ANP staff in the overall design and implementation of community level training modules; b) reinforcing and upgrading the training skills of the PHC/MOH staff, particularly in the area of participatory training approaches; c) training of school teachers in training approaches, as well as the technical and health aspects of environmental sanitation; d) training of traditional birth attendants, village health workers and village committee members; e) training of local community members. (See Appendix 10.8 for the materials developed in conjunction with the environmental sanitation program.) This was the first training course module developed in the Sierra Leone ANP and it will serve as a model for developing others. A total of 36 latrines will be built in the target communities over two years. MFM provides the

cement, iron rods and metal sheets for the roof and some tools. Community members work together to dig the latrine pit, make mud bricks, transport the sand and provide the labor for construction.

Vegetable Garden Project. In response to the results of the baseline data/needs assessment survey which revealed a lack of food, MFM staff initiated a vegetable gardening project in one target community. (During 1984, the project will be expanded to the other communities.) This project was launched in Bombalibana due to the critical lack of vegetables during the dry season, the strong leadership and support of the Chief, and the cooperative nature of the community members. The Chief provided two and a half acres of very fertile swamp land for the development of a community garden. The community was divided into three groups, each cultivating part of the land. Community members have set aside each Saturday to work in the garden. Groundnuts, maize, cassava, watermelon, and various vegetables have been harvested. The USAID Adaptive Crop Research Extension Program (ACRE) provided over 2,000 cuttings of improved varieties of cassava and sweet potatoes. MFM and Catholic Relief Services (CRS) jointly provided the hand tools for preparing the land and planting the crops. Catholic Relief Services will also assist with the nutrition education lessons which are linked to the gardening activities. The Sierra Leone Ministry of Agriculture and the MFM agriculturist provide technical assistance to the community gardeners.

Since these garden plots are some distance from the community and their impact on improving the nutritional status of the children questionable, MFM staff are considering a new approach for the Bombalibana garden project. Using the health/nutrition education classes, MFM and PHC staff would identify mothers with malnourished children. They would then assist these mothers to establish gardens close to their homes to produce a variety of foods which can be incorporated into the family diet on a regular basis.

Nutritional Surveillance Program. A nutritional surveillance program for the 0-5 year old children has been established. By March 1984, mothers in all ten of the target communities will receive health/nutrition education on a monthly basis. As part of the educational process, MFM and PHC staff will monitor the nutritional status of 250 to 300 zero to five

year old children. MFM received permission from CRS to use their Road to Health Charts (with slight modifications) in the nutritional status monitoring. The nutritional assessment data gathered in the 10 communities will be incorporated into the regular monthly program report.

Plans for 1984 include extending the existing community development projects to all ten target communities, construction of fish ponds, promotion of small animal raising projects, launching a rice seed multiplication project, and other food production projects.

Under the dynamic leadership of Program Director, Justin Opoku, the staff of the Sierra Leone ANP have made tremendous progress during the first year of implementation. Strong collaborative ties with such organizations as CRS, CARE, ACRE, PHC, Peace Corps, Foster Parents Plan, and several government ministries have yielded vital assistance to the implementation of community development projects. Community participation is excellent and continues to grow. Staff have documented all aspects of the ANP implementation process. This documentation will be critically important in replicating or expanding the ANP.

#### 6.1.2 Kenya Food and Nutrition Training Program (FNT)

Beginning in 1981, MFM worked with the Kenya Freedom from Hunger Council (KFFHC) to develop this two-year, six-phase, food and nutrition training program. The goal of the program is to strengthen the capabilities of developing communities to solve their own food and nutrition problems. (For a detailed description of this program, see pages 23-29 of the Kenya ANP Proposal, attached as Appendix 10.2.) Supervisors of fieldworkers initially identified training needs for improving community development workers and participated in the development of the training curriculum. Twenty-five fieldworkers nominated by the supervisors attended a comprehensive two-week training in November 1981. Follow-up workshops have been held at six-month intervals. The first follow-up workshop assessed the impact of the original training on participants' activities and taught recordkeeping and monitoring skills. The second workshop covered evaluation, what it is, and how and why to do it. Participants learned nutrition assessment techniques and tested them in the community. They also learned new ways to give nutrition information through games and songs. (These workshops were detailed in the

Appendices to MFM's first report to AID on the Matching Grant dated January 17, 1983.

The final evaluation workshop for the two-year Food and Nutrition Training Program was held June 7 through 11, 1983. (See the Kenya FNT Final Evaluation Report attached as Appendix 10.3.) Fieldworkers, their supervisors and community members involved in the nutritional improvement projects implemented by the fieldworkers attended. All concurred that the training program had not only been successful in meeting objectives but that the outcomes resulting from the training exceeded expectation.

The specific objectives for the final evaluation workshop were:

- a) To provide fieldworkers with skills necessary to make their community development projects self-sufficient.
- b) To assist fieldworkers and supervisors plan future project activities.
- c) To provide fieldworkers and supervisors with an overview of the training program and resulting projects.
- d) For community members to share their experiences and future projections with one another.
- f) To determine what aspects of the training have been transferred to community members.

The workshop revealed that among the skills which fieldworkers either acquired or significantly improved as a result of the training are:

- a) How to identify food and nutrition problems.
- b) How to plan, implement, monitor and evaluate a community development project which addressed the nutrition problem identified.
- c) How to motivate and sustain interest and participation of community members.
- d) How to cooperate with other government and non-government organizations to maximize the use of local resources within projects.

The overall goal of all the 21 projects initiated by 24 participants was to improve the nutritional status of community members. All of the fieldworkers felt that they had met their goal. When asked to list ways this had happened, they responded:

- a) The nutritional status of children in the communities had improved.
- b) Community members are raising rabbits, growing vegetables, and consuming the produce.
- c) Food habits had improved and the effect of detrimental food taboos reduced.
- d) Surplus produce had been sold, increasing family incomes.

MFM staff has decided to continue to support six selected projects for one additional year. A detailed plan for this follow-up support has been prepared. Workshops have been conducted with these six projects on improving project planning, financial management and project monitoring.

The following is a summary of the projects resulting from the two-year program.

#### TYPES OF PROJECTS IMPLEMENTED BY FIELDWORKERS

- 14 vegetable gardening projects
- 3 combination vegetable gardening and rabbit raising projects
- 2 rabbit raising projects
- 2 beekeeping projects

#### BENEFICIARIES

- 654 zero to five year old children are involved in the 21 projects.
- 593 families are directly benefitting from projects (this represents over 6,000 people)
- 913 families are indirectly benefitting from projects (this represents over 6,000 people)
- 307 individual gardens are being cultivated
- 10 communal vegetable gardens are on-going

As a result of these projects, project members earned approximately 10,176 Kenya Shillings (over \$800) through the sale of surplus produce.

The Kenya Food and Nutrition Training Program has been one of MFM's most successful long-term training programs. The Kenya Ministry of Health has adopted the model to use in training its fieldworkers. MFM's Kenya Program Director, Mary Adiedo, has worked with the representatives from the Ministry to facilitate replication of this program. A committee composed of representatives of various Kenyan government and non-government

organizations has also selected this program to be presented at the International Exposition of Rural Development to be held in India in 1984. Out of over 100 Kenyan projects initially considered for inclusion in the exposition, MFM training program ranked third. The projects selected represent "successful" development efforts. They will be highlighted in Kenya throughout 1984.

Meals for Millions is currently preparing a publication documenting all phases of the Kenya Food and Nutrition Training Program. The publication, due to be printed in June 1984, will serve as a guide for organizations who want to replicate the training model developed.

### 6.1.3 Kenya Applied Nutrition Program

Plans continue for the implementation of the Kenya Applied Nutrition Program. (See the Kenya ANP Proposal attached as Appendix 10.2.) The MFM office has been transferred from Nairobi to the project area in Kisumu. The main collaborating organization will be the Lake Basin Development Authority (LBDA), an organization established by an Act of Parliament in 1979 to plan and coordinate the implementation of development projects in the Lake Victoria catchment area. Both organizations have approved an agreement for the terms of the collaboration. Preliminary discussions have also been held on the participation of other government and non-government agencies in the Kisumu area.

The goal of the Kenya Applied Nutrition Program is to improve the nutritional status of the 0-5 year old children in the target area. The target area is the Bondo Division located in Siaya District of Nyanza Province in western Kenya. The entire target area has an estimated population of between 16,000 and 20,000 people. Meals for Millions selected Bondo Division as the target area for three reasons: a) There are several agencies with which to collaborate including the Lake Basin Authority and the Saradidi Rural Health Center; b) The area is representative of the geographical, climatic, socio-economic and nutritional conditions found all along the shores of Lake Victoria, and thus the nutritional problems characteristic of a larger area are represented in the target area. This fact will greatly facilitate future expansion and replication of the ANP; and c) Existing demographic data indicates it is an area with a high infant mortality rate, high incidence of malnutrition, and high unemployment rate.

Preliminary plans indicate that the objectives of the program will be to:

- a) Develop and conduct a survey of the nutritional problems, and to gather nutritional status/baseline data information.
- b) Develop health/nutrition education and training materials.
- c) Organize health/nutrition training courses for:
  - Village Health Helpers and Traditional Birth attendants.
  - Saradidi Rural Health Center Staff.
  - Traditional leaders and community members.
  - Community development fieldworkers.
- d) Monitor the nutritional status of the 0-5 year old children in the target area.
- e) Implement nutrition oriented community development activities based on community identified problems.
- f) Teach health and nutrition through the primary schools and through adult education.
- g) Promote income generating and job creating activities.
- h) Strengthen the capabilities of communities to carry out self-help programs through existing groups and the formation of new groups.
- i) Coordinate development activities in conjunction with the Saradidi Rural Health Center and the Lake Basin Development Authority.
- j) Assess the family planning beliefs and practices of the target population and conduct seminars on various aspects of family planning.

Specific program objectives will be adjusted based on the results of the needs assessment/baseline data survey to be conducted in January 1984.

## 6.2 Asia

MFM's two Asia programs, Thailand and Korea, progressed greatly during 1983. Complete responsibility for the Korea ANP was turned over to the MFM/Korea Association in July. Both MFM President, Peter J. Davies, and Regional Director for Asia, John Seo, continue as board members of the new association. MFM will turn over capital assets in April 1984. The entire Board of Directors of the MFM/Korea Association have agreed to monitor the program to insure that it will achieve the business plan targets for the food production plant and maintain the quality of the nutrition education program.

Accomplishments in the Thailand ANP are very impressive, particularly considering that the project was started just over a year ago. Popular and successful community development projects now on-going include: duck raising, community and backyard gardens, fish ponds, comprehensive village and home sanitation programs, and strengthening of village development committees.

In 1984, MFM plans to implement a new Applied Nutrition Program in Nepal at the request of the Nepalese Ministry of Agriculture.

### 6.2.1 Thailand Applied Nutrition Program

A joint program between the Thai Ministry of Public Health and Meals for Millions, the Thailand ANP seeks to improve the nutritional status of the rural population of Ngao and Sob Prab Districts, especially the 0-5 year old children and pregnant and lactating women. Specific program objectives are to:

- a) Establish an integrated nutrition program model using a participatory community approach.
- b) Develop and adapt a model suitable for replication nationwide.
- c) Work with national and provincial government health, education, agriculture and community development officers to raise awareness of the importance of nutrition to economic development.
- d) Organize and work with communities to develop and implement health and nutrition related community development projects.

The needs assessment/baseline data survey was conducted during September 1982. The analysis of the survey is summarized as follows:

Sample Population: Ngao - 477 households,  
Sob Prab - 179 households  
Total - 656 families surveyed  
(5% of the total number of households.)

Problems: ( as listed by the people surveyed)

1. High unemployment
2. Low yield agricultural crops
3. Lack of irrigation water and drinking water
4. Marginal farm land
5. No knowledge of other ways to earn a living

Assessment of Nutritional Status of Pre-School Children:

2.8% have 3rd degree malnutrition  
11% have 2nd degree malnutrition  
32.4% have 1st degree malnutrition

The survey shows that the major problems are related to a lack of water, both for irrigation and drinking, poor cropping practices, a one crop economy, no nutritional practices, poor sanitary conditions, lack of food storage systems and low income. In our original proposal we stated (based on available government statistics) that there was no shortage of food in two districts. Surprisingly enough, however, our survey indicates that there definitely is an undersupply of basic foods. (Our first annual report to AID on the Matching Grant includes a detailed report on the analysis of the Thailand survey.)

The detailed plans for program interventions are based on this survey information.

Community Development Activities. During June, agricultural training sessions were conducted for villagers. Provincial and district agricultural officers assisted MFM staff in planning and conducting the training sessions. Topics covered in the training included techniques for cultivating soybeans and how to use compost instead of purchasing expensive fertilizers. It is important to note that MFM has introduced for the first time soybean cultivation in northern Thailand.

In preparation for the July planting season, 753 kilograms of soybeans were distributed to 53 villages and 29 schools. Farmers have been encouraged to plant native vegetables using seeds adapted to the particular area.

To date, 58 fish ponds have been established with fingerlings provided by a local donor through MFM. Current activities include planting bananas around the ponds to provide shade and produce a high yield of bananas for home consumption.

Government workers and school teachers received training on duck raising during May. They learned the basic elements of raising ducks and how to cope with the most common duck diseases. The government workers and teachers in turn trained villagers who were to begin duck raising in June. Since June, MFM has distributed 9,560 ducks to 1,709 families and 36 schools. It is important to note that all fingerlings, ducks or seeds are distributed on an in-kind revolving loan basis. Each family receiving ducklings, for example, must return two offspring for distribution to other families. Village Development Committees have primary responsibility for supervising this in-kind revolving loan program. (See Section 8.3.2 of this report for more details on the Thailand in-kind revolving loan program.)

During October, 66 school teachers and 49 sub-district level government workers received intensive training in the following areas: nutrition education and nutritional surveillance, community development, environmental sanitation and appropriate technology.

Together with the personnel from the Provincial Health Office, MFM planned a parasite control program for pre-school children. Before any distribution of parasite drugs, public health officials conducted stool tests on 170 children selected randomly. The parasite drugs were distributed to pre-school children during nutritional surveillance sessions in October and November under the direction of district medical personnel.

Government health workers trained by MFM staff take anthropometric measurements of 7,800 pre-school children in the target area. In addition, 400 of these children (randomly selected) are to be closely monitored for the duration of the program.

MFM staff launched a comprehensive Environmental Sanitation Project which incorporates several appropriate technologies. Community members have built cement water filtration tanks with MFM assistance. MFM provides the mold for the tank and technical support. MFM staff plan to make 40 molds available to promote construction of more filtration tanks. Another technology introduced was the concept of regular street cleaning. Villagers built bamboo trash baskets and placed them in front of each home. Teachers organized school children to collect trash on the streets on their way to and from school.

Also, every full moon day, all farmers and villagers bring a shovel and broom to clean the streets. Once streets are cleaned, the areas surrounding the houses are also cleaned.

The Environmental Sanitation Project has been working extremely well. The Ministry of Public Health, one of the main counterpart ministries, has adopted the model for Northeast Thailand.

Demonstration Villages and Schools. One important aspect of the ANP is that of demonstration villages and schools, one of each in the two target districts of Ngao and Sob Prab. On these four demonstration sites an intensive program of all planned activities is being carried out. All the villagers and all the school children at these selected sites participate.

In the demonstration villages many activities have been initiated. The nutrition education program is well underway. Through women's groups and home visits, staff have taught improved cooking methods, rice cleaning and food preparation. Five ducklings were distributed to each of 114 families who had participated in the May training program on duck raising. Backyard garden activities are also underway. Seeds have been distributed to families and agricultural extension workers provide on-going training and follow-up. These include street and yard cleaning, installation of bamboo trash baskets on street corners, demonstration of water filtration tanks and various kitchen improvements such as construction of food storage cabinets and fuel efficient stoves. In addition, two wells have been dug in the Ngao demonstration village.

On-going activities in the demonstration schools include: intensive nutrition education, a hot lunch program, garden projects and duck raising.

Training Materials Development. Various nutrition education and training materials are currently being developed. The Adult Manual has been reviewed by specialists in the fields of nutrition and non-formal education and is now being field tested for six months before printing. The second draft of the student manual is in preparation. It will be reviewed by experts and field tested. Drafts of six nutrition pamphlets have been prepared. Topics of the pamphlets include: basic food groups, balanced diets, daily food requirements for families, symptoms of nutritional deficiencies and food hygiene. Work has begun on developing posters and a flip chart.

Village Committees. MFM staff view the reactivation of village committees as vital to achieving a high degree of community participation. As of October, 56 of the 83 target villages had reactivated their committees. This is achieved through the combined efforts of MFM staff and district agricultural, health, education and community development workers.

Various other meetings are held regularly to insure coordination of ANP activities with all appropriate government and non-government organizations. An Advisory Committee, which includes provincial and district officials, meets quarterly to review progress of the ANP. An ANP Task Force also meets regularly and includes the district chiefs from the five main ministries of health, agriculture, education, community development and livestock.

In December 1983 and early 1984, various surveys will be conducted as part of the on-going evaluation process. Included will be a dietary recall survey of randomly selected families and market surveys.

Progress within the Thailand ANP has continued nearly as planned. Achievements are impressive considering the program began just one year ago.

The main activities in 1984 will be improving the nutritional surveillance program for the 0-5 year old children, implementing training programs using the nutrition education materials developed in 1983, and expanding the community development projects. All program staff will work to improve the dissemination of information to all villages in the target area and establish close links with village development committees. Staff will also strengthen the link between the community development activities and nutritional improvement through intensive nutrition and health education.

SUMMARY OF COMMUNITY DEVELOPMENT ACTIVITIES

IN THE THAILAND ANP

(as of October 30, 1983)

Activity	Targets		Total Accomplished	
	Villages	Families	Villages	Families
a) Reactivation of village development committees	83	--	56	--
b) Food Production				
Soybean Planting				
in villages	60	946	46	638
in schools	29	--	29	--
Backyard gardens				
in villages	60	654	60	554
in schools	35	--	35	--
Duck Raising				
in villages	47	1,709	51	1,700
in schools	36	--	36	--
Fish Ponds				
in villages	2	--	44	--
in schools	2	--	14	--
c) Environmental Sanitation				
-Water filtration tanks	--	--	--	64
-Water filtration molds	40	--	11	--
-Food storage cabinets	2	--	1	--
-Improved stoves	2	--	1	--
-Village and street cleaning	--	--	15	--

SUMMARY OF NUTRITION EDUCATION ACTIVITIES

IN THE THAILAND ANP

(during October 1983)

<u>PART A</u>			
Activity	No. of People	No. of Villages	No. of Hours
1) Training for health post volunteers and health communicators	206	35	35
2) Training for primary school children	172	3	7
3) Training for village women	97	8	18
4) Home visits	31	7	27
5) Anthropometric survey	--	--	--
6) Cooking demonstrations	158	5	16
7) Village demonstrations	40	2	12
8) Intensive training for: -government workers	49	--	3 days
-school teachers	66	--	3 days
<u>PART B</u>			
Training Topics	No. of People	No. of Villages	No. of Hours
1) Nutrition problems, anthropometric measurement	206	35	35
2) Nutrition deficiencies, basic food groups	172	3	7
3) Food for pre-school children	97	8	18
4) Food for pregnant women and lactating mothers	31	7	27
5) Collecting information and data	--	13	16
6) Food for school children, supplementary food	158	5	16
7) Preparing soybean milk, egg preservation, nutrition education	40	2	3 days

### 6.3 Latin America and the Caribbean

Extensive external evaluations have now been conducted of the two Latin American programs - Ecuador (1982) and Honduras (1983). Both reports indicate that the programs are admirably meeting objectives and having significant impact on the target communities. The two programs clearly demonstrate how local situations shape an ANP. A sudden end to a seven-year drought in Ecuador, forced ANP staff to act quickly and focus on food production activities that would take full advantage of the rains. Strong support from the Ministry of Health in Honduras encourages a focus on health and nutrition activities in that ANP. In Antigua, agricultural production linked to nutrition education is the main program focus. Meals for Millions plans to turn the Antigua ANP over to a local organization by early 1985.

#### 6.3.1 Honduras Applied Nutrition Program

The Honduras Applied Nutrition Program, on-going for over five years, was recently selected as one of twelve health and nutrition projects worldwide to be evaluated by U.S.A.I.D./Washington. The evaluation, conducted in July 1983 by a team of three professional evaluators, shows that the program continues to admirably meet its objectives and have significant impact on the target community. (A draft of the evaluation report is attached as Appendix 11.13.)

The target area encompasses nine villages with a population of 4,000 in the Department of Olancho in eastern Honduras. Six program staff implement the ANP activities. Objectives include: a) Coordination of development activities in the area through a Coordinating Committee composed of government and private agencies; b) Clinical control of 0-5 year old children and pregnant mothers; c) Provision of nutrition and health education to mothers with 2nd and 3rd degree malnourished children; d) Presentation of training programs in project management and administration; e) Agricultural training for community leaders; and f) Implementation of self-help/income generating projects.

- a) Improvement in nutritional status. The data analyzed shows a significant nutritional improvement overall in the target area, with some communities showing greater improvement than others.
- A longitudinal study of 100 children over a four year period shows a 70% reduction in 2nd and 3rd degree cases of malnutrition. Ninety-seven percent of the children were normal or in the first degree classification after the four years. An analysis of the entire population of 0-5 year old children (in the nine target communities) participating in the nutritional surveillance program indicates that there has been a 24% reduction in 2nd and 3rd degree malnutrition cases overall.
  - A review of the 1979 morbidity data at the CESAR (health center) revealed that for every child 0-5 years old under the surveillance program, there were two children with visits for illness. In 1983, the morbidity statistics had been reversed, e.g. for every three children visiting for surveillance purposes, there was only one child with a visit due to illness.
  - The percent of the target population covered by the CESAR in Zopilotepe is much greater than the coverage for the region as a whole. In 1982, 68% of all families were covered, in 1983, 75% of all families were covered.
  - The garden program, the revolving loan program and the self-help projects have had a significant influence on increasing attendance at the CESAR.
  - The entire target population has successfully participated in the vaccination program and new babies are now routinely included. The rate of vaccination in the Zopilotepe area is much higher than the region as a whole.
- b) Inter-agency coordination is very good. This is the only program in Honduras that incorporates and integrates all the different factors and agencies necessary to promote effective integrated community development. Meals for

Millions has been the active catalyst to bring this about and this has been an extremely important influence on the success of the project.

- c) The excellent MFM and CESAR staff form a highly efficient and effective team. They are highly motivated and jointly conduct program planning and decision making processes.
- d) All of the activities implemented have a definite relation to the overall program goal and objectives. The manner in which they are carried out is carefully integrated and monitored.
- e) Innovative methods, implements, materials and systems have been applied to all areas of the program. The technologies introduced have been appropriate in terms of cultural acceptability, affordability, relevancy to specific felt problems and feasibility of assimilation.
- f) Two of the cornerstones of success of the ANP identified in the evaluation are the mobilization and coordination of existing agency resources toward the resolution of community problems and active community participation in all aspects of the program.

The evaluation team also made several recommendations for improving the program. These included:

- a) Applied Nutrition Program staff should direct more attention to those communities which have the highest prevalence of malnutrition, giving particular emphasis to potable water systems and community organization.
- b) Staff should document program experiences more concisely for local dissemination, not only through printed materials but also through seminars and workshops at various levels.
- c) Improve follow-up activities to most program interventions, particularly training.

- d) Systematize the great amount of excellent data that has been collected to facilitate internal planning and external reporting. An appropriate, efficient and comprehensive information system should be designed and implemented to monitor program activities and evaluate results. Data should be collected only for specific, identifiable purposes as determined by the program goal, purpose, and objectives.
- e) Upgrade technical analysis: 1. Be very clear why activities are undertaken and what the alternatives are; 2. Include a more detailed analysis of program interventions to insure that they are, in fact, an improvement over older methods/practices; 3. Improve the analysis by which activities can be replicated within the national system and how they could be coordinated; and 4. Improve formation and analysis of specific studies for more precise problem solving and planning.

The evaluation included meeting with government and U.S.A.I.D. officials in the capital city of Tegucigalpa before and after the actual evaluation up-country. As a result of the concluding talks, many of these officials have planned visits to the ANP site.

It was noted by the evaluators that one of the most important and key factors influencing the success of the program is the quality of the staff and their commitment to program development and implementation.

#### Some Key Program Interventions in the Honduras ANP

Nutrition and Health Education. Nutrition and health education is a basic component of the ANP strategy. It is carried out on an interpersonal level with women who are organized into three types of groups: pregnant women, mothers of children who attend the growth and development clinics, and women's groups in each community. The first group meets monthly for prenatal control, to receive supplementary food rations and to participate in an education session. These activities are directed toward protecting the health of mother and child and promoting breastfeeding. The second group also meets monthly, receives food rations, and participates in an education session. In addition, the children are weighed, measured and,

if scheduled, vaccinated. The education is oriented towards promoting an adequate diet for the pre-school child, oral rehydration for children with diarrhea and the importance of regular nutrition and health check-ups. The third group meets in their respective communities twice each month. Information is provided on the diet of the family in general, personal and food hygiene, child care and the various activities carried out by the health center and ANP. Simultaneously, the women learn new "trade" skills in carpentry, weaving, soap making, etc., and participate in workshops to produce kitchen utensils, household furnishings and other improvements to be used in their homes.

The Ministry of Health Supervisor of Nurses has expressed great interest in the health and nutrition monitoring system developed by the MFM staff in Honduras. MFM Program Director, Zoila Alvarez, has worked with the MOH to plan for the replication of this component of the ANP throughout the region. In 1984, MFM nutritionist will begin to train MOH nurses in the implementation of the health and nutrition monitoring system. The training will take place in three phases. In the first phase, the nutritionist will train staff at a nearby health center. The rural health staff, including a doctor, medical nurse and the area supervisor of nurses will learn how to implement the MFM monitoring system as part of their on-going work. In Phase II, additional training will be provided, first at MFM's training center in Zopilotepe, then on site at additional health centers throughout the region. At each rural health center, MFM's nutritionist will review existing records, train staff in collecting data on 0-5 year old children and pregnant and lactating mothers seen by the health center, and institute the monitoring system. In Phase III, MFM staff will institute a census activity since each rural health center urgently needs data on the nutritional status of their clients. A survey of children 0-5 years of age and pregnant and lactating mothers will be made to establish the total number of children and the number and degree of malnourished in each area.

Agricultural Training and Technical Assistance. At the ANP training and demonstration center near the health center in Zopilotepe, various training programs are conducted. These include:

- Agricultural Workshops. A demonstration garden has been planted and maintained at the training center. Workshops cover a variety of topics such as soil conservation, integrated pest management, caring for fruit trees, irrigation methods, etc.
- Rabbit Raising Workshops. These provide community members with skills in building hutches, technical information on caring for rabbits, and cooking demonstrations.
- Workshops on Project Management and Administration.
- Home Improvement Workshops (On-going). Meals for Millions' staff have made various demonstration articles for home improvement. These include beds, cribs, clothes hangers, clay pots and plates, dish racks, and food storage cabinets. As part of the work with women's groups, certain houses in the communities are designated as "model homes". The women are taught how to build the home improvement items recommended and when they have completed these, their houses are then used as "examples" for other community members. Insect control is another aspect of the home improvement project.
- Silo Construction. A workshop was given to instruct 5 villagers on techniques for constructing silos. To-date 28 silos are in use with another 30 constructed and being distributed.
- Garden Projects. The agricultural training programs above provide essential support to the various gardening projects. In addition to the demonstration gardens maintained at the training center, 58 home gardens and six school gardens flourished in 1983. Twenty-seven basic grain projects did exceptionally well and were supported by the revolving loan fund. Produce from the gardens is for home consumption and income-generating. Nutrition education sessions teach

mothers how to utilize the new vegetables introduced into the area such as carrots, cauliflower, and various greens. The MFM agronomist, and Ministry of Agriculture personnel provide technical assistance to farmers. They emphasize organic gardening techniques such as crop rotation, composting, integrated pest management and raising earthworms. A six-week agricultural training course prepares community members to act as resource persons for their respective communities. In October, an award ceremony was held for these community agricultural leaders who had completed the training course. The goal is to have at least two graduates from the training in each project community to provide on-going assistance to the farmers.

Revolving Loan Fund. In order to improve the effectiveness of the agricultural training and technical assistance, an in-kind revolving loan fund was initiated in 1983. The fund provides such materials as fertilizers, seeds, insecticides, tools, or fencing to facilitate the production and storage of food at the family level. During the first six months of 1983, 49 families had received goods on credit with a total value of \$3,420, an average of \$70 per family.

Water and Sanitation Projects. Community water systems have been promoted, coordinated, and partially financed by MFM in three communities and several more are planned.

The above represents only a few of the Honduras ANP activities. For details on these and other interventions see Honduras Evaluation Appendix 10.13.

During 1984, MFM staff will finalize plans for expansion and replication of the model program. In addition, current project activities i.e. training, health and nutrition education, small animal raising, gardening, grain storage, etc. will be increased within the present project area. At the request of the Ministry of Health, the MFM record-keeping system and surveillance program for the vulnerable groups and appointments system for the pregnant and lactating mothers will be introduced to other health centers in the region.

### 6.3.2 Ecuador Applied Nutrition Program

Due to a deluge of rain bringing a dramatic end to the seven-year drought, the focus of the Ecuador ANP in 1983 has been on agricultural activities. MFM staff have taken advantage of the abundant supply of rain to introduce new crops, improve on production of other crops, and utilize various appropriate technologies related to agricultural production. To support these agricultural activities, MFM staff worked to extend the credit available to farmers by expanding the MFM revolving loan fund and encouraging banks to grant loans to small farmers.

The Ecuador program as a whole concentrates on an integrated approach to improving the food and nutrition status of the most vulnerable groups. Program objectives are to:

- a) Provide technical assistance, training and information for agricultural activities.
- b) Develop a nutrition and health education program for mothers and children in ten communities of the area of influence.
- c) Support the organization, development and functioning of local groups and agencies on the Santa Elena Peninsula to serve as catalysts for full self-sufficiency.
- d) Implement self-help/income-generating projects.
- e) Develop a water resource project.

Four national staff members carry out program activities in 15 Santa Elena Peninsula communities, an area having a total population of more than 6,000 people.

The story of the impact of the sudden rains on the communities and the mobilization of MFM and community members to capitalize on this opportunity is quite impressive.

As soon as the extent on the rains was evident, Lautaro Andrade, Program Director, began encouraging farmers to plant certified corn seed. However, few farmers had sufficient funds to purchase seed and seed itself was scarce. When the Minister for Agriculture visited the Peninsula to distribute 22 community land titles, a group of farmers presented him with a letter requesting loans for purchasing the necessary inputs for planting corn. In a meeting with the Minister, MFM staff requested that certified corn seed be made available as quickly as possible. It is important to

note here that prior to this request by MFM no certified corn seed had even been planted on the Peninsula. The letter, meetings and the national grain crisis, prompted the Minister to quickly work with the National Development Bank to provide the necessary loans. Within a few days the Santa Elena branch of the bank received authorization to begin loaning funds to farmers, and the Ministry of Agriculture (MOA) agreed to provide certified seed.

The MFM office soon became inundated with requests for assistance. MFM staff helped many farmers in the loan application process and others, who did not qualify for bank loans, received assistance from the MFM revolving loan fund.

During personal visits to farmers, and through radio broadcasts, MFM staff encouraged farmers to await the arrival of certified corn seed and not to plant the scarce locally available corn which had poor germination rates and low yields. MFM staff personally transported the first 900-pound shipment of certified seed from Guayaquil to Santa Elena. Within hours of its arrival, all the seed had been distributed to farmers. In addition, certified soybean and rice seeds were also provided. MFM staff and government agricultural technicians provided instructions on how to plant the new seed. By the end of January, 9,000 pounds of various types of seeds had been brought to the peninsula by MFM -- all to be paid for by the farmers.

Although corn had been planted on the peninsula in prior years, drought had all but terminated the growing of any grains. Rice had never been planted in the area. A group of Taiwanese technicians were sent to Santa Elena to teach the farmers rice harvesting and drying techniques. As a result of the extremely successful grain harvests, the Government of Ecuador became very aware of the potential of this area and now hopes that consistent grain yields will prevent massive imports of corn. Their awareness has been translated into visible support not only with the provision of seed and loans, but also with the increased number of agricultural extension agents assigned to the area. Other international development agencies have also become interested in the area. USAID provided \$20,000 for small projects. Efforts were also

focused on reforestation and MFM provided pine tree, saltbush, jojoba and guayule seeds for planting. Later in the year, 30,000 plantain cuttings were planted providing a favorite local food.

The total area cultivated (mainly in corn) totaled 4,000 hectares (10,000 acres). Since the rice harvest was so successful, plans are to considerably increase the area of rice cultivation. Several farmers have already requested assistance for planting rice in the upcoming season. To facilitate harvesting and marketing of the produce, two appropriate technologies have been introduced and received well by the farmers. The first is a digital moisture measuring device to determine the amount of moisture remaining in the harvested grain. This allows the farmers to know when to sell their corn to receive the maximum price. It also avoids the possibility of being cheated by unscrupulous middlemen attempting to mislead the farmers as to the amount of moisture. The second technology is a mechanical corn sheller built by a local industrial mechanic living in a nearby town. MFM has purchased one corn sheller to use experimentally and in demonstrations with farmers. It is expected that additional shellers will eventually be purchased by farmers' groups.

The severe flooding resulting from the rains caused extensive damage in and around the peninsula. One result was a critical shortage of food as washed out roads and bridges prevented transportation of food supplies. Once the heavy rains ceased, MFM began to work closely with the Rotary Club of Salinas (the nearest large urban area) to develop an urban and rural home gardening program to alleviate the food shortage.

MFM's 1983 activities in Ecuador clearly demonstrate the flexibility of the Applied Nutrition Program approach. The staff were able to respond quickly and competently to the resultant flooding which, while causing hardships for the people and severe difficulties to the area, presented an opportunity for farmers to grow a major amount of grain for the first time in seven years. During the emergency, regular MFM program activities continued on a reduced scale as the cultivation

of corn became an immediate priority. Program activities have since returned to normal levels, yet the experience gained by the MFM staff is invaluable. They have shown the ability to assess a difficult situation and react positively in coordination with the Government and the community.

Other on-going program activities include:

Nutrition Education. MFM provides nutrition education courses, pre-natal assistance, family planning information, and growth surveillance for children 0-5 years of age to 179 women and 190 children in eight rural communities. As part of the nutrition education, 30 home gardens and three community gardens are cultivated by community women with technical assistance from MFM.

Rural Infrastructure. AGRUPENSE, a cooperative of 61 farmers organized with MFM assistance, continues to be strong and expects to receive legal status in 1984. A second association of 23 poultry farmers is developing. The cottage baking industry, which began in 1982, also continues to flourish. Six ovens have been built and now provide income for owners who daily bake and sell bread.

Revolving Loan Fund. A comprehensive and highly successful revolving loan fund has been established. During the first six months of 1983, a total of 83 loans were provided for agricultural development and home improvement. (See Section 8.3.1 of this report for further details.) The revolving loan program has a unique design. In order to participate, farmers must fulfill certain prerequisites. Depending on what the loan is for, they may be required to prepare land for planting, build a chicken coop, or purchase matching equipment. Once these prerequisites are met, MFM writes out a purchase order for materials to be supplied by a local merchant. The farmer then receives the items from the store and is responsible for transporting them. With 99% of all loans being repaid, the program speaks for itself. A relatively small loan fund of \$25,000 provides the base for this program.

Through the Ecuador revolving loan fund, MFM has demonstrated the positive effects of a well-organized system of credit for small-scale farmers and has shown other institutions that they need not fear

providing this service. Credit is a major factor in farmers' willingness to take the risks needed to increase production. Basic prerequisites gain an initial commitment from farmers, while follow-up and technical assistance foster the mutual trust that leads to timely repayment.

During 1983, six Peace Corps volunteers provided valuable support for MFM's agriculture and nutrition projects. The volunteers consistently sought advice from the MFM staff and coordinated their efforts to enhance the overall program.

During 1984, MFM staff will work intensively to develop, improve and expand the nutrition education component integrating it closely with the successful agricultural projects. This will include conducting a nutritional status survey, increasing nutrition education classes for the vulnerable groups, promoting home gardens, and expanding community gardens.

### 6.3.3 Antigua Applied Nutrition Program

The Antigua Applied Nutrition Program is nearly into its third year of operation. Four national staff provide technical expertise, training and support to nine of the island's communities. The target area encompasses the entire island which has a total population of 74,000. The program goal is to improve the nutritional status of the most vulnerable groups (0-5 year old children, pregnant and lactating women) in Antigua and to generate income through increased food production. Major program objectives are to:

- a) Develop community and school gardens, orchards and small animal projects.
- b) Coordinate with the Government of Antigua and non-government organizations, available resources for program development.
- c) Develop nutrition and health education programs in clinics, at schools, and with groups in the community.
- d) Monitor weight and height of children in the 0-5 year old age group.
- e) Develop and implement agricultural training programs.

- f) Strengthen the capabilities of communities to carry out self-help programs through the formation and organization of new groups.
- g) Provide technical assistance to local farmers in small scale agricultural production.
- h) Establish a revolving loan fund to provide credit to farmers in small-scale agricultural production.
- i) Provide marketing assistance to farmers.
- j) Provide a tractor and develop a system for it to serve the community.

Agriculture. While clinic and school gardens continue to be a focus of the gardening project, more emphasis is now put on community gardens which have a combined area of 13 acres and involve 45 gardeners. Twenty-four individuals are involved in backyard garden projects producing vegetables for home consumption and income generation. Many more home gardens are planned for 1984. In addition, demonstration gardens are flourishing at three health clinics and three primary schools. During August 1983, MFM's horticulturist conducted a one week workshop for gardeners on Integrated Pest Management.

The following components of the Antigua ANP provide additional and valuable support to the agricultural activities:

- a) Revolving Loan Fund. In 1982, Barclays Bank provided MFM with an interest free loan of \$13,500 to establish a revolving loan fund for small scale farmers. Loans provided to the farmers through the fund are for a maximum of 12 months and a five percent interest charge on the loan provides funds to support the program. A Three-person committee (including a staff member from Barclays Bank) was formed to discuss, review and approve loan applications. This committee also makes periodic field visits to view projects of the recipients. Ninety-five percent of the funds loaned have been used to develop or expand water resources for irrigation of gardens. For example, an irrigation pump purchased for the Cooks Community Garden has allowed participants to cultivate ten additional acres. Another farmer built a water catchment and is now able to plant vegetables on 20 acres of land he received on lease from the Antigua Government. Due to the estimated increased incomes from selling produce, most loan recipients are planning to repay their loans in less than the 12 months allowed.

- b) Tractor Program. A tractor purchased by MFM in 1982 continues to assist small farmers to prepare their lands on a timely basis. The tractor operates on a loan basis at a fixed cost per acre to assure that maintenance, repair and operating costs are covered from payment for services rendered.
- c) Beekeeping: An important element of improved horticulture has been support for beekeeping. To-date MFM has assisted 14 beekeepers to establish 92 hives. The beekeepers formed an association which meets regularly to share expertise and plan activities.

Other on-going components of the ANP include the following:

Nutrition Education. The MFM nutrition educators provide nutrition information at health clinics and schools where demonstration and/or home gardens are located or planned. Home visits are an important aspect of the nutrition education program.

Appropriate Technology. A variety of technologies have been introduced in Antigua since the beginning of the program. Solar ovens and dryers, as well as fireless cookers continue to generate interest and MFM staff receive many requests for information on how to build and operate them. The MFM Director of Appropriate Technology and the Davis Resource Center personnel helped the Antigua Program Director, Ruth Spencer, to develop and produce a solar drying manual which will be printed by the Caribbean Development Bank. MFM staff continue to be requested to demonstrate these technologies in workshops throughout the Caribbean. Other technologies introduced include soap and chalk making. The Seaglans Community Group produces soap and high quality chalk for income generation.

Inter-agency Coordination. MFM staff have established close links to several other agencies within the Caribbean. The agencies work together providing a variety of resources for one another's efforts. For example, early in 1983, MFM, in cooperation with the Caribbean Food and Nutrition Institute and the Ministry of Health, sponsored a-workshop on "Materials Development for Nutrition Education". Plans are underway for MFM to work with the Caribbean Agricultural Research and Development Agency (CARDI) using MFM garden sites as experimental plots. In St. Maartens, MFM Program Director served as

resource persons for a gardening workshop sponsored by BELINAH (Better Life Nutrition and Health Care Foundation). Other organizations with which MFM works closely are: the Pan American Health Organization (PAHO), Women and Development (WAND), Inter-American Foundation, PLENTY (a small private voluntary agency working in Antigua), Caribbean Community (CARICOM), and various government ministries. Nearly all these groups have recently been involved in a comprehensive seminar to discuss issues related to women in agriculture and rural development (Montserrat, November 1983).

Rural Infrastructure. The Farmers Cooperative Association, established with MFM assistance in 1982, is now a legally recognized cooperative. MFM provides technical assistance to the thirty-member group and helps coordinate various activities. The 14 beekeepers have also formed their own association for mutual benefit. MFM's Program Director, who attended a comprehensive training program on beekeeping in the U.S., continues to provide the group with technical assistance.

The Antigua ANP already shows a great deal of self-sufficiency in gaining and utilizing both technical and material resources. During 1984, MFM will assist the Antigua program to become fully institutionalized and independent. In early 1985, the program will be turned over to a local organization.

## 7. MFM's APPLIED NUTRITION PROGRAMS: WHAT? WHY? HOW?

As Meals for Millions struggled to make its program more responsive to the needs of rural developing communities, the strategy of implementing APPLIED NUTRITION PROGRAMS (ANPs) was adopted. Training, which had formerly been the focus of MFM activities, became an integral part of the more comprehensive ANPs.

MFM is now committed to the ANP methodology for a number of reasons. ANPs necessitate an integrated approach which is essential for solving problems having multiple biological, environmental, and sociological causes. An ANP is a flexible model and provides a focal point for the coordination of many community activities. The ANP model stresses the importance of the process used to achieve development not simply the implementation of various activities or the provision of technical or material assistance. Lastly, the ANP approach used by MFM is logical, systematic, cost-effective and easily replicable.

In the following two sections of this report, we will briefly address three questions:

- a) What is an Applied Nutrition Program?
- b) Why has MFM chosen this method to promote rural development?
- c) What are some of the key program strategies used to implement an ANP?

In defining an Applied Nutrition Program, MFM relies on Michael Latham's concept presented in the booklet, "Planning and Evaluation of Applied Nutrition Programs", (FAO, 1972). Latham says that ANPs may be defined as "coordinated educational activities between agriculture, health and education authorities and other interested agencies with the aim of raising the levels of nutrition of local populations, particularly mothers and children in rural areas", (Latham, p. 3). All ANPs share the following characteristics:

- They are coordinated at all levels.
- They are essentially educational activities developed through different channels to reach stated objectives..
- They involve several disciplines, including health, agriculture, education and community development.
- They use the self-help approach - always insuring community participation.
- They use the positive method of learning by doing.
- They are directed to the family, and reach family members not only

in the home but in schools, health centers, clubs and organizations, and through the mass media.

- They cover all levels - linking national food and nutrition policy with field activities at regional, community, and family levels.
- Their ultimate objective is to raise the levels of nutrition of the population. This will involve both food production and food consumption. (Latham, p. 4.)

Providing an ANP meets the above criteria, it might be described simply as a rural integrated development program with a nutrition focus.

Although MFM basically subscribes to Latham's ANP concept, there are some fundamental differences in the implementation process. These differences arise primarily from the fact that Latham addresses his book mainly to potential government implementers while MFM is non-governmental, private voluntary agency. MFM can be considerably more flexible in its approach since it is not subject to cumbersome government bureaucracies. This is in spite of the fact the MFM collaborates closely with various government agencies in all program areas and keeps government officials at all levels well informed of program plans and activities.

Latham suggests a complex, inter-ministerial committee structure to govern the implementation of an ANP. Such a system is too vulnerable to political and territorial conflicts, bureaucratic in-decision, and divided loyalties.

MFM as an independent private agency, sees the communities in the target area and the government and non-government agencies existing with them as the basis for program implementation. Local government representatives in the target areas are brought into the implementation process as appropriate. Government agencies most often involved in the ANP are the ministries of agriculture, education, health and community development.

When selecting a target area for any ANP, one of the main criteria is the existence of an "umbrella organization" with which MFM can closely collaborate. This umbrella organization can be government or non-government, but it must have the necessary national and regional support and the capability for eventually replicating the model ANP. In Kenya, for example, MFM works with the Lake Basin Development Authority (LBDA), an organization established by an Act of Parliament in 1979 to plan and coordinate the

implementation of development projects in the Lake Victoria catchment area which includes the ANP target area. The LBDA is an ideal organization through which the Kenya Applied Nutrition Program can be developed. It provides an excellent infrastructure for replicating the model ANP by being able to incorporate the "lessons learned" as well as actual program interventions into the overall development planning for the Lake Basin Area (an area with a population of approximately 7.1 million people or 40% of Kenya's population.

In Thailand, by contrast, the ANP is implemented directly with the Ministry of Public Health which asked MFM to add a nutrition education component to an existing integrated rural development program in the Lampang Province.

MFM does not seek to establish itself as a new and permanent organization within any area. Rather, it early on establishes itself in the role of a "coordinator", "facilitator", and "catalyst" of development efforts. It is this fact which perhaps precludes the territorial jealousies and conflicts too often characteristic of collaborative development efforts.

There is another main reason why MFM bases the implementation processes of an ANP at the local level. The focus of many national development efforts is on decentralization - placing more decision-making power at regional and district levels. For an ANP to be governed by a national committee of any sort would be counterproductive to efforts to achieve this decentralization. In addition, MFM firmly believes that local decision-making and planning, involving existing agencies and community members, insures that ANP interventions truly meet local needs. It also makes coordination among various groups easier and the implementation of program activities more efficient and timely.

One criticism of MFM's approach is that implementing an ANP in a relatively small target area does not guarantee that the program will have any impact nationally. Although this may be true, MFM's implementation of an ANP from beginning to end is done with a view to promoting replication by the "umbrella organization" or any other organization, for that matter. Some of the factors which MFM considers critical to promote replication of an ANP are as follows:

- a) MFM's programs are low-cost and will not create a dependence on international aid. MFM utilizes the resources of existing

organizations to extend its own capabilities while simultaneously strengthening the service delivery systems of those very organizations.

- b) MFM promotes self-reliance at all levels within the target area. Community leaders and community groups are trained and encouraged to assume responsibilities for various aspects of the ANP.
- c) MFM supports the institutionalization of various program interventions making them independent of MFM support yet maintaining their functions in the community development process.
- d) MFM staff carefully document all aspects of program implementation. Detailed reports, training modules, evaluation reports and other printed materials - all serve to comprise a "handbook" which any agency can use to simply and easily replicate all or part of the model ANP.
- e) Lastly, MFM often provides support to organizations who want to replicate the model. In Kenya, for example, Program Director, Mary Adiedo, assisted the Ministry of Health to replicate an MFM training model for community development workers.

Fundamental activities within an ANP which are essential to specific program interventions such as those described throughout Section 6 of this report are as follows:

- a) Regular data collection and analysis - for planning, monitoring and evaluation purposes.
- b) Detailed planning involving all ANP "stakeholders" for all program interventions.
- c) Continuous monitoring of all program interventions to insure that they are appropriate, meeting stated objectives, cost-effective, and easily replicable.
- d) Periodic and on-going evaluation to: 1) provide continuous information which will indicate whether modifications are needed as program activities move through various phases, and if so, which modifications would be effective; 2) verify the adequacy of methods and techniques being used, including techniques of coordination, and to aid in the development of new ones, as required; 3) disclose evidence of behavioural changes in individuals and groups as a

result of the program; 4) determine, generally, the extent to which the program is achieving or has achieved established objectives; and 5) insure the interest, involvement and responsibility of individuals and groups for whom the program is intended or who may be able to contribute to it." (Latham, pp. 10-11)

The above description of Applied Nutrition Programs does not necessarily describe every existing MFM program. Rather, it represents the concept of an ideal which we have developed from experience. It is the culmination of learnings gleaned from our earliest efforts to implement Applied Nutrition Programs and represents a clear goal for future efforts.

## 8. KEY STRATEGIES USED IN IMPLEMENTING APPLIED NUTRITION PROGRAMS

### 8.1 Needs Assessment/Baseline Data Surveys

The needs assessment/baseline data survey, conducted early in the ANP process, is an important aspect of the development of the overall program. Although comprehensive and extensive, the survey is very low-cost and serves many functions. The exact process for conducting the survey varies with each program. For example, in Sierra Leone, several private voluntary organizations worked together to develop the questionnaire and plan the survey implementation. Results were shared with all the participating organizations. In Kenya, the government's Lake Basin Development Authority is providing vital assistance in the development and field testing of the questionnaire, planning the survey implementation, and eventually, with the overall analysis of results. In all programs, MFM feels that planning, developing and conducting the survey serves the following functions:

- a) Facilitates inter-agency collaboration. Working on the survey with many local organizations facilitates inter-agency collaboration very early in the development of the ANP. MFM staff try to insure that the survey results are relevant to the needs of other organizations working in the ANP target area. In addition, other agencies can often provide additional expertise in the development and implementation of the survey. Various government and non-government agencies share information needs prior to drafting the survey questionnaire. Some agencies actually participate in drafting, field testing and revising the questionnaire as well as in planning the implementation process. Results of the survey are disseminated to the participating organizations soon after analysis is completed. (See Appendix 10.4 and 10.5.)
- b) Promotes community participation. The survey promotes community participation in a number of ways. Meetings are held within the program communities to explain the survey process, such as how it will be done and for what reasons. Once the survey has been analyzed, MFM staff again hold community meetings to share the results and begin the planning process with community members.

Community workers such as school teachers or health workers are intimately involved as they actually conduct the survey.

- c) Trains and involves community workers in the ANP process. Community workers receive extensive training in order to conduct the survey. They work together with MFM staff to translate the survey into the local language field test the questionnaire and achieve consistency in interviewing techniques. During the training, community workers learn about the ANP process and the importance of the survey to that process. The training to conduct the needs assessment/baseline data survey is the first community development effort in the implementation of the ANP.
- d) Establishes a basis for detailed program planning. It is only after the needs assessment/baseline data survey has been completely analyzed that MFM staff begin the detailed planning for the ANP. The survey results provide the information necessary to establish program outputs/objectives which address identified problems and meet expressed community needs.
- e) Establishes baseline measurements and information from which changes can be measured. The baseline data collected in the survey is vital to future program monitoring and evaluation. Data collected periodically throughout the program, when compared to the baseline data, shows whether the program is meeting objectives, what changes may be necessary in the program strategy, and the degree to which program interventions have an impact on the target area.

## 8.2 Nutrition Education Projects

Nutrition education is a vital part of any ANP for it is the one program component which links all other interventions to the ultimate goal of improving the nutritional status of rural communities. In other words, it is nutrition education - in all its forms - which insures that activities such as gardening, latrine construction, small animal raising, or revolving loan funds will have a positive impact on the communities' nutritional status.

Nutrition education projects in MFM's programs have two components - materials development and training. Both are designed to be culturally appropriate and to reflect the nutritional and health problems identified.

The primary beneficiaries of nutrition education in most ANPs are the 0-5 year old children and pregnant and lactating women. Most often it is carried out in interpersonal settings such as clinics, individual homes, women's group meetings and informal gatherings. However, radio and TV programs have been utilized effectively in some programs.

MFM views nutrition education as any form of communication that teaches people to make better use of available food resources or to avoid illness through preventive health care. The topics which can be included and the medium of communication are, therefore, nearly unlimited and might include cooking demonstrations or clinic sessions to teach mothers to prepare oral rehydration solutions for their children.

The exact form that nutrition education takes in any MFM program is determined by community participation, problem diagnosis, staff skills, cultural norms or preferences, available facilities and resources, as well as other considerations. However, all training stresses a "hands-on", participatory approach linking the actual practice of skills to knowledge acquisition. Growth monitoring of pre-school children - a standard activity in MFM's nutrition education projects and often taught to mothers - is an excellent example of participants learning and practicing a skill and acquiring valuable knowledge.

Many people have questioned the degree to which nutritional status can be improved through nutrition education. Various studies have shown that childhood malnutrition often results from poor weaning practices and inadequate environmental sanitation including contaminated drinking water. (See Nutrition in Developing Countries, "Study II - Nutrition Education", Harvard Institute for International Development, 1981, pp. 4-8.) These are factors which can easily be addressed with effective, well-planned nutrition education projects. Coupled with various other community development projects which increase the available food supply and motivate community members, MFM feels that nutrition education can contribute significantly to reducing levels of malnutrition.

The development of materials to support nutrition education efforts is also essential. Materials, like training, are culturally specific including pictures familiar to community members and using the local language. The types of materials can include posters, flip charts, slide shows, skits,

songs, manuals, teaching aids, or puppets. MFM's Korea and Thailand ANPs have developed a broad range of excellent nutrition education materials. All other programs are following the same stages of materials development but building on what has already been produced.

Careful documentation of all aspects of the nutrition education project of an ANP as well as the materials developed serve a vital role in the replication of the program model. MFM encourages systematic planning that is well documented and the widespread distribution of educational materials.

### 8.3 Revolving Loan Funds

From experiences in the Honduras, Ecuador, Antigua and Thailand Applied Nutrition Programs, MFM has learned that credit is a major factor in farmers' willingness to take the risks needed to increase agricultural production. Since most of the farmers with whom MFM works are not eligible for credit through traditional institutions such as banks or credit unions, it has been essential to establish alternative credit sources for small-scale farmers in order to support their self-help efforts.

In the four programs mentioned above, MFM has clearly demonstrated the positive effects of a well-organized system of credit for small-scale farmers and has shown other institutions that they need not fear providing this type of service.

All of MFM's revolving loan funds are coupled with technical assistance for farmers and include extensive follow-up service.

The actual design of each revolving loan fund is unique and geared to local needs. In this report we will describe the Ecuador and Thailand models.

#### 8.3.1 The Ecuador Model Revolving Loan Fund

The active participation of the people themselves is vital to establishing a self-sustaining process that will continue once MFM has withdrawn from the area. The Ecuador revolving loan fund was created in 1981 to help communities become involved in this process. The fund fills a major gap because, while loans are available through large banking institutions to support large-scale enterprises, until 1983 there had been no help for

small farmers, who need only a small amount of money to make a big improvement in their lives.

Community groups and families can apply to the revolving loan fund for small, interest-free loans to enable them to obtain the materials they need to carry out program activities. The loan process is a simple one. When a request is received, an MFM staff member visits the site, explains how the loan fund operates, discusses the purpose of the loan, and tells the requestor immediately whether the loan can be granted. Instead of cash, the recipients gets a written purchase order to be taken to a local supplier, who provides the materials recommended by MFM staff. The supplier bills MFM directly. The loan recipient reimburses MFM through a preset number of payments only after he or she has begun to make a profit from the investment.

Through their experience with the revolving loan fund, the MFM Ecuador staff have developed guidelines for its operation:

- a) Funds are available only in rural communities that have few if any services. People in larger villages, or people who because of economic conditions have left their communities and found work elsewhere, are not eligible for loans.
- b) Since MFM wants to reach as many people as possible with its limited funds, projects funded must benefit families or groups rather than individuals.
- c) While staff may make suggestions, community priorities related to food determine the kinds of projects to be funded.
- d) With few exceptions, loans are made in materials rather than in cash. An in-kind loan process allows the program to track what has been achieved with loan fund money.
- e) Because MFM is not a credit institution, it cannot fund large-scale projects. However, the small projects it funds must have potential for growth. If a farmer starts with 200 chickens, he should be prepared to expand with help and guidance from MFM staff.
- f) Projects must be integrated into the overall MFM program so that follow-up to loan recipients furthers program goals.
- g) Participants must clearly understand the purposes and functioning of the loan fund.

- h) Recipients must make an initial investment of their own. If they want to raise chickens, they must build a chicken coop, according to an approved design, before receiving a loan. If they want to grow vegetables, they must clear the land and provide for irrigation, under the technical direction of MFM staff.
- i) Since MFM does not want to duplicate efforts, recipients must not be receiving funds from another agency when they ask for a loan. However, once a recipient has obtained an MFM loan, staff encourage collaboration with other agencies.

The Ecuador staff believe that four elements are crucial to the success of their revolving loan fund. First, materials are provided exactly when they are needed. If a farmer is going to plant on Monday, he must have the seeds by Saturday. Locating the MFM office in the project area eliminates the need for excessive paperwork and speeds delivery of services. Recipients have responded to this promptness by repaying their loans quickly, enabling money in the fund to revolve about six times per year.

Second, providing funds is not enough. Just as the loan fund provides support for technical assistance, so efficient technical assistance ensures that funds are effectively used. If MFM staff do not have the necessary technical expertise themselves, they make certain it is available in the region before they fund a project.

Third, close supervision is essential. Staff must be willing to become involved in the recipients's lives, working with them and understanding their problems. Using local staff who are thoroughly familiar with local situations greatly strengthens the capacity of the loan fund to help the recipients meet their own needs.

Fourth, staff are responsive to changing conditions. When floods followed seven years of drought, MFM staff quickly adapted loan fund procedures to cope effectively with the change. (See Section 6.3.2.)

The Ecuador staff strongly believe that the people with whom they work simply need some support to get on their feet. The revolving loan fund already has provided support. In addition to raising their income and their standard of living, participants in the fund have begun to "open doors" for themselves. In the first six months of 1983 alone, 83 families benefited from the revolving fund.

Wanting to increase their rate of growth, many farmers have begun to ask for credit directly from suppliers. Instead of one bakery, there now are seven serving two communities. Farmers who started raising chickens with help from the revolving loan fund now contribute to their own association, which schedules farmers' production to insure fair prices and which eventually will initiate its own loan fund.

MFM's Ecuador staff had no experience with revolving loan funds before starting one. They had a modest amount of money, a willingness to experiment, and a dedication to serving the communities in which they worked. With these resources, they created a loan fund that community members have used as an effective tool for improving their own lives.

### 8.3.2 The Thailand Model Revolving Loan Fund

In terms of the purpose and goal, the Thailand revolving loan fund shares many characteristics with the Ecuador fund. Both seek to help the small-scale farmer who is not eligible for credit from other sources, both provide materials coupled with technical assistance, and both work to promote self-reliance at the community and individual levels.

The Thailand in-kind revolving loan fund was established in 1982 as part of the overall ANP to support the specific community development activities which were to be implemented. The need for such a fund was clearly established in the needs assessment/baseline data survey and it was viewed as a critical strategy to avoid aid-dependence and promote self-reliance among community members.

The Thailand fund supports the following food production activities: duck raising, fish pond development, and garden projects. Materials distributed to community members are ducklings, fingerlings and seeds. Training and on-going technical assistance provided to community members insures maximum utilization of these inputs. For example, prior to the distribution of ducks, school teachers and government community development workers were trained to properly care for ducks at all stages of development, identify common duck diseases, and provide food for adult ducks from local sources. MFM staff, cooperating with government extension workers, conducted the training. The teachers and community development workers who were trained, in turn, worked with community members in the target area's 83 villages.

Similar education/training programs accompany the distribution of all inputs. Recipients of the talapia fingerlings learned to construct and maintain fish ponds, to protect the ponds from intense sun by planting banana trees or other foliage, and to harvest and prepare the fish for consumption.

Gardemers receiving seeds get technical assistance from agricultural extension workers. They learn soil preparation methods, composting, seed-specific planting techniques, garden maintenance, harvesting and preparing the vegetables in nutritious ways.

The revolving loan fund is designed in such a way that MFM provides the initial supplies (i.e. ducks, fingerlings, or seeds) to the village development committee existing in each village. This committee is then responsible for selecting the initial recipients and distributing the materials. The recipients, once they have achieved a minimal level of production, return to the village development committee a specified amount of the same material for distribution to other families. In some cases, the village committee simply designates to whom the offspring or harvested seed should be given. In this way, all community members eventually become participants in the ever-expanding revolving loan fund.

Section 6.2.1 of this report indicates the amounts of materials which have been distributed by MFM and the total number of participants in the revolving fund as of October 1983--barely a year after the loan fund was initiated.

Although MFM has assisted with the resolution of some problems in the implementation of the revolving loan program, primary responsibility for fund now rests with the village development committees - an important step to achieving self-reliance in the communities and institutionalizing the fund itself.

#### 8.4 Inter-agency Coordination in ANP Target Areas

Coordination of many agencies in implementing ANP activities is vital to the success of the program for a number of reasons. The most obvious, perhaps, relates to the fact that malnutrition results from a variety of causes and to reduce or eradicate it requires a multidisciplinary, integrated

approach. A small organization such as MFM can not possibly possess all the skills - let alone financial resources - to provide all the technical and material assistance required in an ANP. Thus, MFM uses the resources of other government or non-government organizations to extend its own capabilities. Secondly, in addition to promoting inter-agency coordination, a major objective of any ANP is to promote individual and community self-reliance. An important strategy for doing this is to strengthen the infrastructure and service delivery capabilities of existing organizations rather than creating a dependence on a new organization or duplicating efforts of others.

Inter-agency coordination is thus both cost-effective and a vital strategy for achieving ANP objectives.

An independent agency such as MFM can often be more successful at promoting cooperation among agencies than government organizations. This is due in part to the inherent nature of a non-political organization such as MFM and also to the distinct ways in which MFM seeks to promote the coordination.

As stated previously, inter-agency coordination is established early in the ANP implementation process through the needs assessment/baseline data survey, (see p. ). Various organizations able to make a contribution to or benefit from the ANP are encouraged to become partners or "stakeholders" in the overall program. MFM consistently recognizes the contributions of other agencies and it is this recognition that often solidifies their commitment to the program.

MFM works diligently to keep all the stakeholders well informed of program developments and to involve them as appropriate in program planning and implementation.

One of MFM's programs which has been particularly successful in achieving a high degree of inter-agency coordination is the Honduras ANP. A recently completed evaluation report of that program states:

"The program's success to date, and promise for the future, is due to three significant factors: a) the integration of multiple interventions (in health, nutrition, education, agriculture, community development, etc.) at the community and area levels; b) the effective mobilization and coordination of existing agency and community resources toward the resolution of community problems; and, c) the presence of a capable and motivated team of national workers who understand and execute the ANP strategy in a mutually supportive manner. MFM's most important function is that of a

catalyst: a facilitator who, with minimum financial and material resources of its own, has been able to empathize with community concerns and consolidate existing resources in the area."  
(Appendix 10.13)

One of the cornerstones of the MFM program in Honduras is to mobilize and coordinate existing agency resources toward the resolution of community problems. This has been accomplished basically at two levels - with local agencies at the field level and with regional agencies outside the geographical program area.

At least 25 government agencies and private organizations have contributed to the ANP in Honduras. The nature of their participation is listed below. The agencies of the Government of Honduras have provided training, technical assistance and logistical support, and have donated material for agriculture, primary health care, and sanitation activities. Local PVOs have been involved in the distribution of food commodities, the provision of small animals and the construction of community water systems. International organizations have donated food commodities and have provided a considerable amount of technical information and written materials for use by the program.

#### CONTRIBUTIONS OF PARTICIPATING AGENCIES TO THE HONDURAS ANP

##### Government Agencies

- |  |  |
|--|--|
| - CORINFO  | Training courses in fish pond development and management.  |
| - Forestry Development Corporation (CODEFOR)         | Design and development of a model course on staff management and community development; workshop on soil preparation; donation of 400 pineapple slips.   |
| - Industry Development Center (CDI)                  | Feasibility study on soap making (San Nicolas, 1981); workshop on construction of lorena stoves and solar ovens (1982).  |
| - 16th Infantry Battalion                            | Transport of materials and food commodities.   |
| - Ministry of Education                              | Participation and training of teachers in school vegetable gardens and other community ANP activities.   |
| - Ministry of Natural Resources (DARNO, ENA, et al.) | Training and technical assistance; loan of audio/visual equipment; production and broadcasting of radio programs (1981-83); donation of ornamental and fruit trees (1981), fingerlings for two fish ponds (1981), and earthworms for breeding and redistribution (1982). |

- Ministry of Public Health and Social Assistance (MOH)
  - Legal sponsorship since initiation in 1978. Region 7 Health Office: counterpart agency in Olancho Department; technical/supervisory support in PHC and nutrition; curriculum review; collaboration on feasibility study and anthropometric surveys; laboratory and medical services for internal parasite control campaign (1981); technical and material support for immunization and fumigation (insect control) campaigns (1981-1982); logistics and transport of materials and food commodities.
  - CESAR Zopilotepe: rural health center facilities; PHC and family planning activities by auxiliary nurse; potable water and latrine construction by sanitation promoter.
- Municipality of Juticalpa
  - Logistics and transport of materials and food commodities.
- National Autonomous Service of Aqueducts and Sewage Systems (SANAA)
  - Community potable water systems (Zopilotepe and Las Llaves, 1982)
- National Board of Social Welfare (JNBS)
  - Materials and transport for construction of training center.
- National Institute of Labor Management Development (INFOP)
  - Workshops in horticulture (three communities, 1979); courses in poultry management (Las Parras and La Venta, 1981).

#### Local Private Organizations

- CARE
  - Provision of P.L. 480, Title II food commodities for school lunch program (1979 +) and MCH supplementary feeding program (1980 +); community potable water systems (San Nicolas, 1981; Zopilotepe and Las Llaves, 1982).
- CEDEN
  - Interchange of program visits and technical assistance or personnel management.
- CEVER
  - Exchange of information on appropriate technology projects.
- Heifer Project
  - Donation of rabbits for breeding and redistribution.

#### International Organizations

- ACORDE
  - Provision of information on improved agricultural techniques.
- ASECSA (Guatemala)
  - Written materials and training seminars.
- Coordination in Development (CODEL, New York)
  - Workshops on environmental improvements.

