

PEACE CORPS



PDWAEBS

May 1, 1987

MEMORANDUM

TO : Ike Hatchimonji, Agriculture Development Officer, AID

THROUGH: Mary Killeen Smith, ^{11/15} Director, OTAPS
Jim Ekstrom, Director, PSD/OTAPS ^{In chat}
Colleen Conroy, Health Sector Manager, OTAPS ^{Colleen Conroy}

FROM : ^{Colleen Conroy for Peggy Meites} Peggy Meites, Nutrition Specialist, OTAPS

SUBJECT: Nutrition PASA Renewal

Enclosed is a general outline of what our needs are and the Nutrition PASA revision we are requesting.

I have not included an illustrative budget but have indicated the percentage of PASA money we would commit to various activities. As soon as we complete our current analysis of Peace Corps Country Management Plans for FY-88, I will provide you with full financial detail as well as definitive information concerning the countries we propose to work in. In the meantime, I can give you a list of the countries that have nutrition programs and will get expanded Child Survival support. The integrated programming initiatives are a bit more complex and are currently under negotiation. All indications point to PNG and Botswana as target countries.

The Nutrition Strategy of the Health Sector in the Office of Training and Program Support, PC/Washington, is to stress the importance of integrating Nutrition objectives in Agriculture and Rural Development projects and to strengthen the existing Nutrition component of health programs, particularly in countries that have been identified for expanded program and training assistance under the Child Survival Participating Agency Service Agreement (PASA).

In order to accomplish this we are seeking additional monies for a two year extension of the current Nutrition PASA together with a redefinition and expansion of the activities funded by this PASA. We believe that the original language of the Memorandum of Agreement will cover these new activities.

Historically the Nutrition PASA has concentrated on funding training activities that focus on improving household food security by promoting mixed gardening. Little emphasis has been placed on Nutrition program development and methodologies that assess program operation. We propose an expansion in the activities funded by the Nutrition PASA to upgrade Nutrition programming.

In order to most efficiently accomplish this we request that Peace Corps be included in the same manner that PVOs are included, as potential recipients of technical assistance in AID/Nutrition funded projects. This would allow us to call on groups such as USDA/NEG and OIH for assistance in modifying existing Nutrition methodologies, operation research, and monitoring and evaluation instruments etc. for use in Peace Corps Nutrition and Health programs.

Nutrition Technologies

We plan to incorporate these Nutrition technologies into Peace Corps Health programs on two levels.

On one level we propose introducing PC Staff and their Host Country Ministry Counterparts to these technologies during the Child Survival workshops and through program consultancies to country. For the most part Peace Corps health program managers are generalists who lack the skills and methodology necessary to assess the technical aspects of Nutrition program status and needs. This is particularly true in the growth monitoring/promotion program.

On a second level, Health PCVs and their Counterparts will be trained during Pre-Service and In-Service Training in appropriate Nutrition technologies that relate to their jobs in Host Country Health programs. Workshops, program consultancies and training costs would be covered by the Child Survival PASA.

We not only need to have access to these methodologies, but we also need to be in a position to request that they be modified, without additional cost, for use by Peace Corps in the field. Should it be necessary for PC to make these modifications we estimate that approximately 20% of total PASA funding would be directed towards pre-development and piloting of these technologies.

At the end of two years we propose to evaluate the adoption and use of these technologies and their effect on program performance. We estimate approximately 15% of the Nutrition PASA budget would be needed for an evaluation.

Nutrition and Agriculture

Over the past four years there has been an increase in the number of countries that are conducting Mixed Gardening Training. Several of the countries (Thailand, CAR, Mauritania and PNG) which hosted PASA funded workshops are now conducting their own Gardens training using in-country resources. In addition, PCVs in agriculture as well as health projects (Jamaica) are also requesting this workshop.

The Health sector in collaboration with the OTAPS Agriculture sector plan to continue meeting field requests for the Mixed Gardening Training.

These requests will be funded from a variety of sources. We estimate funding one Gardening training per year from the Nutrition PASA. Approximately 65% of the PASA budget would be spent on Garden trainings.

In addition to teaching gardening skills, we believe these trainings provide an excellent opportunity to demonstrate the importance of integrating Nutrition objectives into Agriculture projects.

There is an increase in the number of integrated PC projects and a parallel increase in field requests for technical assistance in planning, monitoring and evaluating these projects.

Finally, we propose to expand the scope of work funded by the Nutrition PASA to include programming trips. This is a timely opportunity to meet field requests and institutionalize a Nutrition component into Agriculture and Community Development projects. Approximately 20% of the PASA budget would be used for two integrated programming consultancies.

CUMULATIVE PROGRAM/TRAINING ACTIVITY RECORD
From FY84 to PRESENT

Country	TYPE OF ACTIVITY	DATES FROM	TO	NUMBER OF PARTICIPANTS			PSC TRAINERS/STAFF	KS
				PCVS	HCNs	HOST COUNTRY PC STAFF PVO/STAFF		
								REMARKS:
Honduras	Pilot test. of MG trng. manual	11/7/83	11/18/83	15	15		Paul Somers Calvin Dupre	
Dominican Republic	Nutrition Ed. In-Service Trng. 1st part	2/20/84	2/25/84	16	20		Jeralyn Pigott Marcia Griffiths	
Mali	Nutrition Educat. In-Service Trng.	3/12/84	3/23/84	20	12		Suzanne Plopper Mona Ellerbrack	
Dominican Republic	Nutrition ED. In- service Trng.	4/2/84	4/9/84		33		Marcia Griffiths P. Avita de Hails	
Western Samoa	2nd Pilot Testing of Mix Garden Trng. Manual	4/23/84	5/5/84		37		Paul Somers	
Mali	Technical Assist. to PC/M & MOH to redesgn N. Prog.		23				Nancy McLaren	
Mixed Garden Trng. Manual Edited & Publ.			July 1984 Completed					
Ecuador	Nutr./Mix Garden In-Service Trng.	7/23/84	8/3/84		35		Thomas Guerro W. Chaverni	
Thailand	Nutr./Mix Garden In-Service Trng.	3/4/85	3/13/85	13	14		West Burlingame	
Gambia	Nutr./Mix Garden In-Service Trng.	4/6/85	4/16/85		12		Mike Gibbons	Technical Assistance PASA
Jamaica	Nutr./Mix Garden In-Service Trng.	4/29/85	5/7/85	21	9	2	Mike Gibbons	Technical Assistance PASA

*Ed = Education
*Trng = Training

CUMULATIVE PROGRAM/TRAINING ACTIVITY RECORD
From FY84 to Present

Country	TYPE OF ACTIVITY	DATES		NUMBER OF PARTICIPANTS			PSC TRAINERS/STAFF	KS
		FROM	TO	PCVS	HCNs	HOST COUNTRY PC STAFF PVO/STAFF		
								REMARKS:
Honduras	Mix Gardening Workshop	6/20/85 7/03/85	6/30/85 7/09/85	4	16		Mike Gibbons Mike & Anna Vargas	L.I.F.E. sponsored a House Garden Workshop for prog. mgrs.
Papua New Guinea	Mix Garden/N In-Service Trng.	8/05/85	8/14/85	11	12		Gloria Render Wes Burlingame	
CAR	Mix Garden/N In-Service Trng.	12/12/85	12/21/85	10	14		Mary Pecaut Sarah C. Wallace	
Mauritania	Mix Garden/N In-Service Trng.	2/23/86	3/13/86	18	14		Mary Pecaut Drew Lent	PC Health Sector covered cost of 1 trainer
UNICEF Meeting	To discuss Com./ Col. in Nutrition Activities						Peggy Meites PC/W Staff	Meeting with Dr. Greaves
Garden Eval. Instrument	tool developed to evaluate Mix Gardening Training						Dorothy Bell	
Mali ✓	Mix-Garden/N In-Service Trng.	6/15/86	6/25/86	11	8		Donald Boekelheide Amy Wilson	SPA funded
Swaziland ✓	Nutrition/Garden Trng. Assessment	8/30/86	9/12/86				Peggy Meites PC/W Staff	
Swaziland	Mix-Garden/N In-Service Trng.	8/30/86	9/12/86	7	13		Donald Boekelheide Joel Walker	PC Health Sector funded

*MG = Mix Gardening
 *Com = Communication
 *Col = Collaboration
 *Dev = Developed
 *Pkg = Package

CUMULATIVE PROGRAM/TRAINING ACTIVITY RECORD
From FY84 to Present

Country	TYPE OF ACTIVITY	DATES		NUMBER OF PARTICIPANTS			PSC TRAINERS/STAFF	KS	REMARKS:
		FROM	TO	PCVS	HCNs	HOST COUNTRY PC STAFF PVO/STAFF			
FY'87QI									
Nutrition Training Materials	Revise Household Food Systems Trng. Exercises/ Dev. Resource Pkg Nutrition Improvement/Mix	Completed 10/5/86					Robertta Cohen		
Sierra Leone	Garden IST	12/1/86	12/9/86	10	8	1	Winston G. Carro, Dorothy Bell		
Nutrition Trng Materials	Developed Eval. Trng Session to MG/N Manual	Completed 1/1/87					Dorothy Bell		
Nutrition Trng Materials	Developed Logistic Resource Pkge for MG Trng	Completed 1/1/87					Joel H. Walker		
FY'87 QII									
Nutrition Trng Materials	Developed GM resource Pkge for Guatemala IST	Completed 2/9/87					Margaret Ferris-Morris	for CS National Staff Conference and IST for PCVs & HCNs	

MG = Mix Gardening
 N = Nutrition
 Pkge = Package
 Trng = Training
 GM = Growth Monitoring
 CS = Child Survival
 IST = In-Service Training

FY87 QII EXPENDITURES

QUARTER II ACTIVITIES	SALARIES	BENEFITS	DOM TRAVEL	INT TRAVEL	CONTRACT	OTHER	TOTAL
SIERRA LEONE IST-BELL CONTRACT ADJ					315		315
NUTRIT GROWTH MONITORING TRNG MATS.					1000		1000
SALARIES							0
BENEFITS							0
TOTAL:	0	0	0	0	1315	0	1315

FY87 QIII PROJECTED EXPENDITURES

QUARTER III ACTIVITIES	SALARIES	BENEFITS	DOM TRAVEL	INT TRAVEL	CONTRACT	OTHER	TOTAL
NUTRIT. PROG ASSESS. TRNG MATS.							5600
SWAZILAND GROWTH MON. IST			500	4000	3500		8000
SALARIES							0
BENEFITS							0
TOTAL:	0	0	500	4000	3500	0	13600

PEACE CORPS

*Copy sent
to Samuel T.
Jack L.*

July 24, 1987



MEMORANDUM

TO : Don Smith, Country Director, PNG

FROM : Peggy *Meites*, Nutrition Specialist, OTAPS

SUBJECT: Wes Burlingame's final report

I've just reviewed Wes Burlingame's final report from the Garden Workshop and I'm forwarding the report to you. I was particularly pleased with Wes's innovative training methods, co-sharing the responsibility with the participants for teaching and learning.

We have made an effort in the last year to place more emphasis in the Gardens Training on meeting the Host Country participants' needs and in using the PCVs and HCNs as major training resources.

We have been struggling with the design and structure of the pre-course planning packet. None of the versions of the packet we have used thus far have been fully successful. I would greatly appreciate knowing what would be most useful from your perspective.

The combination of food production and household food consumption/nutrition training seems to be a good fit with PC/PNG programming. I want to be as supportive as possible of your efforts in this direction. If you send the specifics (time, place, participants etc.) I'll prepare a SPA-TA request for IST funding FY'88. In addition to the IST you might want to consider a Nutrition/Agriculture program/project development workshop. There is funding available under the Nutrition PASA for such a workshop. I've included an example of a similar workshop conducted by the Nutrition Economist Group at USDA/OICD. It might be an opportunity to link together your plans for integrated programming and short term training.

The Agriculture sector specialist, Rick Record and I are planning to fund a similar request, conference and workshop, from the Inter-America Region.

I appreciate all your assistance to Wes during the In-Service Training. He spoke very highly of the PC operations and staff in PNG.

cc: Chuck Howell, CDO/NANEAP
Jim Ekstrom, D/PSD/OTAPS
Maria Elena Pynn, D/T/OTAPS
Rick Record, AG/OTAPS
✓ Ike Hatchimonji, AID/Nutrition
OICD
Paul Sommers, UNICEF
Wes Burlingame

**IMPROVING INCOMES, FOOD AVAILABILITY
AND CONSUMPTION THROUGH AGRICULTURE WORKSHOP**

OVERVIEW: The "Improving Incomes, Food Availability and Consumption" Workshop is designed to assist agriculturalists in achieving increases in incomes, food availability and food consumption by the poor through improved agricultural, rural development and nutrition programs and projects. This training program is suitable for those with agricultural responsibilities at the project, program or policy level and is designed to help participants gain new insights, knowledge and work related skills. The training materials were developed to suit a variety of host country training circumstances and felt needs. There is sufficient flexibility to suit participants with different educational backgrounds, prior experiences and work responsibilities. Depending upon the needs of the participants and the length of time available for the training, the in-country training program can last from two to ten days.

OBJECTIVES: While the objectives will vary depending upon the circumstances of individual training events, the following five general objectives underlie the content and flow for the five day training program:

1. To understand that production, marketing and consumption objectives and activities pursued by farm-households are interrelated and, consequently, that agricultural changes promoted by agriculturalists affect and are affected by these relationships;
2. To understand the role and importance of farm-household level food security objectives, the relationship of these objectives to other objectives that might be pursued by farm-households, and the sources of expertise and data related to food availability and consumption that indicate whether farm-household food security goals are being met;
3. To develop some analytical skills in using relevant expertise and data in order to assess the likely impacts of proposed agricultural changes upon the achievement of income, food availability and consumption objectives and to develop an approach to modify proposed agricultural interventions in order to ensure that these objectives are met;
4. To develop some analytical skills in using relevant expertise and data in order to monitor and evaluate the actual effects of agricultural interventions upon the achievement of income, food availability and consumption objectives and to identify appropriate ways to modify those interventions in order to ensure that these objectives are met; and
5. To develop appropriate work-related actions plans which utilize workshop material as a basis for identifying agricultural changes which lead to higher incomes, food availability and consumption by the poor.

REQUESTS FOR FURTHER INFORMATION: This pilot training program is being developed as part of a program of work in the area of nutrition in agriculture by the Nutrition Economics Group of the United States Department of Agriculture and the Office of Nutrition of A.I.D.'s Bureau for Science and Technology. Further information on the workshop can be obtained from Dr. William Whelan, USDA/OICD, Washington, D.C. 20250, (202)653-8696, Telex: Agri Wash 64334.

Workshop On
Home Gardens and Nutrition

June 2 - 12

1987

Papua New Guinea

FINAL REPORT

By

Wes Burlingame

Trainer

July 10, 1987

FOREWORD

Papua New Guinea is known for its great cultural and geographical diversity. There are over three hundred different culture-language groups. These occupy widely varied environments: tropical island, rain forest, highland, and alpine. In the highlands, each valley is an isolated world, with its own ecosystem and culture. Each culture has its own language, traditions, crops, and food production system.

Agriculturally, PNG spans man's history from stone age "slash and burn" to modern commercial farming. Traditional subsistence gardening systems are increasingly facing the pressures of more mouths to feed compounded by land deterioration, decreasing productivity, and competition from market crops. This translates into increasing numbers of hungry and malnourished children in the areas undergoing the most rapid transition.

The 1983 country-wide PNG Nutrition Survey found malnutrition rates of children under 5 (weight x age) to be between 20%-50% in the provinces. Severely malnourished children (weight x height) averaged 5% of the total. Increased attendance in the district malnutrition wards supports these findings. Nutritional deficiencies of new and breast-feeding mothers follow the same trend.

PNG nutritionists suggest that the main problem is lack of enough high density food to meet the basic needs of growing children, complicated by high incidence of illness and infection. The government's nutrition education program, based on "the three foods" approach, has had limited impact on improving local subsistence diets. Agricultural extension efforts often appear to be nutritionally counter-productive, emphasizing western style market crops with little relevance to diet. These approaches, which are based upon western technology and models, have not adequately taken into account local conditions, resources, or needs.

An alternative approach has been recommended by PNG nutritionists and food systems specialists. It promotes increased production and consumption of high quality local crops by subsistence families. Peace Corps PNG is one of the leaders in this field, with a number of volunteers working with counterparts in gardening and nutrition improvement projects in local communities. This Gardens/Nutrition Workshop is in response to their continuing need for further training in this area.

Perspectives on Traditional PNG Gardens

by National Participants

Participants offered the following observations about traditional gardens in their home communities:

Families in our community have four food gardens going at one time; one being prepared (slash and burn) and planted; another growing; one in harvest and the fourth post-harvest - returning to bush where some food can still be found.

In my community a garden site is planted once each generation (30-35 years). It is planted by the father, and again by his son when he is grown. The people in my village are healthy. There is plenty of food.

In my community, the villages and families have grown fast. We can no longer wait for the bush to return to a garden site before replanting. We now must plant that site every 5-7 years. The taro and sweet potato are smaller and less plentiful each year. There is not enough food to go around. The malnutrition ward in our clinic is crowded.

How do I know that the soil is good for a garden in a new site? I ask my father or uncle who last planted that site. They will tell me how the taro, sweet potato and banana have grown there. Then I know the strength of the soil.

I know a site is good when the jungle has returned strong and rich.

Some things are saved when a new garden site is prepared. The legume trees are cut back, to continue growing along with the garden. Some trees and brush are piled across the hillside to collect soil washed by the rains. There we plant our best crops.

A special dance is part of our planting ceremony. Branches from bush legumes are collected from the old gardens. During the planting ceremony, the family elder chants and dances around the new garden scattering the legume seeds throughout the site.

Workshop Overview

The second PNG Gardens/Nutrition Workshop was held from June 2-12, 1987, at the Wau Ecology Institute. The course was organized by Peace Corps/OTAPS-Washington and Peace Corps/PNG in cooperation with the Nutrition Office of USAID. Eleven Peace Corps volunteers and PNG nationals and 2 HCN trainers participated.

This is a course about food- the gardens that provide it and the nutrition of families that use it. The main goal of the course is to train extension workers in methods to improve family food security and nutrition, now and into the future. The course provides practical training in applied nutrition, appropriate garden skills, and effective training methods in a cross-cultural setting.

In this course, the interrelated causes of malnutrition in PNG are identified along with the factors affecting food production and consumption in a home. Participants compare, learn, and practice traditional subsistence and improved intensive gardening methods and crops. Emphasis is on growing highly nutritious local crops and methods to improve local soils for more stable gardens and sustainable food growing.

The knowledge and skills covered in the course are applied in practical field exercises in garden design and planting. The use of nutritious food to meet family dietary needs is reinforced by exercises in food analysis, meal planning, and nutrition teaching, supported by cooking projects and traditional cooking demonstrations. The course provides frequent opportunity for participants to share, learn, and practice effective training methods for use in their local communities. With the skills gained from the course, participants are able to plan and conduct appropriate garden and nutrition improvement activities at their sites.

Evaluations from the course indicate that it was highly successful in meeting the participants' needs for useful information and skills to be applied to solving problems in their communities.

Workshop Staff

The expertise and flexibility of each of the staff members contributed to the success of the workshop. John Kaulo, Co-Trainer and PC/PNG Language Trainer, helped tailor the course to the needs of national participants. Joan Jennings, a PNG/PCV, did an excellent job as Nutrition Trainer, filling in for the PNG Nutritionist who had to cancel at the last minute. She condensed a number of complicated topics into concise sessions with appropriate activities. Helen Yamu, a local YMCA Trainer,

further strengthened the nutrition component with an enjoyable series of traditional food preparation demonstrations. Wes Burlingame, back as trainer for his second PNG Workshop, applied his experience to further fine-tune the curriculum. He emphasized participant involvement, problem solving field tasks, and curriculum expansion into the areas of garden stability and food sustainability.

Marie Brown, a former PCV/PNG, did a very capable job of keeping the logistics for the course running smoothly. Thanks to her organizational ability, everything that was needed was available. A locally hired logistics assistant helped with field set-up. The three PC/PNG cooks returned to provide very good meals prepared from local food. Danny Welle (Acting Director) and Kamane Saroa (Garden Manager) of Wau Ecology Institute went out of their way to provide resource people and supplies for training.

A list of Staff is given in the Appendix.

The Workshop organizers, Peggy Meites (PC/OTAPS/Health), Don Smith (Director, PC/PNG), and John Winfield (APCD, PC/PNG) did a good job of organizing the course and gave full support to the preparation effort.

Participants

The Workshop was greatly strengthened by the skills and experience of the participants. There were eleven participants: five PNG Nationals and six PCV's. Our two PNG Staff were also trained in session design and presentation. This group came from extension backgrounds in nutrition and health education, agricultural training, community organization and education.

The majority of National counterparts were "grass roots" extension staff from isolated rural communities and government "bush" outposts. Their exposure to western-style training was limited. Only a few were proficient in English. Several had strong backgrounds in nutrition education. All were experienced in the various traditional garden systems in their areas.

The high level of experience and technical expertise of the volunteers made them quite a special group. Older and more serious, they averaged three years of service, with four having been in prior overseas assignments. Each had in-depth knowledge of several components of the curriculum. They were committed to providing the best possible learning experience for their counterparts and improving their own cross-cultural training skills.

A list of the participants is in the Appendix.

The motivation and complementary skills of these participants led them to take a full and active part in the course. The Workshop was a much richer learning experience as a result.

In-country organizers and the PCV participants felt that others could have benefitted from this Workshop. However, communications with the isolated sites is extremely difficult and the volunteers are often not willing to leave their jobs without very good reason. Our participants said that if others had known beforehand how useful this course would be, they would have come. They suggested that a pre-course information packet would improve future recruitment efforts. (See Recommendations.)

Training Site and Facilities

The Wau Ecology Institute, in the highlands of PNG, was an optimal training site for this course. WEI, which conducts training programs in subsistence gardening and nutrition, has several acres of gardens demonstrating traditional, mixed and intensive systems. Their dorms are comfortable and roomy, with hot baths, modern kitchens, a library and recreational areas. The staff was helpful and well-informed. As a site reclaimed from "kunai" grassland, it dramatically demonstrated environmental recycling and site-stable gardening - valuable lessons for PNG.

The Institute's blend of training resources, comfortable facilities, and stimulating environment was of great benefit to the course.

Only a few things detracted from the site. We missed the large classroom that has been turned into a museum. The water system needs to be checked each morning, and the drinking water boiled especially during dry season. The WEI vehicles continue to be in poor condition and should not be considered reliable.

Course and Curriculum Objectives

The overall course objectives were:

- to present the Gardens/Nutrition curriculum, adapted to the expressed needs of the participants
- to blend new ideas into traditional PNG systems, methods and knowledge
- to encourage and improve cross-cultural communication skills

- to deliver the curriculum directly to the host country participants
- to develop PNG staff capability to conduct future Garden/Nutrition Workshops

The curriculum objectives were :

- to be aware of the varied factors affecting food consumption in a home in order to help determine more appropriate activities to improve family nutrition
- to identify the characteristics of malnutrition and the interrelated causes
- to assess and work with appropriate food crops and technologies, gardening methods, and extension activities to improve family nutrition
- to share, learn, and practice gardening skills leading to better family food security. Increase the quantity of food produced, the nutritional quality of food available, and the capacity for more continual food production.
- to identify and practice appropriate methods to improve garden soils for greater land stability
- to apply the knowledge and skills covered in the course to plan appropriate nutrition and gardening activities or projects for local communities
- to give all concerned an opportunity to share their experiences, skills, and local cultures in an interesting and enjoyable way

*Storage?
processing?*

Modification of Course and Curriculum

The 1985 PNG Gardens/Nutrition Workshop provided the basic design and content for this course. The experience and recommendations gained from the former were applied to fine tune the content and approaches of this new course. This encouraged us to innovate in several important areas:

1. to target the course to the PNG Nationals
2. to give priority to meeting the expressed needs of the participants

Focus on PNG/Nationals

A long-term goal of the course has been to make it a more effective cross-cultural tool. We wanted to deliver the curriculum directly to the Nationals without having to go through the volunteers as intermediaries. To do this, we used the National language, an interactive learning process, and a role change.

The course was conducted in "Tok Pisin", the cross-cultural language of PNG. This made the curriculum immediately accessible and understandable for the Nationals and reduced the use of volunteers as go-betweens. While the lead trainer needed to present in "English" the training process we used encouraged subsequent handling in "Pisin".

The interactive learning process that emerged during the course gave the participants the major role in building upon the information provided by the presenter. Priorities, content, and relevance were in large part determined by the participants. The training became an interactive process among the presenters, participants and resource people. Each topic evolved as a group effort, increasing the appropriateness and usefulness of what was being covered.

How was this done? The presenter/resource person drew up a session plan listing practical objectives, main topics, and key supporting ideas. The session was introduced in the customary manner. A main topic was then presented, supported by technical information or observations, and opened to the group. Individuals in the group then reinterpreted what was given, adding observations from their own locales, and benefits or problems experienced or anticipated. A resource person might be asked for further information or clarifications. The topic, and each subsequent topic, would be built upon in this group process. The session would conclude with a problem-solving task or field observation to provide experience in applying the content in a useful way.

The presenters and participants came to increasingly rely upon this process as the course progressed because it offered such an effective cross-cultural learning approach. A participant offered the following observation in the final evaluation:

A very good cross-cultural experience. The course became geared to common goals, rather than just a technical information seminar. An excellent atmosphere for sharing and Nationals opening up.

Cross-cultural learning was also improved by interchanging roles flexibly. Nationals became the resource people for the traditional PNG systems and practices. Their contributions were the foundations that each session built upon.

The volunteers contributed new and adapted ideas and methods on an equal basis. Trainers and resource people provided the lead and support functions as information givers and facilitators. The results of this interchange were heightened self-confidence, greater participation by all, and open sharing of ideas. One participant noted:

Our counterpart pinpointed the main nutritional and garden concerns for our area and then the three of us came up with a variety of ways to address these concerns.

Meeting Participants Needs

A strong effort was made to reorganize the curriculum to directly meet the needs of the participants. These needs were assessed by the Pre-Course Survey, early interviews with participants, and feedback during informal evening discussions. The pre-course baseline established the group's information needs and priorities. From this, adjustments were made in the schedule, the time allotted to sessions, and the content offered.

Several examples of participant needs and corresponding adjustments are given below:

- | | |
|---|---|
| - how to improve soils and plant nutrition? (18 out of 39 total responses listed) | The Soils and Plant Nutrition Session (planned - 3 hours) was given priority position and increased to 1½ days. |
| - what are appropriate training methods to use with PNG villagers? (in soil improvement, plant nutrition, human nutrition) (3) | TOT Approach used - practice teaching by participants (soils, plant nutrition, food preparation, etc.); increased number of demonstrations; visual aids preparation for site use. |
| - what are nutritionally rich PNG foods and crops? (3) | Emphasized foods and their values in a number of practical tasks; strong diet needs and food preparation demo sessions. |
| - how to <u>kill</u> bugs? (evening feedback after cultural pest control methods session) | New session on Pesticide Dangers and Safety and Organic Pest Control Methods scheduled next day as follow-up. |

A summary of participant training needs from their Pre-Course Surveys is included in the Appendix.

The participants satisfaction with this approach is indicated by these comments from the Final Evaluation:

A number of the sessions really answering concerns which are in my own community.



Staff and Participants
at the 1987
PNG Gardens/Nutrition
Workshop

Counterpart
Group Planting
Improved Highland
Garden-Blending
Modern and
Traditional



Demonstration -
Preparing Meals for
Special Needs with
Local Crops

I liked the evolving nature of the course. Too often a curriculum is inflicted on course participants rather than matching their needs. One of the major reasons that many people came to the course was to improve communication with the people they work with, rather than just gather information, so this process orientation was conducive to meeting this goal.

Balancing the Curriculum Design

Use of the "Keys to family food security" enabled us to plan and present a more balanced and appropriate curriculum. These factors give unity to the design. They indicate what components need to be given greater emphasis to provide a comprehensive approach.

Keys To Achieving Family Food Security

1. Productivity of the garden
 - Total amount of crops grown
2. Nutritional Quality of food grown and consumed
 - Nutrients contained in the food
 - Diversity of nutrients
 - Sufficiency: meet family and special high risk dietary needs
 - Quality and health of plant as food
3. Garden Site Stability
 - Soil structure
 - Nutrients available in soil
 - Resistance to erosion
 - Water holding ability and drainage
 - Nutrient recycling
4. Sustainability of Food Production
 - Garden continues to produce quality food into the future
More is returned to the soil (organic material, nutrients) within a stable garden site than is taken out (crop production)-an ecological balance.
5. Appropriateness
 - to local food, diet, and food consumption patterns
 - to local cultural traditions (skills, practices, taboos, etc.)
 - to locally available resources (time and labor, money, materials, tools and technology, etc.)
 - to local environmental conditions (climate, seasons, soils, land form, pests)
 - to family needs and problems
 - to training and extension methods

In the past, our curriculum has focused on garden productivity and nutritional quality of food within the context of appropriateness. The "Keys" indicate that these need to be balanced with factors affecting garden stability and sustainable food production to have the desired long-term impact. For a tradition-based culture like PNG, all of these must be considered within the boundaries of appropriateness if they are to be applied to local communities.

These factors also give us a practical tool to assess the potential benefits and problems of any innovation that we may want to consider within the course. Question: "How does this idea, method, crop, ..., affect each of the above factors in a given situation?"

Workshop Overview and Schedule

This Workshop integrated food systems, gardening, and nutrition as means to provide family food security. It was based upon curriculum of the earlier PNG Workshop, modified according to an expanded set of objectives and a training process attuned to participant needs. Participants were active in all phases of the course: planning, presentation, and evaluation. A cross-cultural training process was used which emphasized topic building by participant interaction.

The Workshop consisted of nineteen (19) sessions, supported by frequent practical field exercises and demonstrations. Five of the sessions contained TOT-type practice teaching components. The course presentation time was approximately 65 hours.

A schedule for this Workshop as presented is attached.



Preparing nutritious meals using traditional cooking methods

J/K

SUNDAY	June 1, 1987 MONDAY	June 2 TUESDAY	June 3 WEDNESDAY	June 4 THURSDAY	June 5 FRIDAY	June 6 SATURDAY	
PNG GARDENS- NUTRITION WORKSHOP 	PARTICIPANT ARRIVAL	GARDEN SKITS	PNG TRADITIONAL LAND PREPARATION AND CROPS EXERCIZE	LOCAL GARDEN CROPS & FOOD VALUES -GARDEN SURVEY -VISUAL AIDS PREP	SOIL IMPROVEMENT PLANT NUTRITION & LOCAL SOURCES (*)	PARTICIPANT MEAL PROJECT	
		OVERVIEW OF COURSE and HOME GARDEN CHARACTERISTICS		SOIL IMPROVEMENT PRACTICE TEACHING (*)	LEGUMES AS SOIL BUILDERS (*)	MID-COURSE EVALUATION	
			WELCOME LUNCH				PICNIC
	PRE-COURSE PARTICIPANT NEEDS & SKILLS SURVEY	NUTRITION PROBLEMS IN PNG	THE FOOD SYSTEMS CALENDAR	SOIL TYPES & HOW TO IMPROVE (*)	NO TILL/NO TURN	PARTICIPANT PROJECT TIME & INDEPENDENT STUDY-WEI	
		THE MALNUTRITION CYCLE			COMPANION PLANTING		
		TOUR: WAU ECOLOGY INSTITUTE (opt.)	(VOLLEYBALL)				PARTICIPANT MEAL PROJECT
COURSE WELCOME and INTRODUCTION			(PNG CULTURAL VIDEO)			(VIDEO)	

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June 7 SUNDAY	June 8 MONDAY	June 9 TUESDAY	June 10 WEDNESDAY	June 11 THURSDAY	June 12 FRIDAY	June 13 SATURDAY
FREE TIME	GARDEN PLANTING and PRESENTATIONS	PEST MANAGEMENT (Practice Teaching*) Identification of insect and disease pests Cultural Management Methods	PEST MANAGEMENT (*) Pesticides: Dangers & Safety Organic Pest Control Methods	EXTENSION METHODS THAT WORK IN PNG Home Garden/ Nutrition-Activity & Project Plans	FAREWELLS AND DEPARTURE	
FREE TIME	DESIGN OF EXTENSION & TRAINING GARDENS -- School Garden Health Center Agri Training Center	SPECIAL FOOD NEEDS & DIETS Weaning Food Child Illness Oral Rehydration Pregnant & Breastfeeding Mothers	TRAINING-METHODS "WHAT WORKS?" Methods Adult Learning Characteristics	FINAL EVALUATION		
ADDITIONAL "Mumu" COOKED MEAL	(VOLLEYBALL)	Food Preparation Methods Demo	Food Preparation Demo	Closure and Graduation		
	(PNG VIDEO)	MOVIE: CHILD NUTRITION IN PNG		(GRADUATION PARTY)		

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The daily schedule was varied and stimulating. Food, garden, nutrition, and extension topics were included in each session. Technical sessions contained supporting demonstrations and problem solving tasks. All but two sessions of the course were held in the field or food preparation areas.

The technical gardening and family food-nutrition sessions of the first week combined new and traditional methods and information. Sessions of the second week gave participants an opportunity to apply what they had learned in practical exercises that would be useful at their sites. These included the popular garden design and planting projects, special diet planning and food preparation demonstrations. The course provided ample opportunity for participants to share, learn and practice effective training and extension methods. By the end of the course, participants developed a number of appropriate activities and projects that should have a positive impact on improving family food security in their communities.

Workshop Evaluation

Evaluation was a continual effort during the course. It was a useful tool to provide insights and guidelines to adapt the course to meet participant needs and to determine the most relevant training methods.

The participant "Needs and Skills Survey" started the process. From this, the course priorities, design, session schedule and objectives were tailored to meet mutual needs and capabilities.

Each evening, concerned staff and participants met informally to provide feedback and determine the content priorities, pace and training approaches to be used the following day(s).

A brief, mid-course evaluation was filled out by counterpart groups. Many useful suggestions were offered on how to further improve the first week's sessions. From this came the priority for the second week: to assimilate and apply the technical information that had been covered, by problem-solving tasks relevant for participants' on-site work.

The final evaluation was by a short open-ended questionnaire answered by individuals. Questions used in this evaluation and a summary of participant responses are given in the Appendix.

In the final evaluation, this course again received very positive ratings from all concerned. The course directly answered participant needs and was based upon the traditional systems that they had to work with in their communities. They especially liked the training process that built a positive environment for cross-cultural sharing and learning. They favored the smooth and flexible organization of the course that allowed input from all concerned and adaptation to their needs as it progressed.

As one participant noted:

This training course was excellent. The people and setting were ideal for generating an exciting learning experience. The staff continued to provide a very special blend of experience, energies, ideas, and approaches.

Practical sessions that compared traditional practices with adapted intensive methods were considered most relevant. The highest ratings were given to the practice teaching exercises (soil improvement and pest management) in which complicated topics were simplified and presented using methods appropriate to local audiences. The practical field sessions continued to be most useful, including garden planting, soil improvement, food preparation, and pest control methods.

The participants were satisfied with the course. The few negative comments concerned suggestions to improve particular sessions (see "Evaluation" in Appendix). The most frequent comment, from half the participants, concerned their need for pre-course information to enable them to be better prepared (see Recommendations). Several suggested that staff should be recruited earlier and participant resource persons be informed of their roles sooner to allow for planning.

Recommendations

1. It is recommended that another Gardens/Nutrition IST Workshop be conducted in PNG. This course remains the most appropriate means to deliver training in these needed skills. Don Smith, Peace Corps PNG Director, suggests a similar workshop be considered a year from now as part of the Mid-Service Conference for the group of volunteers entering service in mid-'87.

2. A priority in another IST should be training of in-country national staff to conduct future courses. Capable assistant training staff are in place. Needs for core staff recruitment are:

- an agricultural trainer with background in subsistence gardening and experience in non-formal training
- a nutrition educator with technical nutrition background and practical training skills

3. A stateside lead trainer should be provided for another workshop to continue building in-country training capabilities. Since this is a very heavy load for a single trainer, the workshop could be improved by providing a second trainer recruited in PNG or regionally, experienced in this or a similar curriculum.

4. Participants need and deserve more pre-course information about the workshop. It is consistently their most frequent comment on how to improve the workshop. A Pre-Course Information Packet should be prepared by OTAPS or the lead trainer, forwarded to the country office for revision, and sent to prospective participants to promote the course. They need to know:

- time and location of course
- the course objectives and overview
- summary of topics likely to be covered
- criteria for selecting counterpart most likely to benefit
- a note on what to bring or prepare
- (a Pre-Course Needs/Skills Survey: for feedback)

5. The logistic arrangements have been excellent for both PNG workshops. The reports of the prior logistics coordinators provide valuable information for those who will be in charge of logistics in future courses. Overall recommendations are:

1. The logistics coordinator should begin work a week before arrival of trainer(s) in country.
2. Pre-course tasks may include: review former workshop reports (logistics and final), confirm training site and resources, estimate budget, confirm PNG training and support staff and participants expected. Determine preliminary supply lists and adjust to number of participants expected. Purchase and obtain as many of the basic training/office supplies, equipment and non-perishable food items as possible prior to arrival of training staff. Work with in-country organizers to confirm travel and housing arrangements for staff and participants. Arrange Peace Corps vehicle for training site. Plan/budget for local hire logistics assistant to help trainers with session set-up. An early start on these tasks helps eliminate much of the rush and stress of last-minute preparation.

6. The lead trainer should communicate via OTAPS with in-country organizers as soon as possible. A dialogue should be established on selection and recruitment of training staff, confirmation of training site, and preliminary supply needs.

The lead trainer needs every day of the two week in-country preparation period, especially when HCN staff are to be trained. A minimum of 8-10 days is required at the training site for precourse preparation.

7. PC/ICE needs to send reference materials three months prior to the workshop. Reference materials sent two months before have arrived late for both PNG Workshops.

8. The six months follow-up evaluations on the 1985 Workshop provided trainers with valuable feedback on how the training was applied by the participants in their jobs. The information helped trainers revise this course for greater relevance. It would be helpful to have six month and one year follow-up surveys sent to participants by PC/PNG. OTAPS/Health would appreciate photocopies of responses. This information will help improve future PNG, and other, Gardens Workshops. A copy of the survey form is in the Appendix

10. Other Peace Corps activities that could follow up this workshop in PNG are:

- include nutrition/gardens curriculum components in future PNG/PCV Preservice Trainings, involving HCN workshop trainers and past PCV participants in this effort.
- prepare a PNG Nutrition Overview covering problems, situation, and notes of successful activities, i.e., a fact sheet for volunteers. (This was suggested by several participants.)
- consider placing an in-coming volunteer couple (recruited with experience in gardening and nutrition training) with a national-level organization. With their counterparts, they would conduct future provincial and local Gardens/Nutrition courses.

11. Recommendations regarding the Gardens/Nutrition Workshops curriculum, content, and training approach are given in the "Notes to Trainers" in the Appendix. Trainers for future PNG workshops may want to review these to learn from our past experience.

APPENDIX

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Workshop Trainers

Staff and Participants

Training Staff

Wes Burlingame: Trainer
Laurel Springs Nursery
401 Regal Street
Hendersonville, NC 28739

John Kaulo: Co-Trainer
c/o Kumsek Trading
P. O. Box 161
Mt. Hagen, WHP

Marie Brown: Logistics
P. O. Box 115
Vanimo, WSP

Joan Jennings: Co-Trainer-Nutrition
Koinambe
via Mt. Hagen, WHP

Helen Yamu: Asst. Trainer-Food Preparation
YMCA - P. O. Box 27
Wau, Morobe

Support Staff

Lisi, Belini and Judy, P.C./PNG
Training Project Cooks

Tumbo Tumun: Logistics Asst.
Field Set-up

Participants

Lucas Wek: Nutrition/Health
Health Dept. Educator
P. O. Box 129
Mt. Hagen, WHP

Bob Spencer, PCV
Joan Jennings, PCV
Nutrition/Community Devel. Trainers
Koinambe
Via Mt. Hagen, WHP

Willie Nitpel
Didiman Trainer-Asst. Farm Mgr.
Oksapmin Farm
Training Center
Oksapmin Station
Via Vanimo, WSP

Jono O'Sullivan, PCV
Erika Beecher, PCV
Training Ctr. Coordinators & Trainers
Oksapmin Farm
Training Center
Oksapmin Station
Via Vanimo, WSP

Silas Moiyang
Health Post-Nutrition/Health
c/o M.D.H.P. Educator
Box 62
Menyamya, Morobe

Mark Sullivan, PCV
Health/Nutrition Extension
Anga Nutrition Project (Tawa)
P. O. Box 61
Menyamya, Morobe

Simeon Max
Regina Max
Farmers-Community Group Leaders
Catechist Selbang
c/o MCM Kiunga
P. O. Box 42
Kiunga, Western Province

Julie Nelson, PCV
Comm. Devel. Extension
Selbang
c/o Catholic Mission
P. O. Box 42
Kiunga, Western Province

Participant Training Needs

Participants requested that the workshop cover the following topics to help them meet needs in their communities: (Summary of "Needs Assessment" from Pre-Course Survey).

The right-hand column indicates how these needs were answered. Code: (1) covered directly in sessions; (2) in consultation with trainer or resource person; (3) directed to references or WEI library.

<u>Need</u>	<u># Requests</u>	<u>How Answered</u>
1. Soil Improvement & Plant Nutrition	(18)	
-Identifying nutrient deficiencies in plants	5	(1) (2) (3)
-Composting methods & pros/cons	3	(1)
-Soil Types/characteristics-how to improve	2	(1) (2)
-Tech. soil problems at site	2	(2)
-How to use legumes to improve soils	2	(1) (2) (3)
-Soil conservation methods	1	(1)
-Technical problems: recycling "kunai" grassland, pasture management, bog management	1 each	(2) (3)
2. Appropriate Training Methods to use with rural villagers in: Nutrition, Soil Types, & Plant Nutrient Needs	3	(1) (2) (3)
3. Methods and uses of companion planting	3	(1) (2)
4. Identify PNG food crops that are nutritionally rich and poor	3	(1) (2) (3)
5. Pest Management		
-Identification and control of insect pests	2	(1) (2) (3)
-Identification and control of plant diseases	2	(1) (2)
6. Approaches to enable site stable gardening	1	(1) (2) (3)
-Crop rotation methods	2	(1)

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7. How to mix traditional crops and methods with new	1	(1) (2)
8. How to grow fruit and nut trees	1	(1) (2)
9. How to do a chicken raising project	1	(2)
10. Technical problems: in growing legumes and potatoes	<u>1</u> each	(2)
Total Responses	39	

Final Evaluation Responses

Questions used in final evaluation

1. What sessions/skills were most useful? Why?
2. What sessions were less useful? Why?
3. What did you like best about these last ten days?
4. Recommendations/comments to improve future home gardens-nutrition trainings?

Summary of Participant Responses

A summary of the participant responses from the final evaluation is given below. Final evaluation questionnaires were received from 11 participants, including 1 PNG couple answering together. The results were:

	Responses
1. Sessions/skills most useful:	
- Legumes: How to use & benefits (from Soil Improvement Session)	6
- Pesticide Dangers & Use (from Pest Management)	6
- Garden Planning & Planting Exercise	5
- Plant Nutrition (Soil Improvement)	5
- Soil Types & Methods to Improve (Soil Management)	5
- Companion planting	4
- Practice teaching (In Soils & Garden Tasks)	4
- Cooking/Food preparation demos	4
- Traditional garden land preparation exercise	4
- Teaching methods: How To-	3
- Compost making demo (Soil Improvement)	3
- Food calendar and nutrition sessions	2
- Others (single responses)	(2)

Selected Quotes:

Soil Improvement Sessions (and Practice Teaching):

The subject was an important and often neglected aspect of the knowledge base that needs to be developed. The exercise of presenting to the group allowed PNG input to make the information relevant and also provided a useful dialogue on presentation techniques.

It was useful for us to have the opportunity to try out some exercises with this non-threatening group and get their feedback.

Garden Planting:

Our counterpart pinpointed the main nutritional and garden concerns for our area and then the three of us came up with a variety of ways to address these concerns.

A good method for people to narrow their focus and find practical applications of what they have learned ... my counterparts now perceive the same problems that I see.

Nutrition (and cooking demos):

Provided a good model of simple ways to teach and reinforce what are the key issues to get across.

Gave me the opportunity to try different methods that I was not familiar with and will be able to incorporate into the cooking routine at the training center.

Course:

A number of the sessions really answering concerns which are in my own community.

2. Sessions less useful? Why?

	Responses
- All useful	2
- Nutrition sessions (already knew)	2
- Pesticides (need more balanced approach)	1
- Training methods (link with adult learning characteristics)	1
- Food calendar (monthly structure confusing to HCN's)	1
- No comment (-)	(2)
- Others (single response)	(2)

Selected Quotes:

Pesticides:

I felt the pesticide session was a bit too scare-tactic oriented. The facts need to be presented in a less sensationalized manner.

Training Methods:

We got to the first stage of identifying techniques but when it came to seeing the best reason why something worked we often came to a dead end. The connection wasn't made between adult learning characteristics and approaches to training.

3. Like best about course?

Responses

- | | |
|--|------|
| - Enriching learning experience cross-culturally: sharing of ideas and knowledge | 6 |
| - Informal discussions and activities allowing relaxed interactions | 3 |
| - Trainers: flexible, listened to suggestions, adapted sessions to needs | 3 |
| - Course geared to common goals rather than just technical information | 2 |
| - Blending new ideas with traditional methods and knowledge | 2 |
| - Experience variety of PNG foods and cooking methods | 2 |
| - Learning teaching methods and use of visual aids | 2 |
| - Stimulating variety of training methods | 1 |
| - Getting seeds and planting materials | 1 |
| - Others (single responses) | (10) |

Selected Quotes:

A very good cross cultural experience, the course became geared to common goals rather than just a tech information seminar. An excellent atmosphere for sharing and nationals opening up.

This training course was excellent. The people and setting were ideal for generating an exciting learning experience. The staff continued to provide a very special blend of experiences, energies, ideas and approaches.

The focus on blending new ideas into existing gardening methods and associating new ideas with traditional knowledge.

4. Recommendations and Comments:

The recommendations given by the participants in their final and mid-course evaluations have been included in the Recommendations of this report and in the "Notes to Trainers" in the Appendix.

A sample of responses from the evaluation is given below:

	Responses
- Participants need overview of the course before coming to the workshop; to be better prepared and recruit appropriate counterparts	6
- Include village extension field trip during course	3
- Recruit staff earlier. Inform resource people (i.e. participants) about roles at earliest opportunity	2
- Be careful not to overload participants with too much technical information, especially the HCN's	2
- End afternoon sessions on time	2
- It was appropriate to conduct the course in "Tok Pisin"	1
- Design and offer a session on mixing cash crops with subsistence gardening	1
- Others (single response): "See Notes To Trainers"	(6)

Notes For Trainers

The following notes are offered to future Gardens/Nutrition trainers to pass on our experience from the two PNG Workshops. They are a summary of recommendations and comments from staff and participants. These ideas can be useful for improving the organization, design, content, and delivery of future courses.

1. The lead trainer needs to communicate with PC organizers in-country as soon as possible (3 months before) to establish a dialogue on selection of in-country staff, training site, basic supply requirements, and pre-course information for participants.
2. Peace Corps OTAPS/Health has on file a number of curricula and handouts from prior workshops in this series. They are a valuable resource for trainers.
3. Confirm core training staff with OTAPS and in-country organizers six weeks before course. Request identification of alternative core trainers to cover cancellations (see Recommendation #2).
4. The lead trainer should have a precourse task list prepared prior to arrival in-country.
5. The logistics coordinator's job can be made more manageable by:
 - reviewing the logistics reports and recommendations, budgets, and supply lists from former workshops a month before the course
 - lead trainer confirming preliminary supply, equipment, and non-perishable food needs three weeks prior to arrival
 - logistics coordinator starting up the week before trainer's arrival (see Recommendation #5)
 - providing a local hire logistics assistant for on-site session set-up
6. The majority of course hand-outs should be prepared and copied prior to departure for the training site.
7. Core training staff should be at the training site 8-10 days before start-up. This time is needed-don't delay!
8. Local food, meal planning, and preparation should be an integral part of the course. Selection of cooking staff, menu planning, and purchase of food should compliment the "nutrition-local foods" message of the curriculum.
9. Trainers should review the "adult learning characteristics" section in this Appendix, and if possible, references by non-formal adult educators. This information provides helpful guidelines to determine effective training methods to use in the course.

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10. The sessions for the first two days of the course should be prepared prior to arrival of participants. Priority sessions for the rest of the first week should also be outlined (objectives, main topics, presentation methods, materials). Finalize these after learning participant needs, and skills available.

11. Inform participants who are to serve as session resource people or presenters as soon as possible to give them time to prepare.

12. The "interactive learning process" described in the "Course Modifications" Section is an effective cross-cultural training tool. Use in sessions that blend the traditional with the modern. This approach is slower and less information-intensive than lecture. Adjust timing and content accordingly.

13. A successful course meets participants' on-site needs. Determine these with a Pre-Course Needs/Skills Survey (see samples in Appendix), and by informal discussion. Adjust schedule, content, and training approaches to match. Evening discussions with concerned participants provide on-going feedback.

14. Similarly, identify the skills of individual participants, to be aware of resources in the group. Involve participants fully in course planning, presentation, and daily feedback. Provide opportunities for practice teaching and support demonstrations. Enlist participants as small group leaders and resource people. Encourage independent projects and evening presentations about their on-site work.

15. Keep sessions stimulating, varied, and active. Hold classes in field and food preparation areas. Mix work sites and presentation methods in each session.

16. Long-term course evaluations point out that technical lectures are soon forgotten. People tend to remember and apply what they have done. Keep lectures brief and to the point, limited to 20 minutes followed by a support activity. Hands-on problem solving tasks, supported with resource people, can be a more effective way to provide technical information. Assist new staff in learning and practicing alternative training methods.

17. Participants from bush sites may not be able to handle as much technical information as the trainers are prepared to give. This can result in information "overload" leading to the mid-course doldrums. Many participants give greater priority to learning cross-cultural communication and training skills than just gathering new information. Be aware of "overload" in the group. Balance information with counterpart interaction, processing, and practice.

18. Keep introduction and overview sessions brief. Participants are ready for practical content by noon of the first day.

19. A field exercise (seedbed planting, fruit tree nursery,...) is a stimulating and appropriate first session for the course.

20. Participants have consistently requested in-depth technical information and skills in these subjects:

- identification of signs of malnutrition
- identification and use of high nutrient local crops and food
- recognition of soil and plant nutrition problems and use of appropriate methods to improve both
- recognition of pest problems and use of appropriate pest control methods: cultural, organic, pesticide
- effective local training and extension methods: "how to"

21. Include when possible and relevant:

- traditional land preparation and local crops exercise (as foundation for improved methods)
- the food calendar
- applied nutrition demonstrations and tasks; nutritional assessment of meals and crops, food planning and cooking, recipe sharing and trial, practice in local extension methods
- exercises in preparation of food for special needs: weaning, sick child, oral rehydration, pregnant and breast-feeding mother
- seedbed planting, fruit tree nursery, transplanting activities
- compost making, legume cover crops, companion planting, and other methods leading to site-stable gardens
- participant projects and evening "show and tells"
- teaching practice
- session on mixing cash cropping with subsistence gardens (pros, cons, and approaches)
- exercises in planning and design of extension gardens: for schools, health clinics, agricultural training centers, et al.
- distribution of gardening tools, seeds, and planting materials to participants

22. It is not helpful to "talk" about extension methods. Each session of the course should be designed to give the participants the opportunity to share, learn, and practice useful training and extension methods for their communities.

23. Take a village field trip during the course, observe local resource people demonstrate extension methods and skills, and follow with participant discussion.

24. Attempt to provide simpler references and resource materials for rural national counterparts: i.e., in native language, visual aids, posters, etc.

25. Simplify and shorten the Garden and Project Design sessions. Make them practical and applied to on-site use.

26. Use simple and clear evaluation instruments. A mid-course evaluation using open-ended questions discussed by small groups helps nationals take a fuller part in the process.

27. Provide time in the course for independent study and projects by participants.

28. Encourage enjoyable staff and participant interaction. The workshop depends on a community effort for success.

29. Plan and schedule time and opportunities for group recreation. This is a necessity to maintain the interest and energy of the group given the intensity and duration of the course. Consider activities like: volleyball, music and singing, evening videos, special meals, picnics, hikes, dances, trips to town, ... and just time to relax. Recognition of this need can greatly improve group spirit and help overcome the mid-course blahs.

Notes On Adult Learning Characteristics

This summary of adult learning characteristics and training recommendations comes from literature, non-formal educators, and personal experience. I have felt that awareness of these improved the quality of this Workshop.

<u>Adult Learning Characteristic</u>	<u>Suggestinons For Training</u>
1. Adults: remember what they <u>do</u> or experience much longer than what they hear.	- encourage field exercises and hands-on tasks, role plays and practice teaching.
2. like variety and stimulation.	- vary sessions, use stimulating methods, change sites often.
3. find listening difficult, tend to have a short listening span (20 min.).	- limit lectures, keep brief and to the point, alternate with activity.
4. learn better in a relaxed atmosphere than when formally taught.	- use low-key approaches and informal discussions.
5. need to understand what is being said to maintain interest.	- speak and demo. slowly and clearly; encourage use of native language when possible.
6. have skills, ideas & experiences they want to share.	- provide frequent opportunities.
7. have greatly varying capacities to deal with new information.	- watch for signs of information overload, adjust content and training methods appropriately.
8. need course content to be relevant.	- survey needs at start; keep content practical and related to needs; limit theory, generalizations and repetition.
9. want to achieve or accomplish something.	- provide learning tasks to complete.
10. like to talk; would rather talk than think.	- encourage discussion; stimulate thinking with problem-solving tasks, questions, teaching practice and brainstorming.
11. need time to feel confidence in a new group.	- leave small groups together for several days, then switch.
12. learn in different ways: listening visual experience	- discussion, lecture, music, etc. - visual aids, demos, observation, slides - hands-on, teaching practice ...
13. appreciate humor and fun.	- lighten up approach!; encourage role plays, skits and fun activities.

Resource Materials

These resource materials were provided to the participants by Peace Corps/ICE, and the PNG Department of Health.

Note: The asterisk code indicates how useful/relevant the resource material was for the PNG Workshop. (** very useful; * good)

From Peace Corps/ICE:

- ** 1. Peace Corps, New Pacific Nutrition. 1983. Peace Corps/ICE M-701, 806 Conn. Ave., N.W. Washington, D.C. 20526.
- ** 2. UNICEF. The UNICEF Home Gardens Handbook. 1981. PC/ICE reprint. (By Paul Sommers, et. al.)
- ** 3. Cameron & Hofvander. Manual on Feeding Infants and Young Children. 1983. Oxford Univ. Press, New York, N. Y.
- ** 4. Oomen, H. and Grubben, G. Tropical Leaf Vegetables In Human Nutrition. 1978. Royal Tropical Institute, Amsterdam, Netherlands.
- * 5. Peace Corps, Small Vegetable Gardens, Resource Packet P-4. 1982. Peace Corps/ICE.
6. Pacy, A. Gardening for Better Nutrition. 1978. Milton Buechhoff, Intermediate Technology Ltd.; P.O.Box 337; Croton on Hudson, New York 20520.
7. Peace Corps, Bibliography of Traditional Medicine. 1985. Peace Corps/ICE.

From PNG Department of Health, Nutrition Section:

- ** 8. Fitzpatric, E. and Cox, E. Good Gardens, Good Food, Good Development. 1981. Wirui Press, East Sepic, PNG.
- ** 9. Cox, E. A Book of Nutrition Songs. 1981. Nutrition Section, Department of Health, Government of Papua, New Guinea, Port Moresby, NCD, PNG.
- ** 10. Cox. Good Food For Your Baby. 1982. Nutrition Section.
- * 11. Nutrition For Papua New Guinea. 1986. Nutrition Section.
- ** 12. "Recipes For Papua New Guinea". (pamphlet), Nutrition Section.
13. "Nutrition and Development". 1985-1986. (Magazine issues), Nutrition Section.
- ** 14. "Good Crops for Subsistence Gardening". (Poster) Nutrition Section.
- * 15. "Tripela Kain Kaikai". (Poster), Nutrition Section.

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List of Handouts

These course and session reference handouts were distributed to participants during the Workshop.

1. Participant Skill and Needs Survey.
2. Introduction to Workshop (staff, logistics info., times, etc.)
3. Workshop Schedule.
4. Keys to Food Security.
5. Checklist of Intensive Home Garden Characteristics.
6. Checklist of Plants and Their Uses - WEI Gardens.
7. The Multi-Level Garden.
8. Dietary Data - A Family Survey.
9. Common Signs of Malnutrition in Children.
10. Results/Recommendations of the PNG Nutrition Survey
11. Land Preparation Methods.
12. Soil Improvements Techniques.
13. Steps in Composting.
14. Compost Tea (Manure).
15. Local Sources of Plant Nutrients.
16. Soil Fertility-Fertilizers.
17. Plant Characteristics-Multi Story Crops.
18. Crop Companions for Companion Plants.
19. Crop Locations in the Garden.
20. Mid-Course Evaluation.
21. Non-Chemical Insect Controls.
22. Non-Chemical Disease Control.
23. Methods of Weed Control.
24. List of Plants and Planting Materials Available for Participants.
25. Seed Sowing Guidelines.
26. PNG Recommendations/Recipes: Weaning Food.
27. PNG Recommendations/Recipes: Children Ages 1-3.
28. Recipes: Good Tasting Drinks & Food From The Garden.
29. Training Methods Used in the Course.
30. How To Do A Demonstration.
31. Staff & Participant Address List.
32. Final Evaluation.

Facilities and Resources

at Wau Ecology Institute

- Hostel: Comfortable for 20. Ten rooms for 1-3 people, hot baths, modern kitchen; large eating, study and recreation area.
- Flats: Three private flats with office space, baths, and kitchens for staff and visitors.
- Classrooms: Several with good work areas.
- Gardens: Several acres of gardens including traditional subsistence, mixed, intensive and market. Food crops from throughout PNG.
- Other Training Resources: Research library, demonstration areas - poultry raising, fish ponds, compost making, soil conservation, etc.
- Cooking areas: Full, modern kitchen for meals, several traditional sites for training.
- Resource and training support staff: Available in traditional and improved gardening, food preparation and nutrition extension.
- Wau farm market: Source of local food for meals and training supplies.
- Recreation areas: Museum, nature preserve, arboretum, hiking trails, volleyball, videotape equipment.
- Planting materials, seed and tools.
- Miscellaneous: Photocopier, telephones, local transport (rental).

Planting Materials and Tools
Distributed to Participants

The following tools and local planting materials were distributed to interested participants at the end of the Workshop. Seeds and tools were provided by Peace Corps. Other planting materials were made available from the Wau Ecology Institute's gardens.

Seed

Beans (dwarf, mung, snake, wing)
Cowpea
Amaranthus
Peanut
Corn
Watermelon
Capisicum (green pepper)
Tomato
Papaya
Hot Chile
Leucaena
Cucumber
Pumpkin
Lemon
Mandarin
Orange
Guava
Basil
Marigold
Mint
Radish
Passionfruit
Avacado
Rosella

Planting Materials

Aibika (veg.)
Lemon Grass
Taro
Kumu manus (veg)
Sweet Potato
Pineapple
Chayote (choko)
Sugar Cane
Pitpit (food cane)
Yams
Banana-cooking & sweet
Ginger
Cassarina
Cassava
Kangkong
Comfrey
Passionfruit
Pomelo

Tools

Spades-6
Bush knives-6
Forks-2
Hoes-2
Buckets-4

Participant Skill/Needs Inventory

NAME: _____

JOB DESCRIPTION: _____

HOME GARDENS WORKSHOP

Particular skills I would like to learn from this workshop...

Gardening/Nutrition skills or experiences I have

Short description of any gardening and nutrition projects that I have worked on, or plan to work on in the near future

45+

Gardens/Nutrition Course
Follow-up Survey

NAME _____

ADDRESS _____

1. How have you gone about teaching the ideas you learned at the Gardening Course to others?

2. Have you got any activities planned for the future? What?

3. Have you organized a garden workshop or do you plan to in the future?

4. When you share with people the ideas discussed at the course, what do they think of your ideas.

5. After going back to your place and thinking about the information learned and discussed at the course, do you have any suggestions for future courses?

6. Do you have any comments in general?

PEACE CORPS



April 10, 1987

MEMORANDUM

TO : Nicolaas Luykx, Deputy Director, USAID/Office of Nutrition
THROUGH: Ike Hatchimonji, Agricultural Officer, USAID
FROM : Peggy Meites, Nutrition Specialist, Peace Corps

The following is background information on the activities and accomplishments under the Nutrition Participating Agency Service Agreement (PASA) and a discussion of directions for future activity.

Nutrition and Agriculture

Since the inception of the Nutrition PASA (FY84-87) the predominate program activity has been a series of trainings that promote mixed gardening as a means of improving household food security and family nutrition. An average of four Gardening trainings per year have been conducted for health PCVs and their Host Country Counterparts. The funding for these trainings has been shared between the Nutrition PASA, PC Health Sector budget and PC/Washington SPA TA funds, and the Child Survival PASA.

In addition to covering participant cost for the Gardens training, PASA funding has covered the cost of the development of new Nutrition and Household Food training materials that have also been used in Primary Health and Growth Monitoring training. We are anticipating the possible use of these materials in the proposed Women in Agriculture PC/AID Collaboration work.

The current emphasis in the Gardens programs is to strengthen the ability of Peace Corps and the host country to continue these trainings without the assistance of PC/Washington. In order to accomplish this we are identifying Host Country Nationals and PCVs as co-trainers and devoting a portion of the course preparation time to developing their training skills. Mauritania, Central African Republic and Papua New Guinea are all countries that are institutionalizing the training into Peace Corps programs.

As a result of the experience gained in the Gardens trainings we have advocated for the inclusion of a nutrition and food component into Peace Corps food production programs and trainings for agriculture and rural development PCVs. An outcome of program advocacy has been increased awareness and interest in integrated programming. Technical Assistance requests in FY'87-88 for health sector assistance include:

- Developing an evaluation protocol for a new pilot horticulture project in Botswana. The project targets women farmers and seeks to improve household food security and family diet;

- Developing a monitoring and evaluation system for the nutrition component in an integrated rural development project for PC Paraguay;
- Designing the nutrition section of an integrated training for agriculture, forestry and nutrition PCVs in Papua New Guinea.

Although PC Field Staff and their host country co-professionals are interested in including a nutrition and food component in agriculture projects, they often lack the knowledge, expertise and experience to accomplish this. In the coming year {FY'88} we plan to use these new programming requests to strengthen the ability of APCDs to integrate a Household Food component into Agriculture programming and training. In order to support these field requests there is a need for household food needs assessment and garden evaluation methodologies that are appropriate to the level of Peace Corps projects.

In order to accomplish this work it would be very advantageous to Peace Corps to have closer collaboration with AID, access to pertinent work developed under AID contracts and assistance in redeveloping existing methodologies from other AID/Nutrition funded groups. For example a less sophisticated version of the evaluation of the Home Gardens project developed by the Nutrition Economist group at USDA would be extremely useful for the Botswana project. We are unsure of the mechanism involved in a collaboration of this sort and would appreciate guidance.

Child Survival

A number of requests from the field for support under the Child Survival PASA have been for Nutrition programming and training assistance. As we indicated in a previous memo Peace Corps has few up-to-date Nutrition training or program assessment materials. It is perhaps optimistic to expect good program development in Nutrition when the majority of Associate Peace Corps Directors {APCDs} for health are either generalists or Public Health generalists. If Nutrition is to become an important part of the Child Survival Initiative we must give APCDs and their host country professional counterparts the necessary program assessment tools and training to do the job. Since many PC APCDs are HCNs and not subject to the 5 year rule it would be particularly advantageous to increase their Nutrition programming and technical skills. We believe that this activity under the Nutrition PASA can compliment and strengthen the technical assistance offered under the Child Survival PASA.

The Health Sector and the Inter-America Region will be holding a Child Survival programming planning conference this summer. The conference will be attended by I.A. Health APCDs and their Ministry Counterparts. This would be an excellent opportunity to assure that Nutrition is part of the Child Survival initiatives in the Inter-America Region and to upgrade the skills of regional program managers and host country counterparts.

Again, we would prefer to adapt rather than recreate. Our experience with Dr. Teller's Growth Monitoring/Promotion thesaurus in training PCVs and HCNs has convinced us of the value of utilizing existing project assessment, evaluation methodologies and to adapt them to PC's needs. Dr. Teller's work is one example of the type of methodology that PC and HCN field staff need to analyse the status of growth monitoring/promotion programs. Rapid assessment surveys or KAP Survey on Weaning foods, are other examples of methodologies that would be valuable to incorporate into the Child Survival project assessment and design phase and for use in training of staff, HCNs and PCVs.

Once again, we would like to explore if there is a creative mechanism that would allow us to collaborate more clearly with AID, possibly, field testing some of the work you are currently funding and avoid duplication of effort.

PEACE CORPS



June 11, 1987

MEMORANDUM

TO: Richard Tolliver, PCD/Mauritania/Africa

FROM: Peggy Meites, Health/OTAPS *PM*
Richard A. Record, Agriculture/OTAPS *ZAR*

SUBJECT: Final Report on PC/Mauritania Nutrition Gardens Workshop

Please find enclosed a copy of the final report on the Nutrition Gardens Workshop conducted for PC/Mauritania from April 16 to April 26, 1987 by Dorothy S. Bell.

cc. Margaret McLaughlin, CP&T/Africa
Linda Colby, APCD/Health/Mauritania/Africa
CDU/Mauritania/Africa
Jim Ekstrom, D/PS/OTAPS
Maria Elena Pynn, D/TD/OTAPS
Jim Patterson, SPA Coordinator/OTAPS
/Ike Hatchimonji, Nutrition/S&T/AID
Robert Clay, Health/S&T/AID

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THE 1987 NUTRITIONAL GARDENING WORKSHOP IN MAURITANIA
FINAL REPORT

Prepared by

Dorothy S. Bell

May 18, 1987

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PROGRAM OVERVIEW

This IST in Better Nutrition through Mixed Gardening was conducted in Nouakchott, Mauritania from April 16th through the 26th of 1987 with a total of 8.5 days of training activities. The program was organized by the Office of Training and Program Support, Peace Corps Washington by Peggy Mietes (Health) and Richard Record (Agriculture). The program was requested and supported in Mauritania by Becky Raymond, APCD/Health. Her request was based on the success of this training as it was given the year before by Drew Lent and Mary Pecaut, and the success she felt participants had had in adapting concepts from the workshop in their on-site work.

A major goal in conducting this IST for a second time was to develop an in-country capacity to incorporate the concepts and skills of this workshop into the yearly PST for Health Volunteers. To this end PCVs David Phillips and Michele Florde were responsible for the design and delivery of many of the sessions. David Phillips is a third year Volunteer in agriculture. He had trained some agricultural sessions in the workshop with Drew Lent and Mary Pecaut. Michele Florde is a second year health Volunteer who had attended the IST the year before.

Host Country Nationals (HCNs) were not represented in the training staff. Although a HCN from the agricultural school in Kaedi was identified as a trainer, he did not assist in the training program as planned due to failures in communication on several levels. Thanks to Moustapha Sidat (APCD/Agriculture), Mr. Youssouf Thaim from the Ministry of Agriculture was able to participate as a guest speaker. He spoke on Pest Control and Fruit Trees. His talks were informative and easy to understand, his style open and direct, and he translated the points which he felt were exceptionally important into Pulaar.

Ken Lejoie, a PCV participant in the workshop and a health volunteer, also helped in the training of the workshop. He and Michele Florde planned and delivered the session on Nutrition. This team approach provided a supportive and creative base for both individuals which resulted in a dynamic session.

Seven PCVs and six HCNs participated in the IST. The PCVs were all Health Volunteers who had been in service for 6 months. Five of the six HCNs were local counterparts of the attending volunteers. The sixth, Madame Blal, was from the Ministry of Health and Social Affairs. She was an excellent participant, bringing additional experience to the group as well as helping to keep the group motivated. The two HCN professors who provided language translation were also active participants. In general, participation was good and well balanced between PCVs and HCNs.

The workshop was delivered entirely in French with translation into Pulaar and Hassaniya. All of the HCNs but one had some level of language skills in French. This greatly facilitated their ability to make use of information presented in the workshop. Two participants

needed some translation into Pulaar when points were not clear to them. One required translation into Hassaniya. It was this third person who had no French background. In addition, social distance between herself (a Black Moor) and the translator (a male and a White Moor) did not facilitate an open exchange. Some PCVs had difficulty in following the French and required later explanations in English. These PCVs do not commonly use French in their work.

LOGISTICS

Nouakchott was chosen as the training site in lieu of conducting the training in Kaedi as it had been the year before. This was based on the seasonal timing of the workshop and the fact that it was hotter and dryer in Kaedi at this time of the year. This was well illustrated during the workshop. On our hottest day it was 118 F in Nouakchott while in Kaedi it was reported to be 136 F.

Classroom exercises, lunch, and siesta were taken by the whole group in the Peace Corps Maison de Passage. Gardening activities were conducted in a large private garden 8 kilometers from this house. The Garden chosen was excellent in its resources of space, materials, and established plots and trees. The gardener working there was not only skilled in applying variations of many of the principles that we were interested in teaching, but also interested in participating in our activities to improve his skills. We also visited the Hospital Gardens in Nouakchott and examined gardening techniques, social and economic considerations affecting those gardens, insect and pest problems, and fruit tree production. This provided us with a good contrast between private and commercial gardening in the capital.

Although this arrangement of multiple working sites created a requirement for transportation, each separate working site was an excellent choice. However, in light of logistical problems outlined below and illustrated in the daily schedule of events, the loss of time in transportation and the shifts in last minute training sites for agricultural sessions, the distance between these sites had a definite and detrimental effect on the workshop.

Logistics and funds were handled by Tawel Oumrouould Ahmed who conducted his responsibilities capably, efficiently, and in good cheer. He was also very helpful in clarifying cross-cultural issues that affected the workshop and in the daily planning of activities. His willingness and ability to conduct these affairs were well appreciated in light of the logistical constraints of the workshop.

Difficulties

1. Peace Corps Mauritania had a variety of activities being conducted at the same time as this workshop. These activities included a

motorcycle stage, a workshop for PCV TEFL teachers, and a training for HCN language teachers who would be working on the up-coming PST, as well as this workshop. These coinciding activities greatly reduced the availability of resources for this workshop.

2. Transportation was inadequate to allow the conveyance of participants and staff between work sites throughout the workshop. Two vehicles were required to do this and they were not commonly available.
3. While the Maison de Passage was an excellent setting for informal teaching, learning, siestas and lunch it had a negative impact on the regular functions of the house. PCV participants noted that the workshop interfered with the normal functions of the house for Volunteers by virtually monopolizing it during the day. Lack of water was also a problem. The cistern was often empty which created a problem with the modern toilets, both for the people staying in the house and for the workshop participants. This also caused a shortage in the availability of drinking water.
4. The workshop was scheduled for a ten day period between April 16th and the 26th. However, several factors reduced the amount of time during this period available for the workshop. Two of these factors should have been taken into consideration in the initial scheduling of the workshop. First, Friday is a holy day for Mauritians and they need the entire day off. Secondly, Easter fell within the workshop period and Peace Corps Volunteers needed time off to attend church.

The third factor affecting the amount of time available for the workshop was an international convention of the Presidents of West African States. The day that the Presidents arrived was declared a holiday and we were unable to meet. The following days were marked by traffic stoppages which affected our ability to get to the different work sites.

While Peace Corps Mauritania was unaware of the timing of this convention at the time that the dates for this workshop were set this type of unforeseen problem is always a possibility where transportation between work sites is an issue.

WORKSHOP CONTENT

The Workshop Goal

The goal of this training was introduced and defined during the first session of the workshop as follows:

To become able to improve the level of food security at the household level by employing gardening techniques appropriate for Mauritania and a knowledge of basic nutrition in order to enable a family to be more self-sufficient in food resources all year round.

Nutrition

A variety of points led us to focus on very basic nutritional issues. First, as indicated in the Lent/Pecaut report of 1986, vegetable growing or consumption is not widely practiced in Mauritania. Where production is practiced the gardens focus on commercial aspects and have little nutritional focus. For example, it is unclear as to whether the producers themselves consume little more than what is left over after marketing and crop selection is based solely on market value.

In total, the inventory of fruits and vegetables available in Mauritania is very limited. (See summary charts for Calendar Exercise). Mauritians, in general, do not have a long experience in agriculture and are learning new cultivation practices. Environmental constraints also severely limit the opportunities for production. No dark green leafy vegetables are consumed. Beets are the only garden vegetable commonly grown with a dark green leaf and these are fed to sheep.

Secondly, the availability of fruit and vegetables throughout the year was clearly indicated as a problem during the Food Calendar Exercise (see summary calendars). There are long periods of time when no fresh or dried fruits and vegetables are available. Consumption becomes irrelevant where the produce simply does not exist.

Thirdly, it became clear during the Calendar Exercise that HCNs felt that if people were eating at all they were eating well. This meant that if people were relying on a little meat and cereal for several months out of the year they were still considered to be well nourished.

Finally, in terms of child nutrition, when there are adequate food resources available children are fed a lot. The cultural preference is for pudgy, fat babies, and if possible people will feed their babies to this state. The problem that mediates this preference is the lack of food. This is not to say that problems in child nutrition do not exist but that the availability and diversity of foods which are basic to child nutrition are more fundamental problems in Mauritania.

Given these factors the nutritional objectives of this workshop were;

1. To educate people about the importance of fruit and vegetables in a balanced diet and to demonstrate their palatability.

2. To develop food storage techniques for fruit and vegetables to alleviate seasonal shortages.
3. To develop gardening skills that would increase production during growing seasons.

Gardening

The gardening materials were developed around a list of essential gardening techniques provided by Richard Record (OTAPS/Agriculture) and adapted to the Mauritanian environment.

COURSE OUTLINE AND CONTENT

Nutrition

Nutrition (2 hours, Florde and Lajoie): A session on very basic nutrition using three food groups (vitamins and minerals, protein, and carbohydrates and fats) was presented. Vitamin deficiencies of A and C were recognized and discussed. By the end of the session participants were familiar with the three food groups and their benefits. Balanced meals were illustrated and discussed using drawings of local foods on a flannel board. The importance of fruit and vegetables was clearly illustrated and understood. The seasonal lack of these foods was discussed.

Food Drying (2.5 hours, Florde): Food drying was introduced as a method for making fruit and vegetables available all year round. Foods which are traditionally dried were listed. Other local foods which can easily be dried were added to the list. Dried bananas and mangos as well as cabbage, carrots, and tomatoes were passed around and the fruits were tasted. The participants then processed and dried quantities of vegetables and fruit to become familiar with the processes and to prepare supplies for further food demonstrations during the workshop. This included produce selection, treatment, drying and storage.

Preparing a Good Meal (including the Market Trip and Food Preparation - 4.5 hours, Florde). In this session appetizing meals were to be prepared (by three different groups of participants) which illustrated the principles of the three food groups, using dried foods, and which was presented in a culturally acceptable meal. All three groups made a variety of rice, fish, and vegetables; the traditional lunch meal in Nouakchott. Rice, oil, and dried vegetables were provided as part of each group's "family stores". All other food resources for the meal were to be bought in the marketplace that morning with a "household budget" of 200ug (a little less than \$3.00) for a meal for five people.

Meals were reviewed for cost, taste, and nutritional content. All were rated as excellent and no difference in quality or taste was observed between dried and fresh vegetables. The meal which used the largest amount of dried vegetables was also the least expensive.

Gardening*

Garden Bed Preparation (4 hours, Phillips): The field session began with a discussion of how to plant a nursery seed bed and how to plant direct-seeded vegetables. Information was presented through a method demonstration. This demonstration included: planting techniques, the value of adding manure to the bed, how deep to cultivate, the need for good seeds, how to plant, how much water is needed, and shading. After this presentation the participants prepared their own garden plots. A Volunteer and a counterpart worked together to cultivate each bed.

Visit to the Hospital Gardens (2 hours, Phillips): The purpose of this field trip was to show the participants examples of mixed gardens. The participants also had the chance to ask the gardeners specific questions about their work, such as the problems they encountered in gardening in Mauritania, where they procured their inputs, what they did with produce, etc. The Mauritanian counterparts seemed to derive much more benefit from the session than did the Volunteers in that for many of the Mauritians this was the first time they had seen gardens as developed as those at the Hospital.

Characteristics of a Mixed Garden (2 hours, Phillips): In this session we examined the characteristics of a mixed garden. We looked at the multilevel nature of mixed gardens, how to intercrop different types of cultures (trees, bushes, fruit trees, forage, vegetables), the difference between market and family gardens and can a garden be both, what inputs are needed, and so on. We found that we attempted to provide too much information during this session. It would have been better to address this subject during more than one session, perhaps by presenting a general overview the first day of the training, and then explain how each session relates to this subject.

Transplanting (1.5 hours, Phillips): This session covered the principles and practicalities of transplanting vegetables in Mauritania. The trainer demonstrated how to transplant while discussing the following issues:

1. Land preparation.
2. Proper depth of the hole for transplanting.
3. How to choose plants with the best chance for survival during transplanting, importance of thinning to develop strong plants.
4. Watering; use of manure tea.
5. Shading.

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Soil Lab (45 minutes, Phillips): The purpose of this session was to demonstrate the differences in water retention capacities between sandy and clay soils, and humus. Also we discussed the nutrients in the soil and how these can be leached away by irrigation, the dangers of root rot in sandy soils, and how the structure of the soil can be improved by the addition of organic matter. The session began with a brief discussion of the different types of soils, then each type of soil was examined in terms of its water and nutrient retention capacity. To illustrate soil porosity a demonstration was presented, pouring water over different soil types in strainers. This showed how water passed through different soil types. The session, while appropriate for the counterparts seemed to be unchallenging and too simple for the Volunteers. Another problem that we encountered was that it is next to impossible to find anything other than sandy soil in Nouakchott. While we were able to improvise a humus type soil, we were not able to find any clay soil.

Soil Improvement Techniques (1.5 hours, Phillips and Bell): During this session we discussed the importance of adding organic matter to the soil to improve water holding capacity; nutrient retention (and the addition of other nutrients from the organic matter); the structure of the soil thus allowing for better root and tuber development. The trainers demonstrated how to make manure tea and compost discussing how and when this should be added to the soil.

Land Preparation (30 minutes, Phillips and Bell): Due to time constraints we incorporated land preparation in the mornings activities. Trainers demonstrated and discussed planting in hills, ridges, and furrows and double digging.

Seed Selection and Storage and Plant Nutrition (2 hours, Phillips): The first part of the session addressed how to choose the plants you want to collect seeds from; how it is important to follow these plants from the time they are young as well as the time they bear fruit. A demonstration of how to save seeds from various plants was then conducted.

The second part of this session presented plant families and their respective nutrient needs, how to recognize some of the simple signs of nutrient deficiencies, how these signs can be confusing and contradictory in plants, and how to correct these difficulties. This subject was also addressed during the garden management session when chemical fertilizers were discussed.

This session was not presented as planned due to constraints detailed in the Workshop Schedule of Events.

Fruit Trees (1 hour; Mr. Youssouf Thaim, Ministry of Agriculture): Mr. Thaim discussed the general nature of fruit tree cultivation, how to graft different varieties of fruit trees, planting techniques, and how to care for fruit trees. The nursery at the Hospital Gardens was used as a demonstration site. This material was not well received by

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participants because of cultural values about trees. Trees are expensive and not as easy to grow as vegetables. Their role in a mixed garden was restated in response to this reaction.

Pest and Disease Management (1 hour; Mr. Youssouf Thaim, Ministry of Agriculture): The hospital gardens were used as a demonstration site to discuss pest and disease control measures. Chemical measures commonly used in Mauritania were discussed as well as biological and physical measures (good spacing, cleaning tools, checking for insects) that could be employed in household gardens.

Garden Management (2 hours, Phillips): This session was the preparatory session for the Action Plan exercise. We examined the necessary steps in establishing and maintaining a mixed garden. Among the elements that were presented were the review of the basic elements of a market garden, its structure, its purpose, what inputs are needed, labor needs, where to find seeds, intercropping, succession planting, pest management, and wind breaks. The primary points of garden care, thinning, weeding, proper watering, different types of simple irrigation systems, chemical fertilizers, and soil management were also reviewed.

Project Planning Etc.

Workshop Introduction (2 hours, Bell): The goal of the training was introduced and defined. The concept of hands-on, practical learning was emphasized as was the need to learn, listen, counsel, and encourage one another throughout the workshop. A task analysis of the workshop goal was conducted and actions to be achieved were listed through group participation. The proposed course work was reviewed in terms of the activities that had been discussed and their ability to aid us in working towards our overall goal. The use of the task analysis framework was initially confusing but provided a strong background for discussing the proposed list of sessions. The concept of task analysis was employed throughout the workshop and included in the Action Plan assignment.

Information on conducting task analyses was taken from *Helping Health Workers Learn* by David Werner and Bill Bower.

The Food Calendar for Mauritania (3.5 hours, Bell): The Food Calendar exercise followed the established lesson plan and provided information for planning the nutrition sessions of this workshop. The summary charts are presented at the end of this report.

Conducting this exercise in an Islamic culture provided two different results from previous experiences. First, labor is difficult to discuss and pin down in a stratified culture where the upper class is the group represented by the participants. Second, holidays where food is prepared have both negative and positive effects on nutrition.

Everyone eats really well on the day of the holiday but the following month is one of little household resources because of expenses for the holiday. It was not possible to chart these effects.

Extension Methods for Nutritional Gardening (2 hours, Bell): A skit on motivating people to begin to eat dark green leafy vegetables (Beet Greens) was given. Animation techniques at many levels were demonstrated during the skit including a visit from the Ministry of Social Affairs, a nutrition Volunteer, a representative of the Ministry of Agriculture, and an agriculture Volunteer. All the players acted from their professional perspectives and shared information, resources, and techniques related to the simple message - Eat Beet Greens. Two beet green dishes were prepared; a cold salad and a hot peanut butter sauce and offered as part of the skit. Twelve of the thirteen participants tasted both dishes and found them very palatable. Methods of preparation were discussed.

Action Plan Assignment and Presentations (7 hours, Bell): Participants were to work with their counterparts and come up with a plan of action which could be effected in the next year. In doing this they were to state their goal. A task analysis was to be prepared based on their goal.

The presentations represented realistic projects which related to our workshop goal. They appropriately represented the skill levels of the participants and addressed some very basic and important problems in conducting these specific projects. Most participants chose to work with people who already had gardens, introducing a few new gardening techniques but focusing on nutrition issues.

The task analysis model was easy to illustrate and provided participants with a simple framework for organizing their ideas and activities.

WORKSHOP PREPARATION

Three days of briefing were held in Washington, D.C., primarily with Peggy Meites and Richard Record, in order to develop strategies and workshop content that might meet the special needs of the workshop in Mauritania. The primary focuses of that work were:

1. Meeting the in-country objective of developing skilled personnel to incorporate the IST material in the PST for Health Volunteers.
2. Developing new skills for both Host Country Nationals and Peace Corps Volunteers as trainers and participants.
3. Achieving a complimentary blend of nutrition and agriculture lessons within the brief span of the workshop.

Ten days of pre-workshop preparation time was available in Mauritania for the further development of the workshop. This period of time provided for the smooth adjustment to a new and difficult environment.

Several problems surfaced during the pre-workshop preparation period which centered around a basic miss-communication between Peace Corps Washington and Peace Corps Mauritania about what was to be achieved with this workshop and how it was to be done. This confusion was complicated by the fact that Becky Raymond had responsibilities that prevented her from participating in the planning phase of the workshop (as she had indicated by cable before the workshop began). The basic problems were as follows:

1. What the roles and skill level of the consultant were and their appropriateness to in-country needs.
2. The role of Host Country Nationals in the training process.
3. The role of the Volunteers as trainers in the workshop.

While it was expected that a Host Country National expert in agriculture would be on the training staff this was not understood to be the case by the in-country staff. This person had been identified by cable but the desired degree of his involvement in the workshop was unclear. Arrangements for his participation had not been finalized upon the arrival of the consultant and attempts to contact him by telegram in another city in Mauritania failed. In addition Host Country Ministries had been avoided as resources in order to reduce complications. As a result no Host Country Nationals were brought into the training staff as more than guest speakers.

The volunteer trainers which were to be involved in the workshop were not aware of their roles as the primary trainers (in order to develop skills for the PST) and had not been prepared for the intensity of work that was necessary. In addition, the lack of a Host Country

2/1

National, skilled in agriculture put the full burden of training this material on David Phillips, a PCV. This was not foreseen by Becky Raymond since she expected to get a consultant with the same skills as the consultants she had had the year before. This problem was not foreseen by Washington Staff because they expected the HCN staff person to be on board.

The ability of the workshop trainers (Phillips, Florde, and Bell) to work as a cohesive team during this pre-workshop phase was severely hampered by the Volunteers expectations of their roles in the workshop and the amount of time they had allotted to preparation for the workshop based on their understanding of their roles. David Phillips was unable to arrive in Nouakchott until four days before the workshop and had other responsibilities beyond those of the workshop during this period of time.

EVALUATIONS

Daily Evaluation

A daily evaluation scheme was followed as established the year before. At the end of every day the group was to meet without the trainers, review the day's work for good points, those points that needed work, and any other comments. After their review one individual was to be sent to the trainers to report their findings.

This system worked well for the first week and then fell apart as the schedule became complicated due to unforeseen events. There was also a certain resistance to conducting the meetings in this fashion after the first week. Participants felt that the process took too long and got bogged down in pointless discussion when left on their own. They preferred open discussion with the trainers present. In fact no substantial problems were raised during these evaluations even though the workshop did not run smoothly because of logistical constraints. In part, this is due to the fact that problems were detailed and discussed as they came along, and also because the participants were patient and understanding of the events outside our control.

Workshop Evaluation

A written evaluation was conducted on the last day of the workshop. The evaluations were very positive and indicated that the participants learned new skills which were appropriate to our goals in conducting the workshop. The overall evaluation form is followed by a summary of the remarks. The second form is a listing of the courses with scaled response choices. The responses are summarized on that form.

Indiquez si vous etes: un homologue un volontaire

1. Les seances etaient: trop simples appropries trop difficiles
2. La sequence des seances etaient: complimentaires confuses
3. Les formateurs etaient: bien prepares bien organises concernant besoins et interet du groupe
 ou non ou non
et les traducteurs: bons acceptables ou non
4. Est-ce que vos besoins et vos interets etaient remplis? Expliquez.

5. Quelles etaient les 3 meilleurs choses que vous avez retenu?

6. Quelles etaient les 3 choses moins necessaires selon vous?

7. Est-ce qu'on doit changer la duree du stage? Les jours du repos? Les heures des seances? Expliquez.

8. Est-ce que vous pouvez nous conseiller comment nous pouvons ammeliorer la programme?

9. Comment avez-vous trouve les dejeuner?

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1. The classes were

98%(12) appropriate in their level of difficulty

8%(1) no response

2. The sequence of classes was

84%(11) complimentary

12%(2) confusing

3. The instructors were

92%(12) well prepared

8%(1) no response

61%(8) well organized

24%(3) no response

15%(2) not well organized

46%(6) concerned about the needs and interests of the group

46%(6) no response

8%(1) not concerned about the needs of the group

3a. The translators were

38%(5) good

31%(4) acceptable

31%(4) no response

4. Were your needs and interests met?

85%(11) positive response

7.5%(1) negative response

7.5%(1) did not respond to the questions asked

5. The three best things in the training were (only those with a response value of at least 3 are listed):

Food Drying	10 (76% of the participants)
Nutrition	4 (30%)
The Food Calendar	3 (23%)
Seed Selection and Saving	3 (23%)
Preparing a Good Meal	3 (23%)
Soil Preparation and Improvement	5 (38%)

6. The three least essential classes were (only those with a response value of at least three are listed):

Fruit Trees	5 (38%)
Reforestation	3 (23%)

7. Should the duration of the training be changed? The days off? The hours of class work? Explain.

The workshop was too long in the number of days	10 (76%)
Need more time off for business as well as all day Friday off	10 (76%)
Too many logistical problems getting to the garden	3 (23%)

8. Can you indicate how the program could be improved? (only responses with a value of 2 or more are listed)

Do not do it in Nouakchott	2 (15%)
Garden too far from the class	2 (15%)
Do not have it in the Maison de Passage	2 (15%)

9. How were the lunches?

Positive response	13 (100%)
Too spicy	3 (23%)

Notre but tout bien considéré, indiquez si chaque séance est très intéressante, moins intéressante, ou inapplicable.

N=13

Calendrier Alimentaire en Mauritanie 1 = no response			
très intéressante 4 (30%)	intéressante 6 (46%)	moins intéressante 2 (15%)	inapplicable
La Nutrition			
très intéressante 11 (85%)	intéressante 2 (15%)	moins intéressante	inapplicable
Séchage des Aliments			
très intéressante 11 (85%)	intéressante 2 (15%)	moins intéressante	inapplicable
Vulgarisation du Jardinage Nutritionnelle 1 = no response			
très intéressante 3 (23%)	intéressante 5 (39%)	moins intéressante 4 (30%)	inapplicable
Comment Préparez un bon Repas			
très intéressante 12 (92%)	intéressante 1 (8%)	moins intéressante	inapplicable
Lutte contre les ravageurs			
très intéressante 5 (39%)	intéressante 4 (30%)	moins intéressante 4 (30%)	inapplicable
Préparation du sol et semis 1 no response			
très intéressante 7 (53%)	intéressante 4 (30%)	moins intéressante 1 (8%)	inapplicable
Le Jardinage Mixte 1 no response			
très intéressante 5 (39%)	intéressante 5 (39%)	moins intéressante 2 (15%)	inapplicable
Le repiquage 2 = no response			
très intéressante 6 (46%)	intéressante 5 (39%)	moins intéressante	inapplicable
Amélioration de la terre 1			
très intéressante 9 (69%)	intéressante 4 (30%)	moins intéressante	inapplicable
Préparation de la Terre			
très intéressante 6 (46%)	intéressante 6 (46%)	moins intéressante 1 (8%)	inapplicable

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2 = no response

	très intéressant	intéressant	moins intéressant	inapplicable
3 (23%)	5 (39%)	3 (23%)		
Les arbres de fruit et le reboisement				
très intéressant	intéressant	moins intéressant	inapplicable	
	11 (85%)	2 (15%)		
Selection des Semences				
très intéressant	intéressant	moins intéressant	inapplicable	
4 (30%)	9 (69%)			
Nutrition des plants				
très intéressant	intéressant	moins intéressant	inapplicable	
6 (46%)	5 (39%)	2 (15%)		
Gestion et entretien du jardin				
très intéressant	intéressant	moins intéressant	inapplicable	
2 (15%)	9 (69%)	2 (15%)		
Plan des Actions				
très intéressant	intéressant	moins intéressant	inapplicable	
7 (54%)	5 (39%)		1 (8%)	
Presentation des plans				
Très intéressant	intéressant	moins intéressant	inapplicable	
4 (30%)	4 (30%)	5 (39%)		

CONCLUSIONS AND R

The conclusions and recommendation made here are the result of discussions with Michele Florde, David Philips, and Tawel Ahmed and the workshop evaluations.

1. That there should be increased involvement of Moustapha Sidat (APCD/agriculture) in the planning phases of this workshop. In addition there should be increased involvement of resource people in the Ministry of Agriculture, Rural Development, and Natural Resources to provide a better integrated resource base. Mr. Thaim, who was a guest speaker is highly recommended for further and more intense involvement in this workshop as is Madame Blal, a participant this year from the Ministry of Social Affairs.
2. That all training staff be together for the entire pre-workshop preparation period with a minimum of outside responsibilities.
3. That workshop logistics be such that garden site and classroom site are within walking distance.

It is also the conclusion of this consultant that the objective to develop skills to incorporate the materials of this workshop in the PST on a regular basis was not achieved. While Michele Florde and David Phillips are to be congratulated on the success with which they managed their sessions and contributed to the success of the workshop, the overall concepts embodied in the workshop, and the ability to plan and make decisions based on those concepts, were not developed. Given the crisis nature of our work (based on poor preparation time and insufficient resources), a lack of materials to work from in planning future activities concerning this workshop, and limited development experiences from which to draw, it is unreasonable to expect that they would have developed these skills. In addition, while they will be able to work in the PST this year they will not be available for future PSTs. For these reasons it is recommended that in order to institute the Better Nutrition through Mixed Gardening Workshop as part of the PST for health volunteers, that HCNs be trained who have a broader experience base in decision making and technical experience, and who will be available over a number of years.

The workshop was a success for the participants. Peace Corps Volunteers and Host Country Nationals developed new understandings and skills related to nutrition and agriculture which they felt they would be able to use in their future work. There was a keener understanding of nutritional problems and the development of skills and techniques that could be used to address those problems. The workshop ended on an upbeat and participants were eager to return to their posts to implement their new ideas.

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WORKSHOP SCHEDULE OF EVENTS

Thursday the 16th

- 9:00 - 11:00 Workshop Introduction
- 11:00 - 12:00 The Food Calendar for Mauritania
- 12:00 - 3:00 Lunch and Siesta
- 3:00 - 5:30 Food Calendar Continued
- 5:30 - 6:00 Daily Evaluation

Friday the 17th

- 8:00 - 12:00 Garden Bed Preparation (Garden)
- 12:00 - 12:30 Travel Time
- 12:30 - Lunch and open afternoon

Saturday the 18th

- 8:00 - 10:00 Visit to the Hospital Gardens
- 10:00 - 12:00 Characteristics of a Mixed Garden
- 12:00 - 3:00 Lunch and Siesta
- 3:00 - 3:30 Travel Time
- 3:30 - 5:00 Transplanting
- 5:00 - 5:30 Travel Time
- 5:30 - 6:00 Daily Evaluation

Sunday the 19th

Easter Morning - open

- 3:00 - 5:00 Nutrition
- 5:00 - 5:30 Daily Evaluation

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Monday the 20th

Classes were canceled by a national holiday to celebrate an international conference of West African countries and the arrival of their presidents.

Tuesday the 21st

8:00 - 12:00 Soil Lab
Soil Improvement
Land Preparation (Garden)
12:00 - 12:30 Travel Time
12:30 - 3:00 Lunch and Siesta
3:00 - 5:30 Food Drying
5:30 - 6:00 Daily Evaluation

Wednesday the 22nd

7:30 - 10:00 Travel Time: Due to the departure of visiting presidents the traffic was halted for three hours. Both vehicles, a car and a Land Rover had already picked up the participants and left for the gardens but only the Land Rover made it all the way to the garden (via an alternate and sandy route which the car was unable to pass). The driver of the Land Rover did not return with the participants until 10:00 even though it was clear that the car could not pass. Sessions planned for the morning in the garden were conducted in half the time at the house once everyone was together again using flip charts and lecture instead of the planned hands on experience.
10:00 - 12:00 Seed Saving and Storage
Plant Nutrition
12:00 - 3:00 Lunch and Siesta
3:00 - 5:00 Extension Methods for Nutritional Gardening
5:00 - 6:00 Fruit Trees (Hospital Gardens)

Thursday the 23rd

- 8:00 - 9:00 Market Trip
- 9:00 - 10:00 Food Preparation
- 10:00 - 11:00 Scheduled for Pest Control at the Hospital Gardens. The speaker did not show up because his motor cycle broke down. The session was rescheduled for the afternoon.
- 11:00 - 1:30 Preparing a Good Meal
- 1:30 - 4:30 Siesta
- 4:30 - 4:45 Travel Time
- 4:45 - 5:45 Pest Control (Hospital Gardens)

Friday the 24th

- 7:30 - 8:30 Travel Time: Each way took an hour since we only had one car and had to shuttle people.
- 8:30 - 9:30 Garden Maintenance
- 9:30 - 10:30 Travel Time
- 10:30 - 12:30 Garden Management
- 12:30 - Lunch and open afternoon

Saturday the 25th

- 8:00 - 12:00 Action Plan Assignment
- 12:00 - 3:00 Lunch and Siesta
- 3:00 - 3:45 Tree Planting
- 3:45 - 4:30 Open Discussion on Cooperatives in RIM
- 4:30 - 5:30 Two Presentations of Action Plans
- 5:30 - 6:00 Oral Evaluation of Daily Activities

Sunday the 26th

- 8:30 - 9:00 Travel Time: Could not get cars before this hour to travel to the garden.
- 9:00 - 9:30 Garden Maintenance and Farewell
- 9:30 - 10:00 Travel Time
- 10:00 - 12:00 Action Plan Presentations
- 12:00 - 12:30 Written Evaluations
- 12:30 - Lunch and open afternoon
- 7:30 - 9:00 Dinner and Presentation of Diplomas

THE FOOD CALENDAR EXERCISE SUMMARY SHEETS

The following pages are the summary sheets for the Food Calendar Exercise. The exercise was conducted by three different groups for the North, the East, and the River area. In general, agricultural work begins in May with field preparation and is followed with seeding in July and harvest in December and January. Gardening is begun in October with field preparation and seeding and harvesting is completed in April.

The following tables summarize the knowledge of the workshop participants. For any variable a negative sign indicates a problem for that period of time while a positive sign indicates that there is no problem. These signs must be interpreted differently for each class of variables. For example, a negative sign after a food indicates that it is not available and a problem in food availability may be indicated. A negative sign after a disease indicates that it is prominent at that time and a problem.

HL

Au Nord

	Jan	Fev	Mars	Avril	Mai	Juin	Juil	Aout	Sept	Oct	Nov	Dec				
Le Temps	/froid/		frais	/		chaud				/frais / froid						
Chaleur	/froid/		frais	/		chaud				/frais / froid						
Pluie									/	pluie		/				
l'Eau	+++++					_____			+++++							
Fruits																
Dattes	_____					++ ++++++			_____				_____			
Pasteques	+++++					_____			_____				+++++			
Jujubes	+++++					_____			_____				+++++			
Legumes																
Carottes	+++++					_____			_____				+++++			
Tomates	+++++					_____			_____				+++++			
Salade	+++++					_____			_____				+++++			
Oignon	+++++					_____			_____				+++++			
Betteraves	+++++					_____			_____				+++++			
Havets	+++++					_____			_____				+++++			
Radis	+++++					_____			_____				+++++			
Menthe	+++++					_____			_____				+++++			
Viande																
Chameau	+++++					_____			_____				+++++			
Chevre	+++++					_____			_____				+++++			
(a Chinguetti)	++ __ ++ __ ++ __ ++ __ ++					_____			_____				++ __ ++ __ ++ __ ++ __ ++			
Ceeals																
Ble	+++++					_____			_____				+++++			
Orge	+++++					_____			_____				+++++			
Riz	+++++					_____			_____				+++++			
Boissons																
Lait (chameau, chevre)	+++++					_____			_____				+++++			
Garess	(fabriquer)					+++++			+++++				(fabrquer)			

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Au Fleuve

Jan Fev Mars Avril Mai Juin Juil Aout Sept Oct Nov Dec

Viande

Mouton	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Boeuf	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Chameau	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Poulet	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Chevre	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Poisson

+++++

Poisson Sec

Oeufs

Cereales

Mil	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Sorgho	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Mais	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Riz	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Arachides	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Ble	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Boissons

Lait	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pain De Singe	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Bissap	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Travail

Les Hommes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Les Femmes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Maladies

Paludisme																			
Vers de Guinee																			
Conjunctivite																			
Cholera																			

Argent

+++++

Workshop Participants

Participants:

Khadyjettou m/Blal
Ministere de la Sante et des Affaires Sociales
Nouakchott
Republique Islamique de Mauritanie

Amy Hance and Fatimetou N'Daiye
B.P. 20
Rosso
Republique Islamique de Mauritanie

Amy Johnson and Fatima min Ahmed Mahdoul
Bou Steilla
Republique Islamique de Mauritanie

Stephanie Kimbal and Aisse Aw
Olo Ologo via Boghe
Region du Brakna
Republique Islamique de Mauritanie

Ken Lajoie and Filman Coulibaly
Nema, Homh Charghi
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Kaedi, Gorgol
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Guest Speaker

Youssef Thaim
Ministere de l'Agriculture
Nouakchott
Republique Islamique de Mauritanie

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PEACE CORPS



*Copy sent to
Jack Pennington
6/2/87*

May 29, 1987

MEMORANDUM

TO: Lynn Gray, Peace Corps Director
Mamadou Issa, Associate Peace Corps Director

THROUGH: Mary Killeen Smith, Director, OTAPS
Jim Ekstrom, Director Program Support, OTAPS

FROM: *Colleen Conroy*
Colleen Conroy, OTAPS/Health
Peggy Meites, OTAPS/Health

SUBJECT: Niger IST Report submitted Margaret Ferris-Morris,
May 1987

I have enclosed Margaret Ferris-Morris' report on the Nutrition IST, April 20-25, 1987 for your review and distribution in country.

I feel that she has made some very sound recommendations regarding the preparation for and delivery of future ISTs. I would be very interested in receiving your response to these suggestions. While these recommendations are specific to Niger, some of the issues raised could be applied to a larger Peace Corps population.

As we discussed, I will share this report with consultants Joanne Csete and Susan Burger.

Will look forward to hearing about any activities that occur as a result of this IST.

cc: Robert Clay, Health Officer, USAID
Ike Hatchimonji, Agricultural Officer, USAID
Djodi Deutsch, Country Desk Officer/Niger
Margaret McLaughlin, Chief, Program and Training/Africa

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FINAL REPORT
NUTRITION IST PEACE CORPS
ZINDER, NIGER
20-25 APRIL, 1987
MARGARET FERRIS-MORRIS, CONSULTANT

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OVERVIEW OF TRAINING

Background and Focus

This In Service Training was requested from Peace Corps Niger, to address recuperation strategies of malnourished children, and learn interviewing and survey techniques. The trainer assumed that the participants would need skills sharpening for both rehabilitation of malnourished children as well as prevention of malnutrition in the community, since the problem of malnourished children existed. With initial cable traffic between Washington and Niger, telephone discussions with the APCD for Health Niger, M. Issa, and discussions in Niamey with M. Issa and the Ministry of Health (MOH) co-trainer, the training outline was finalized.

The focus of this In Service Training (IST) was two-fold. First, the participants were to gain a solid comprehension of the causes of malnutrition and growth failure, and know the principles of treatment of malnutrition at the clinic level. Secondly, through the evaluation of their growth monitoring program, and other lectures and exercises, be able to design an action plan for better program strategies to prevent growth failure. (See Principle Objectives in the Training Curriculum Packet)

Length, Participants, Location of Training

The length of the program was scheduled for six full days including Monday, April 20th through Saturday, April 26th, 1987. Between thirty and thirty-four participants attended the workshop sessions regularly. Approximately half of the participants were Peace Corps Volunteers comprising eleven nutritionists, three nurses, and two lab technicians. The other half of the workshop participants were from the Ministry of Health including the Directress of Training, Health and Nutrition Education, Directress of the PMI's (Protection Maternelle et Infantile), and Director of the Division of Social Affairs and Maternal Child Health. Nutritionists from the MOH, and Coordinators with their administrators for the PMI's for the seven Departments. Visitors were free to attend sessions. (See List of Participants in Packet).

Initially, the workshop was intended for PCV's and their counterparts in the field, however, due to miscommunications, logistics and other reasons, no counterparts actually attended and MOH officials were selected to attend. This changed the purpose and objectives of the workshop considerably. The trainer was informed of the change when she was in-country, after much of the course outline had already been developed. However, the content was easily adaptable to the new composition of participants.

The IST was held in the city of Zinder, Department of Zinder, approximately 12 hours drive from the capitol city Niamey. The DDS (Director Department of Sante - Health Department),

graciously provided a newly built center of the Association des Femmes Nigerienne (AFN) for the training. The field trip undertook during the training was to a small town (Guidimouni) of 7,000 - 10,000 inhabitants, 65 kilometers from Zinder.

Strengths and Weakness of the Training

I. Preparation Time Stateside and In Country

Due to trainer time constraints and travel scheduling plans, an inappropriate amount of preparation time was allotted for this workshop. In country, the trainer had less than two days to finalize the outline, collect materials, and divide training responsibilities with the co-trainer. This had an impact on organization of the workshop and coordination between the two trainers and the assistant trainer (Dr. Yaou). Both trainers noted that organization could have been better, as well as a few participants in their evaluations. As a result, the trainers had 18 hour days at the training site, and no free time to address other needs of the participants nor the trainers. In addition, due to the time constraints with the co-trainer and the language difference in original materials, the primary trainer had most of the responsibility in organizing the materials and workshop, where with more time, these items could have been shared with the co-trainer.

After the training, Peace Corps Washington allotted one working day to finalize and type all the documents produced from the workshop, evaluate the workshop and trainee responses (evaluations), debrief with the co-trainer and Peace Corps staff of Niger. With this amount of time, all these items were impossible to accomplish. Therefore, a strong recommendation to be made would be for Peace Corps Washington to allot more preparation time, both stateside and in-country and to allot at least two to three days in country to finish all necessary tasks including evaluations and debriefings. Numerous other training reports have mentioned the same recommendations for optimizing the training program.

II. Scheduling of the Program

Six full days were needed to cover the material of the workshop. The trainers and a number of participants felt the program contained too much material and that a free day or half day within the program would have been desirable. Some of the Peace Corps Volunteers entered the workshop with different expectations and perceptions of the what the workshop should offer them. The previous IST focused more on the immediate and emotional needs of the PCV's whereas this IST was intended to be a training, to sharpen certain skills. The difference in IST objectives should have been clarified beforehand between the APCD for Health and the PCV's. This training could have benefited from more free time and sessions explicitly for the PCV's (and in english) for discussions of projects and post reports. The Nigeriennes were comfortable with the training length and content, however a few expressed desire for more free time.

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In relation to the scheduling of activities within the program, placing the field trip near the beginning would have given the groups more time to evaluate the problems encountered in the field and explore in more depth concrete plans of action. In addition, the groups could have explored more areas such as market resources available to make home made recuperation diets, problems within the training of weaning foods to mothers, etc. Nonetheless, the field trip and ensuing activities were highly valued by most participants despite arrangement of the schedule.

III. Content and Activities

The overall training content was appreciated by most participants including variety and topics. A few PCV's whose work involved strictly medical activities and the two lab technicians found much of the content not particularly relevant to their work. Unfortunately, this could not have been avoided as the composition of "health volunteers" varied. The nurses and lab technicians positions are being phased out so that only nutritionists will be in the health program in the future, in Niger.

The activities were varied and interesting for most participants. Most sessions were in small working groups with presentations to the large group and discussions. Non-formal education techniques were found useful (some drawn from "From the Field" - World Education) and enjoyed by the participants.

IV. Documents and Language

There was a need to translate most documents into french. The documents translated in Washington by a consultant were poorly translated and did not use language specific to the field of nutrition. A Peace Corps volunteer was commissioned to translate the remaining documents in Niger, and she was able to use country specific language and terminology. Most documents handed out to the volunteers were in english in addition to french due to the low level of french spoken by them. In addition, the growth monitoring thesaurus was a 'generic' document as well as some of the survey questionnaires used during the field trip. Some participants would have liked them to be country specific.

A number of the Peace Corps volunteers were concerned about the conducting the program entirely in French. Initially, they were reluctant to speak French, given the nature of the positions of the Nigerienne participants. After the first day, however, most PCV's took active part in the discussions despite their speaking abilities.

The trainers divided up the explanations of group work in English and French, such that both groups of participants (PCV's and HCN's) could understand clearly the work to be accomplished. The level of spoken french by the primary trainer was clear for the PCV's, however the HCN's would have desired more sophisticated presentations. The co-trainer made explanations clearly understood by the HCN's.

TRAINING CURRICULUM

A complete copy of the training curriculum, resources, and additional materials used can be found in the Training Curriculum Packet. The outcome of each work session, for each group has been typed and is found under each days heading in the Packet.

Comments on Individual Sessions

DAY 1

Icebreaker Exercise - Introductions

This activity quickly brought the participants together and 'broke the ice'. Each person introduced some one they did not know.

Skills Assessment and Self Evaluation

These handouts gave the trainers an idea of the skill levels of the participants, priorities for learning, and what participants wanted out of the workshop. The skills levels and priority levels were quickly tabulated and trainers discussed the objectives of the workshop in relation to the findings.

Piecharts of Employment of Time Exercise

At the beginning and end of the workshop the participants performed this activity with the objective of each person evaluating their use of time at work. The participants not only divided their work into catagories but determined why they spent time on each activity (as a result of job descriptions, priorities, interests, etc.) At the end of the workshop, participants revised their piecharts according to what they now saw as priorities (to combating growth failure) and how they felt they could, given the opportunity, change their activities to be more productive towards the goal of reducing childhood malnutrition. The Peace Corps volunteers could take back the piecharts and discuss the activities of the workshop and their desire to change their own activities with their counterparts. This exercise worked well and most participants found it useful.

Aspects of Protein Calorie Malnutrition Activity

The large group was divided into three small working groups of about ten (10) persons each selected by the trainers and M. Issa. Each group had at least one official from the MOH Niamey, one coordinator of the PMI's and administrator of PMI's at the Department level; one PCV nurse, nutritionist, and lab technician (accept one group for the latter). In addition, one trainer or assistant sat in with each group to act as facilitator. Each group choose a president (leader) and a secretary (recorder).

The groups were to come up with a definition of malnutrition and list of the major causes of malnutrition to present to the large group. The large group reviewed the three defInitagns and came up with a working definition for the workshop.

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This activity took longer than planned and could have been more efficiently conducted. The group was caught up in terminology for the definition, and the co-trainer, who was leading the session temporarily lost sight of the objectives to be covered.

DAY 2

Management of Protein Calorie Malnutrition Activity

We took an outline that had been translated in Washington, modified inappropriate words and reorganized it into three phases of treatment: I. Initial Contact and Treatment of the Acute Phase, II. After the Acute Phase has Passed, and III. Community Follow-up. Each small group took one phase and discussed the outline and made other relevant points. They were to come up with treatments which worked in their field situations and present them to the large group. The groups worked well together and many found the information very useful. However, some of the PCV's felt the session was too theoretical and wanted advice for recuperation diets in situation where little resources existed. In any case, the skills levels of the participants rose the highest during the workshop for the objectives covered in these activities.

The training process was a compromise between the two trainers. Initially, the trainer wanted to present accepted protocols (WHO) for treatment of PCM with supporting documents. However, the MOH was not prepared to make formal (or nonformal) presentations of a protocol for the country. A more interesting and satisfactory activity might have been to observe and evaluate rehabilitation strategies at the field level, and evaluate market resources for making home recuperation diets and then present these findings to the group.

Vitamin A Deficiency Presentation

A slide presentation was made by Dr. Yaou with a question answer period. Supporting documents and field materials were distributed afterwards. This went very well, was clear, and well received.

Good and Bad Interview Techniques - Role Play

There was a humorous role play done by selected volunteers (PCN and HCN). Participants elaborated the main points after each type of interview. These were listed on a flipchart. Everyone enjoyed the activity and found it educational.

DAY 3

Understanding Each Others Roles Activity

Each person in the large group received a photo of someone from a developing country and were asked to enter the shoes of that person and give a brief story (in the first person) about themselves. Most participants found it difficult to personalize stories or to really feel what the person in the photo was experiencing. Parallels were made with interviewing and working with people different from themselves.

Growth Monitoring Program

The entire group was given an introduction to growth monitoring (GM) and then asked to fill out the empty blocks of the model with a few prompts. The conceptual model was easily completed and gave a clear picture of what a growth monitoring program should do to reduce childhood mortality. The GM thesaurus was distributed, explained, and the group asked to identify who was responsible for each task and where progress indicators could be found. Differences arose between what was real and ideal. In the afternoon session, small groups took the remaining GM activities not covered and discussed these differences as part of the activity. No large group presentations were made.

There were difficulties with the poor translation and generic nature of the thesaurus. A more productive way to obtain the same objectives may have been to have small groups from the start, select those activities most relevant to Niger and itemize them according to priority, in addition to the identification activities.

Factors that Motivate You in the Workplace Activity

Small groups looked at factors that motivate and demotivate one in the workplace as well as those that motivate and demotivate mothers to change their health behaviors. One group, who finished quickly presented a list for discussion to the large group, as time was running short. This activity was fun and worked well.

DAY 4

Initially this day was going to include an overview of the data collection process and a presentation by a statistician/health expert, Jim Setzer, from Tulane University and the MOH. At the last moment we were informed he was unable to come, hence the program was modified accordingly. Had we been informed sooner, the co-trainer would have presented this topic. Instead, Mr. Zanie Sambesi was asked to give a presentation of a family planning program he developed for the Department of Zinder, outlining the necessary steps to carry out an effective program. Some of the objectives for this day were not covered in sufficient detail.

Determining Specific Causes of Malnutrition, Ease of Change, and Education Techniques Activity

Small groups took four general causes of malnutrition in Niger and discussed in detail actual situations that exist for each topic. They identified ease to change, and successful educational techniques found to change mothers behavior. Each group presented their discussions using a certain format. Only one group presented information about educational techniques, although the others had discussed them in their small groups. This was a time of problem/solution exchange between the PCV's and MOH.

Presentation of Sex Education and Family Planning by Mr. Zanie Sambesi

This presentation was well done, outline the methodology for good program design. It was well received, with an active question/answer period.

Preparation for Field Day Activity

Everyone was explained the tasks and objectives of each team's work for the field day, suggestions for evaluating and tabulating data, and drawing up their plan of actions. Then everyone was given their team packets, divided into teams, discussed their directions and divisions of work. A trainer or assistant clarified any questions.

DAY 5

Field Activity - Guidimouni, Niger

We commenced team activities at 9 AM and finished by Noon. All survey activities went very well. The afternoon was spent reviewing the data collected, organizing and evaluating it, and then devising a plan of action. Groups needed more time for this activity to accomplish all objectives.

DAY 6

Plan of Actions Activity

Each team continued to form a plan of action with the given outline. In the later morning the first two groups presented and discussed their findings with the large group. In the afternoon the third group presented their findings. Then each team returned to their small group and drew up formal recommendations, based on their findings and plans of action for the Minister of Health. These were presented and discussed. As terminology became an important factor, it was proposed that a sub-committee work on the exact terminology for these recommendations to the Minister. The Co-trainer was selected to oversee that committee.

Re-evaluation of Employment of Time

(Discussed on Day 1)

Evaluations and Recommendations for Future IST's

(See following summary of these topics.)

RESULTS OF TRAINER AND TRAINEE EVALUATIONS

A copy of the results of the change in skills abilities and the summary of the final evaluation of the IST can be found in the Training Curriculum Packet.

Briefly, the ability of each participants skill level for eleven items was evaluated at the beginning and the end of the workshop. The difference in perceived level change was calculated using all participants who felt they had skill level 4 or 5 at the beginning to those who felt they had that level

at the end of the workshop. For all but two of the eleven skills listed, at least 20% or more of the participants felt they had increased their skill level. The two skills regarding the data collection process day, where the program had changed, had the least amount of perceived increase.

From the variety of responses of which activities of the IST were found to be most useful, almost all activities of the workshop were useful to someone. The highest ranking activities were the field trip, growth monitoring model, plan of action, and recuperation strategies. Surveys and causes of malnutrition also received comment.

The least useful activities expressed where the large group activities, activities Monday through Thursday, growth monitoring activities and recuperation strategies. This contradiction from the first response can be explained by the lab technicians and a couple of nurse volunteers who found many of the workshop activities not relevant to their work.

The summary of the strengths and weakness of the trainers can be found on the Summary sheet and is self explanatory.
(Questions 4-7)

RECOMMENDATIONS FOR FUTURE IST'S

A small number of participants wanted future IST's on recuperation diets at the rural community level; education techniques; seminars for health agents working in the field; seminars (general); and seminars on the GM model for field personnel. They would like to see future trainings be five day maximum or have a half day rest; have field trips near the beginning of the IST; adapt questionnaires to Niger (and documents, if possible); have sessions in English (response from PCV's); and have seminars related only to the specific needs of the PCV's (response from PCV's).

One person noted that the trainers should have had a more in-depth knowledge of the work of each participant in the workshop. Time permitting, it would have been useful for the trainers to observe a PCV and their counterpart in the field prior to the training.

Overall, the trainers felt the workshop went very well, and the informal feedback from most participants was positive. The workshop was full and free time could have been scheduled if had the trainers had more time to better organize the sessions. The large group discussions did not go as well as small group discussions mainly because of the differences in french language abilities of the volunteers. The trainers regreted that the original presentation by Jim Setzer was cancelled and felt this important information could have been better covered, had they had earlier notice. The trainers also noted that the PCV's had a general attitude of impatience partially due to language differences and partially due to their perceptions of what the workshop should have been (more specifically for their personal and emotional needs) and what it was.

IST RECOMENDATIONS

The following recommendations are made based on the experiences of the two trainers working in Niger, in preparation, conduction and follow-up of this six day IST in nutrition. These recommendations should serve for future IST's as well.

Preparation

- This is a strong recommendation for in-country preparation time of a five or six day IST to be at least 10 working days.
Rationale - When working with a co-trainer, the course outline needs to be finalized, materials translated and/or adapted to the country, photocopies and handouts produced, logistics arranged - especially if there is to be a field activity, meetings with officials, site visits to PCV's, etc., in addition to specialized co-trainer training which may need to take place. One must also consider that the co-trainer may not be released to work full time during the prep days and schedules therefore need to be flexible.
- Have a prepared course outline and resource materials before arriving in-country, even if there is a need for modification and finalization.
Rationale - It facilitates the work of both the trainer and co-trainer to have a 'model' to discuss. In addition, frequently, there is a lack of appropriate materials and resources in country, which can be prepared in advance by the trainer.
- Materials to be translated should be edited in-country by a native speaker, or translated in-country, if possible.
Rationale - Often times country-specific words exist for certain terms. It is best to have the most appropriate translation for most effective use of documents.
- Trainer(s) should preferably visit a PCV site and/or HCN at work or have an 'informant' (PCV and HCN) come to the city where the preparation of the IST is taking place.
Rationale - It is deemed essential that an outside trainer and co-trainer who may have little exposure to the work of the IST participants know what the problems and issues are, before finalizing the course outline.
- Know the language capacity of the PCV's and the HCN's before the onset of the IST.
Rationale - Trainers can adapt materials and lectures to suit the language skills of the participants.
- Focus training to one or two specific topics and overall objectives.
Rationale - Programs which are too full are tiring and some valuable points may be lost amidst the other material. Time constraints and participant needs for free time are also important to consider.
- Trainers and participants should be informed of who will be attending the IST and what are the overall training objectives in advance of the course.

Rationale - To maximize the benefits and skills to be gained by the participants, and to maximize the IST design by the trainers, such that the materials and activities planned optimize the skills and knowledge of all participants.

- If possible, have PCV participants at similar stages/times of their posts attend the IST.

Rationale - Where there is too much diversity in language skills, experience levels, personal and emotional needs, and posts types (such as nutritionists, nurses, and lab technicians), it becomes extremely difficult for the trainer(s) to address the needs of everyone in one specific IST. Hence satisfaction and skills learning may be compromised for some participants.

- Schedule in one day or a half day of free time during a week long IST.

Rationale - Time is needed to absorb course content, relax with other participants, and discuss other non-IST topics - such as Post-reports, SPA funds projects, personal problems, etc.

Delivery

- It is strongly recommended that the APCD coordinating the training attend the IST and be available to the PCV's and HCN's during the workshop.

Rationale - During this IST, M. Issa was an indispensable resource and key person. He mediated differences between trainer and co-trainer, PCV's and HCN's, knew all the participants, was there to answer questions posed by PCV's regarding their work (which the trainers could not answer), provide feedback to everyone, and assist with all logistics. He was also able to evaluate the trainer and was a source of continuity regarding other IST's, pre-service training, and follow-up activities. His participation in the workshop was also greatly valued as he had insights unique from all other participants.

- It is recommended that each IST integrate field activities as much as possible. Before scheduling a field activity, the trainer(s) should know their objective for the field activity - ie., is it to generate information for the bases of the IST work sessions, or to summarize learning and make plans of actions, recommendations, follow-up activities, etc.

Rationale - Field activities give the participants a chance to examine real situations and work on solutions to the problems identified. Often times courses can be too theoretical and sterile, especially if a trainer is not familiar with the country and/or participant's problems.

- Utilize small working groups as much as possible.

Rationale - To maximize knowledge transfer and skills learning of the participants, small groups are an excellent avenue. In addition, where language is a difficulty with participants, small groups are less intimidating.

- Integrate activities which enhance understanding and appreciation of cultural differences. (Peace Corps ICE resources, the PC-CCCD Training Manual, and 'From the Field' - World Neighbors have useful activities). These activities need to be intergrated during pre-service training as well.

Rationale - It has been found that PCV's lack this type of skills development and sensitivity in pre-service training and after being at post for some time. A general attitude of impatience by PCV's was noted at this IST, partially due to attitudes stemming from lack on perception of Peace Corps philosophy (development and skills/knowledge exchange).

Follow - Up

- It is stongly recommended that the trainers have a minimum of three days to finalize IST activities before departing.
Rationale - One of the most important aspects of an IST is to assure follow-up activities are concrete and finalized. There are numerous components to finalizing IST activities which include: typing of documents and/or information produced during the workshop (such as flip charts, plans of actions, small group work, etc.), debriefing and report writing with co-trainer(s) and with Peace Corps staff, arranging follow-up packets to be sent to participants, discussion and arrangement of all other follow-up activities to assure skills gained and work accomplished during the IST is being incorporated into field work.
- A set of recommendations were drawn up during the IST for the Minister of Health. A subcommitte was formed to formalize and present these recommendations. It is recommended that a status report of the finalized version of recommendations and what plans to implement them are followed-up by M. Issa, the co-trainer - Mr. Hamani, and the visiting consultant, J. Sessy.
- Each of three small groups drew up concrete Plans of Action for improving nutritional status in their community. M. Issa and J. Sessy should inquire as to the steps thus far taken on behalf of the PCV's and HCN's, and note any preliminary evaluations of progress. (This could be in the form of a questionnaire, status report and/or site visit).
- There was discussed the possibility of health PCV's working with the Helen Keller International Blindness Prevention Project. Follow-up activities include contact and discussions with Dr. Ahmed Zayan (HKI), M. Issa, and the Ministry of Health.
- Aspects of the Growth Monitoring training (lecture, field day, and small group work) as specified in the module on Growth Monitoring developed by M.F. Morris be integrated into the Pre-Service Training along with additional sessions on educational techniques and cultural appreciation.

NUTRITION COURSE OUTLINE
PEACE CORPE IST (Récyclage) ZINDER
APRIL 20 - 25, 1987

DAY 1
(9:00 - 12:30)

Introduction(s) by Mamadou Issa and DDS Zinder

Introductions of trainers and participants
(Icebreaker - exercise)

Pretest and Skills assessment

Activity - drawing up time charts of
your activities - use of time
(Brief discussion by trainers)
Objectives of the Workshop

Lunch
(12:30 - 3:30)

(3:30 - 6:30)

I. Aspects of Protein Calorie Malnutrition (PCM)

A. Introduction to Malnutrition - Definition

Activity Group divide into 3 groups of 8 or 9 persons
and agree upon a definition for malnutrition. (Write it)
Then identify all causes and list. Select one person
to give definition and causes.

B. Nutrition Terminology and Nutrition Standards

- Nutrition/health terminology (reference-handout)
- Discussion of unclear points in classification of malnutrition

DAY 2
(8:00 - 12:30)

II. Management of PCM

A.

Activity: divide into three groups, each taking one
phase and discuss main points from outline.

- B. Each group will present what seems to be the most
effective strategy, each stage will be discussed in
more detail. Supporting references will be distributed

Phase I.

First referral and what to record (observe)

Detecting Nutritional Status

Physical Signs

Treatment during the acute phase

Phase II.

Treatment after the acute phase has passed

Phase III.

Education of the mother

Community follow-up

24.

- Who has what responsibility for the communities health?
- What are the responsibilities of the PMI coordinator?
- Responsible to PMI's?
- Chef de CM?
- PDS?
- PMI nurse?
- Aide sociale (social worker)?
- PCV?
- Who else in the local community should be involved with health and what roles do they play
 - Village leaders?
 - Teachers?
 - Traditional healers?
 - Others?

(3:30 - 6:30)

C. VITAMIN A DEFICIENCY PCM

- Introduction of main points
- Clinical Slide presentation and discussion
- Handouts - suggested guidelines for prevention and treatment - WHO
 - visuals for PMI (2)
- Discuss prevention measures and foods high in Vitamin A.

D. ACTIVITY - Good and Bad Interview Techniques (mothers and health assistant)

DAY 3
(8:00 - 12:30)

A. UNDERSTANDING Each Others Roles (Health care workers and caretakers)

- ACTIVITY - handout photographs of people, select one person in photo and "get into their shoes". Then give short story of their life to participants (discussion 2-5 min)

B. Growth Monitoring Program

- I. Importance of a Growth Monitoring Program
 - Definition - What is GM?
 - Why monitor growth? (large group)
 - What are the other benefits?
 - What are the common problems?

- II. Presentation of GM Conceptual Model (each square filled in by participants)
 - Review of detailed model

- III. Growth Monitoring Thesaurus (large and small group discussions of who is

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IV. Activity: Factors that motivate you (personnel) in the work place and mothers (to change behavior) in the community. (small group discussions and presentations)

DAY 4
(8:00 - 12:30)

I. Data Collection Process

A. Introduction

B. Activity: Determining specific causes of malnutrition in the communities where you work; identifying ease to change, and effective educational techniques to change maternal behavior.
(small group work and large group presentations)

(5:00 - 6:30)

II. Presentation by Mr. Zeini Samber, DDS Zinder, on Family Planning and Sex Education Program, Department of Zinder

III. Overview and Objectives of Field Day Activities

Distribution of packets, review of materials, team instructions and questions

DAY 5

FIELD ACTIVITIES AND REPORTS

Group will be divided into four teams

- o Team 1 - will observe a PMI operation, evaluate workers and interview mothers after they've received services.
- o Team 2 - will divide up in groups of 2 or 3 and visit different mothers houses. They will observe mothers morning tasks and record then after observing preparation feeding for lunch will ask her what activities (and time spent) she does for the rest of the day till bedtime.
- o Team 3 - will conduct KAP surveys dividing into groups of 2 or 3 and working at diarrheal feeding practices and infant feeding practices at different houses.

- o Team 4 - will conduct a community food and health practices survey interviewing key community informants. These activities will take place in AM, after lunch they will stay in their 4 teams and analyze their data collected; prioritize it; evaluate it; tabulate it; and finally make an action plan to reduce malnutrition in the community based on previous days activities and information and the information they've collected today.

One team member will be selected to present their information and plans the next day (guidelines and action sheet handouts)

DAY 6

I. FIELD ACTIVITY REPORTS ACTION PLANS FOLLOW-UP ACTIVITIES

After presentation of reports, participants will add points (or discuss differing points of information found) and a "cross-fertilization" (exchange of ideas, problems) will take place.

Are these plans realistic, feasible?
Who should be in charge of following up on the plans?
M. Issa's role, PCV's, MOH's, Community's

II. TIME CHART REEVALUATION ACTIVITY

Each participant will now take their old time chart and draw up a new one after learning from this IST. They will prioritize where they think their time should be used to most effectively reduce malnutrition in the community and promote child survival.

III. FINAL EVALUATIONS

Skills Assessment
Evaluation of Trainers and Workshop
Recommendations (from stage to MOH)

IV. ADDITIONAL FOLLOW-UP STEPS

More IST's
Better pre-service training
Field visits, etc

SUMMARY OF FINAL EVALUATION OF NUTRITION IST
ZINDER, NIGER April 20-26, 1987

- List the activities in the workshop which were most useful to you.
 - field trip (14)
 - causes of malnutr. (3)
 - plan of action (6)
 - recuperation strategies + vit A material (6)
 - group work (8)
 - growth monitoring model (8)
 - surveys (3)

(1) - {
nutr educ. of mothers
problem identification
health educ. (general)
family planning health
promotion of health serv.
getting admin. to face prob.
recommendations
- List the activities in the workshop which were least useful to you
 - large group presentations (3)
 - manufactures Non-ethus (3)
 - growth monitoring activities (3)
 - recuperation strategies (2)
 - definition of malnutr. (2)
 - accuses (2)

(1) - {
using human resources
field trips + plan of action
growth monitoring program
- What stands out as the most meaningful learning for you?
 - growth monitoring model + program (10)
 - recuperation strategies (3)
 - plan of action (3)
 - analyse data (3)
 - planning surveys + interpreting (2)

(1) - {
need to evaluate work
reconsidering time use +
new techniques
communicating nutrition ed.
designing a nutr. project
field trip / concrete ideas
seeing admin. want to change
- What do you think were the particular strengths of the primary facilitator (Mrs. Ferris-Morris)?
 - knows subject/field well (7)
 - good organizational skills + leadership (5)
 - goal group skills (4)
 - approachable + cares about nutr in 3rd world (5)
 - listens, asks questions (2)
 - gets ideas going (2)

(1) - {
dynamic
explains well
ability to change into
into better action
knowledge of data into
model for ERM done
- Do you have any feedback or specific suggestions which might help the primary facilitator in doing a better job next time?
 - better knowledge of P.C.U.'s job in field (2)
 - of PMI (M + DEB work) (1)
 - adapt documents specifically to Niger (6)
 - discussions at a faster pace (6)
 - organize work of co-trainers better (2)
 - improve level of french (4)

(1) - {
speak louder
estab. program of HC
centralize the program
↑ mngt skills
learn customs of the
some material to adapt
- theoretical
- What do you think were the particular strengths of the co-facilitator (Mr. Hamani)?
 - clear explanations (7)
 - organization skills + leadership skills (5)
 - good arbitrator (3)
 - Synthesis ideas in group discussions (2)

(1) - {
well informed
disciplines
dynamic
- Do you have any feedback or specific suggestions which might help the co-facilitator in doing a better job next time?
 - keep faster pace (2)
 - knew needs of group + problems that exist (2)
 - better role w/ co-trainers (2)
 - follow hours of the programme (2)

(1) - {
speak louder
spoke too simply
be more present

8. What future IST trainings (stages) would you like to have after attending this stage?

- recipitation diets at community level (3)
- education techniques (3)
- Seminars for health agents in the field (3)
- stages (general) (3)
- Use 6M model for field personnel (2)
- Surveys - formulating, → data → evaluate
interpret
- Changing personal attitudes
- family planning
- Strategies for sensibilization of community

SPECIFIC RECOMMENDATIONS FOR IMPROVING THIS STAGE (IST):

- 5 day maximum or give 1/2 day rest (7)
- have field trips moved up a few days (5)
- adapt questionnaires to N'gèr & better translation of documents (5)
- Wanted English sessions (3)
- (PCU) misunderstood purpose / felt stage was for MCH not PCU's (5)
(wanted to address more objectives of PCU's)
- (1) {
 - do recipitation strategies at village level
 - always do small groups
 - give more time for discussing the plan of action
 - little free time to exchange experiences + problems with each other work
 - French language
 - increase # of days
 - trainers get to know more about PCU's before stage

SOMMAIRE

EVALUATION D'HABILETES

Indiquez l'estimation de votre niveau d'aptitude après chaque activité ainsi que la priorité constatée en apprenant davantage sur cette aptitude au cours du présent IST.

Estimation d'Habilités 1 = Capacité réduite 5 = Hautement Expérimenté
 Estimation Prioritaire 1 = Haute Priorité 5 = Priorité Moindre

		AU DEBUT	AU FIN (CHANG
	(Haute niveau - 4&5)	Niveau d'Habilité	Niveau d'habileté
**	1. Evalue le statut alimentaire des enfants	23%	52% (29)
**	2. Identifie les facteurs conduisant à la malnutrition	48%	76% (28)
***	3. Réussit, de manière clinique, à bien manier les patients au PMI	29%	62% (33)
**	4. Détecte et traite avec succès la MEP (Malnutrition en Energie Protéique)	29%	57% (28)
**	5. Possède une compréhension de la surveillance de croissance et entreprend des mensurations anthropométriques précises	43%	60% (17)
- -	6. Réunit et interprète les données PMI et/ou les visites à domicile	37%	42% (05)
**	7. Prépare et exécute des enquêtes solides sur le plan statistique	22%	47% (25)
- -	8. Conçoit des plans d'action efficaces basés sur l'analyse des données	28%	37% (09)
* *	9. Communique une éducation nutritive efficace aux mères ou aux gardiennes d'enfants	24%	50% (26)
**	10. Encourage un changement de conduite positif chez ceux qui pratiquent des conduites de santé nocives	25%	50% (25)
**	11. Utilise les ressources humaines et les ressources en matériel disponibles afin d'élever la notion et le niveau de santé des communautés	22%	42% (20)

** niveau augmentation significiant
 - niveau augmentation insignifiant

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EVALUATION D'HABILETES

Indiquez l'estimation de votre niveau d'aptitude après chaque activité ainsi que la priorité constatée en apprenant davantage sur cette aptitude au cours du présent IST.

Estimation d'Habilités 1 = Capacité réduite 5 = Hautement Expérimenté
 Estimation Prioritaire 1 = Haute Priorité 5 = Priorité Moindre

		<i>Groupe - générale</i>	
		Niveau d'Habilitété	Priorité
1.	Évalue le statut alimentaire des enfants	<u>bas</u>	<u>haute</u>
2.	Identifie les facteurs conduisant à la malnutrition	<u>moyen- haute</u>	<u>haute</u>
3.	Réussit, de manière clinique, à bien manier les patients au PMI	<u>bas</u>	<u>haute</u>
4.	Détecte et traite avec succès la MEP (Malnutrition en Energie Protéique)	<u>moyen</u>	<u>haute</u>
5.	Possède une compréhension de la surveillance de croissance et entreprend des mensurations anthropométriques précises	<u>moyen- haute</u>	<u>égal</u>
6.	Réunit et interprète les données PMI et/ou les visites à domicile	<u>égal</u>	<u>moyen- haute</u>
7.	Prépare et exécute des enquêtes solides sur le plan statistique	<u>bas</u>	<u>bas- moyen</u>
8.	Conçoit des plans d'action efficaces basés sur l'analyse des données	<u>égal</u>	<u>haute</u>
9.	Communique une éducation nutritive efficace aux mères ou aux gardiennes d'enfants	<u>moyen</u>	<u>haute</u>
10.	Encourage un changement de conduite positif chez ceux qui pratiquent des conduites de santé nocives	<u>moyen</u>	<u>haute</u>
11.	Utilise les ressources humaines et les ressources en matériel disponibles afin d'élever la notion et le niveau de santé des communautés	<u>moyen</u>	<u>haute</u>

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** niveau augmentation significatif
 - niveau augmentation insignifiant

PEACE CORPS



April 16, 1987

MEMORANDUM

TO: Douglas Frago, Country Director/Guatemala
Jill Carty, APCD/Guatemala

THROUGH: Mary Killeen Smith, Director/OTAPS
Jim Ekstrom, Director of Program Support/OTAPS

FROM: Peggy Meades, *P. Meades* Nutrition Specialist/OTAPS

SUBJECT: Peace Corps Guatemala Child Survival Conference and Growth Monitoring IST

We would like to express our appreciation to both you and your staff for your willingness to take on and successfully implement the Child Survival Conference and Growth Monitoring IST. We were particularly pleased with the active role of the MOH in the conference, as partners in designing and conducting the IST, the collaboration with PVOs and the use of in-country technical resources such as INCAP.

It is always difficult to initiate new models for Government collaboration and new training directions. We fully support your approach and feel it will strengthen both PCH/MOH programs. Jill Carty's recent cable citing the MOH follow-up to the IST, ie; site visits to observe growth monitoring, development of a growth monitoring manual and interest in using PCVs as trainers in MOH/CARE growth monitoring training, are certainly an excellent testimonial to the impact of the IST.

In addition to the enclosed original report, translated from Spanish, we asked the consultant, Judith Ann McNulty, to provide us with an evaluation of the training process and a list of recommendations in regards to conducting the IST with PC/HCN training teams. This report is also enclosed. We would be most interested in having any additional information on insights on integrating HCNs into the PC training process and follow-up on the IST.

Again thank you for the cooperation and willingness to experiment. Look forward to your next steps.

cc: Robert Clay, Health Advisor, USAID
John Grant
Ike Hatchimonji, Agricultural Officer, USAID
Jose Velasco, Regional Director/IA
Katie Wheatley, Country Desk Officer/Guatemala
Judith Ann McNulty

806 Connecticut Ave., N.W. Washington, D.C. 20526

Sallie 4/17
Mike NL
PC activities
CS and G.M.
An example of
future directions
discussed in
Peggy's memo.
Jke

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FINAL REPORT

Staff Conference - Child Survival
and
Growth Monitoring Workshop

Guatemala

February/March, 1987

Judiann McNulty, Consultant

STAFF CONFERENCE

The overall goal of the Staff Conference was to promote cooperation between private voluntary organizations, international agencies, and the Ministry of Health with particular regard to the Child Survival Program. Peace Corps took the initiative in promoting, planning, and executing the conference. Their role during the conference itself was that of facilitator. They were assisted in the planning and execution stages by a representative from the Ministry of Health. The Nutrition Institute of Central America and Panama (INCAP) became a sponsor in the final stages and provided a representative to assist with planning the agenda and the group work exercise.

The conference was held in Antigua Guatemala on February 26 and 27, 1987. The pleasant accommodations in the chosen hotel with its new conference facilities provided an element of added significance.

The Ministry of Health and INCAP provided the lists of PVO'S and international agencies to be invited. Of the 33 originally invited, 18 attended and substitutions were made for others bringing the attendance from that sector to 21. Fourteen officials from the Ministry of Health and seven persons from Peace Corps including both staff and volunteers also attended. A list of participants is attached.

The agenda for the first day included presentations by MOH officials on the need for a Child Survival program in Guatemala and basic data on specific components including immunizations and growth monitoring. A panel of the major international agencies present (CARE, PAHO, UNPFA, AID, and INCAP) explained their role in Guatemala's child survival program and related efforts.

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On the second day, conference participants were divided into groups by geographic region or area of specialty and asked to suggest ways in which they could assist the MOH in various aspects of Child Survival. In the second session of the day, after briefly summarizing the activities and objectives of their particular agency, they were asked to discuss ways in which they might help each other to attain more efficiency in their efforts with less duplication. At the end of these sessions, each working group presented their suggestions and recommendations to the MOH.

An over-riding concern was the lack of communication with the Ministry. Another concensus was that the problems in cooperating are most frequently encountered at the local level. Discrepancies in programming activities within the Ministry itself were pointed out. Lack of flexibility in accepting PVO offers of cooperation was another issue. Overall, the PVO's indicated a strong willingness to cooperate with the MOH where possible.

The Ministry responded by emphasizing the relatively new role of a coordinator with PVO's. That individual, Caesar Aquilar, explained the need for establishing more formalized agreements between the MOH and PVO's which would enable the Ministry to reciprocate any cooperation by arranging for the importation of vehicles and aquisition of visas of foreign personnel. The coordinator expressed a desire for direct contact with each PVO and an interest in gaining a better understanding of their objectives and programs. The MOH is very interested in learning from the experience of the PVO's and sharing ideas.

A suggestion was made to form an advisory committee made up of PVO representatives, but this move encountered resistance from the Ministry and the idea was dropped. The MOH did not make any committment as to how they intend to follow-up the conference.

RECOMMENDATIONS:

1. As suggested by the representative of PAHO, Peace Corps could encourage the MOH coordinator of PVO s to publish a regular newsletter. This would not only establish tangible communication, but would also encourage the Ministry to finalize plans and dates for events such as vaccination campaigns well in advance.
2. Since most of the PVO s felt that the problems in cooperation arise at the local level, the Ministry of Health and Peace Corps could follow-up now by arranging local level meeting involving not only MOH and PVO field staff but also community officials. Misunderstanding and doubts could be talked out and more concrete plans for cooperation made at that level.
3. If a consultant is deemed necessary for any future staff conferences, he/she should be sent two to three weeks in advance to participate in the actual planning and to carry out the arrangements. This would be a more significant role and would minimize problems of transition from the APCD.
4. An alternative to sending a consultant would be to form a PVO - PCV committee to share the planning and preparations. A two-member PCV team was activated three days prior to the conference. Besides providing a learning experience for them and distributing responsibilities, their assistance was invaluable.
5. The efforts of the MOH-assigned co-planner and the INCAP person who assisted in the final phase of planning were exemplary. Host country nationals such as these individuals should be included in planning any future staff conferences.
6. The APCD involved in this project commented that pre-planning activities were initiated in November and by January first, three key MOH officials had been changed resulting in a necessary repetition in many efforts. The month or six weeks prior to the conference would be the most effective planning time for such an event.

SEMINAR - WORKSHOP ON Child Survival

Antigua, Guatemala

26-27 February 1987

AGENDA

Thursday 26 February

<u>TIME</u>	<u>ACTIVITY</u>
08:00-09:00	Inscription
09:00-09:30	Coffee
10:00-10:15	Introduction of participants
10:15-10:30	Objectives and methodology of seminar Licda. Margarita de Alonzo, Maternal-Infant Dept.
10:30-11:15	Conference: "The need for a child - survival plan in Guatemala" Dr. Gonzalo Saenz Aguilar, Chief Executive Unit of Applicable Programs
11:15-12:00	Conference: "The importance of and components of the child-survival plan" Dr. Juan Jose Hernandez, Coordinator Child -Survival and Chief of the Maternal-Infant Dept.
12:00-12:45	Conference: "Growth Monitoring" Lic. Luis Ariza, Department of Nutrition
12:45-14:00	Lunch
14:00-14:45	Conference "Description of Immunization Program" Dr. Otto Zeissig, Chief of the Division of Vigilance and Control of Diseases

14:45-15:30

Conference:

"The need for a intersectorial coordination for the national plan of the Child survival"

Lic. Cesar del Aguila, Chief
Unidad Coordinadora de Instituciones no Gubernamentales
(Coordination Unit of Non-Governmental Institutions)

Prof. Hector Barrios, Extracurricular Education

16:16-16:30

Recess

16:30-17:30

Panel:

PAHO - Dr. Edilberto Antezana
AID - Lcda. Lilliana Ayalde
CARE - Lcda. Heather Nesbitt
INCAP - Dr. Adan Montes

"Support from the External Cooperative Agency to the National Plan for Infant Survival"

Friday 27 February

08:00-08:30

Group Organization

08:30-10:00

Working Group I

"Coordination of the Non-governmental Organizations with the Ministry of Public Health

10:00-10:15

Recess

10:15-12:30

Working Group II

"Coordination between the Non-governmental Organizations"

12:30-14:00

Lunch

14:00-15:30

Conclusions and recommendations, comments, suggestions
Dr. Juan Jose Arroyo Hernandez, Chief Dept. Maternal-Infant

15:30-15:45

Establishment of a contract coordination
Lic. Cesar del Aguila, Chief, Coordination Unit of the Non-Governmental Institutions

15:45-16:30

Closure

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LISTA DE PARTICIPANTES EN CONFERENCIA DE
SOBREVIVENCIA INFANTIL

Febrero 26-27, 1987

Antigua, Guatemala

MINISTERIO DE SALUD PUBLICA Y ASISTENCIA SOCIAL

1. Dr. Pablo Werner Ramírez,
Viceministro de Salud Pca. y Asistencia Social
Vice-minister of Public Health and Social Assistance
2. Dr. Byron Sisniega,
Asesor de la Dirección Gral. de Servicios de Salud
Advisor of the General Direction of Health services.
3. Dr. Otto Zeissig Bocanegra,
Jefe División de Vigilancia y Control de Enfermedades
Division Chief of Vigilence and Control of Diseases
4. Dr. Juan José Arroyo,
Coordinador del Programa Supervivencia Infantil
Coordinator of Child Survival Program
5. Dr. Eduardo Tejada de la Vega,
Jefe Regional
Regional Chief
6. Sr. César del Aguila,
Jefe Unidad Ejecutora de Instituciones No Gubernamentales
Chief of Executive Unit of Non-government Institutions (PVO's)
7. Dr. Gonzalo Sáenz Aguilar,
Jefe Unidad Ejecutora de Programas Aplicativos
Chief of the Executive Unit of Applied Programs
8. Dr. Julio Cabrera,
Jefe Unidad de Programas Específicos
Chief of the Unit of Specific Programs
9. Licda. Cristina Martínez, Nutritionist
División de Recursos Humanos
Division of Human Resources
10. Licda. Margarita de Alonzo, Nutritionist
Programa Supervivencia Infantil
Child Survival Program
11. Lic. Luis Ariza Solís, Nutritionist
Depto. de Nutrición
Nutrition Department
12. Dr. Raúl Rosemberg,
Unidad de Planificación Familiar, Depto. Materno Infantil
Family Planning Unit, Maternal-Child Health Department
13. Dr. Enrique Molina
14. T.S. Nelly Méndez,
Depto. Materno Infantil
Department of Maternal-Child Health

NACIONES UNIDAS (UNFPA)

15. Srita. Lucrecia Alegría

FACULTAD DE MEDICINA - UNIVERSIDAD DE SAN CARLOS DE GUATEMALA

Faculty of Medicine - University of San Carlos of Guatemala

16. Dr Ernesto Velásquez,
Centro de Investigaciones de Ciencias de la Salud17. Dr. Mario Figueroa Alvarez,
Coordinador del Programa Materno Infantil, Fase IIIA I D18. Licda. Liliana Ayalde,
Jefe de la Oficina de Desarrollo de Recursos Humanos
Director of the Office for Development of Human ResourcesINCAP

19. Dr. Adán Montes

VISION MUNDIAL INTERNACIONAL - World Vision International20. Licda. Emma Domínguez,
Técnico en Educación para la Salud

21. Licda. Mirna Acevedo

22. Sr. Hugo Arana

OPS/OMS - PanAmerican Health Organization/World Health Organization

23. Dr. Edilberto Antezana, Oficial Médico

CARE

24. Lic. Edward Brand, Director

25. Licda. Heather Nesbitt, Jefe del Programa de Alimentos

26. Licda. Donna Frago, Coordinadora Proyecto de Monitoreo y Supervisión

PROYECTO HOPE/QUETZALTENANGO - Project HOPE

27. Lic. Clifford Sanders

CLUB DE LEONES GUATEMALA, C.A. - Lions Club of Guatemala

28. Dr. Carlos Umaña Rodríguez

CHRISTIAN CHILDREN'S FUND

29. Dr. Augusto Contreras Argueta, Encargado Programa Salud y Nutrición

MEDICOS SIN FRONTERAS - SUIZA - Medics Sans Frontiers -Switzerland

30. Sr. Daniel Listir

MEDICOS SIN FRONTERAS - FRANCIA Medics Sans Frontiers - France

31. Sr. Christopher Rondeleux

32. Sra. Aurelia Rondeleux

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APROFAM - (National Family Planning Institute)

33. Dr. Carlos Fernando Contreras

PATRONATO PRO-NUTRICION INFANTIL - Foundation for Infant Nutrition

34. T.S. Arlina de Sánchez

ASECSA/CHIMALTENANGO - Association of Community Health Services

35. Sr. Florentín Tejaxun

HOSPITAL SANTIAGUITO/SOLOLA - Project Concern International

36. Srita. Betsy Alexander

FUNDACION PEDIATRICA GUATEMALTECA - Association of Guatemalan Pediatricians

37. Sra. Rebeca de Montalván

38. Arquitecto Nery Hernández

MIRANDA ASOCIADOS, S.A. - Peace Corps Pre-training39. Alexander Haartz,
Entrenador TécnicoLA LIGA DE LA LECHE - The Leche League

40. Maryanne Stone

41. Robin Archer

DECORACIONES JAUZEL (Factory that is making the Nabarro graphs for MOH)

42. Sr. Salvador Hernández

CUERPO DE PAZ/GUATEMALA - Peace Corps

43. Lic. Howard Lyon, Director Interino

44. Lica. Jill Carty, Directora Programas de Salud

45. Lica. Stacy Sloan, Directora Interina Programa de Salud Comunitaria

46. Cheryl Gutowsky, Nutricionista

47. Cynthia Robillard, Nutricionista

48. Jane King, Nutricionista

49. Licda. Judiann McNulty, Conferencista

INSTITUCIONES INVITADAS QUE NO PARTICIPARON EN EVENTO

1. Facultad de Medicina - Universidad Francisco Marroquín
2. ROCAP
3. UNICEF
4. ASINDES
5. SOCIEDAD PROTECTORA DEL NIÑO - Society of Protection of Children
6. MEDICOS DEL MUNDO - Doctors of the World
7. CLINICA BEHRHORST/CHIMALTENANGO
8. AGROSALUD
9. CDAG (Clínica Médica)
10. Ministerio de Agricultura
11. Médico de Bananera, Izabal

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IN-SERVICE TRAINING ON GROWTH MONITORING

PLANNING

The planning team was made up of three nutritionists from the Ministry of Health and the consultant. The MOH nutritionists named by their respective departments were Luis Ariza from the Nutrition Section, Cristina Martinez from Recursos Humanos, and Margarita de Alonzo from Materno-Infantil. Luis is the only one directly involved in the Ministry's current growth monitoring program, which is being implemented in cooperation with CARE. He is the one who will be responsible for training MOH personnel in growth monitoring.

All three nutritionists received their academic training at INCAP with all successive work experience being in the MOH. Margarita had previously completed teacher's training, and Luis is currently completing his Masters in Nutrition at the University of San Carlos. Assessment of their training experiences and skills was done by interviewing a former co-worker, CARE personnel and two individuals from INCAP who have observed them.

Planning sessions were held in the conference room of the Materno-Infantil office. The team met for an average of six hours on each of five days and also completed assignments at home at night.

On the first day of the planning session, the team defined objectives for their work and for the workshop. They also set a work schedule for themselves and began to review materials. On the second day, four Peace Corps volunteers came at the invitation of the APCD to share their assessment of current growth monitoring activities and training. Each of the PCVs to participate in the workshop submitted a written assessment of their nurse and promotor counterpart's skills in growth monitoring and nutrition education. These were used in lieu of a pre-test.

That afternoon and the following morning, discussion centered around the objectives and merits of the two different methodo-

logies for growth monitoring being espoused by the Ministry of Health. These are weight for age and weight for height using the Nabarro-McNab graph. In an effort to minimize misunderstanding and confusion of children's parents, the team recommended to Materno-Infantil a change in the format and color-coding of the weight for age charts given to the parent. Both CARE and INCAP representatives contributed to these discussions.

On Wednesday afternoon, representatives from the health committee of the village selected to provide field experience for the workshop participants arrived to help in planning that activity. Thursday was devoted to revising the agenda, discussing content, and developing formats for a community diagnosis and interviews of mothers. On Friday, the team met to review lesson plans, discuss teaching methods, and plan final details.

EXECUTION OF IN-SERVICE

The in-service training for growth monitoring and nutrition education was held at a hostel near Antigua Guatemala from March 9 - 12. Eleven Peace Corps volunteers, eleven health promoters, one social worker, one health technician, and seven auxiliary nurses participated. A supervisor from CARE attended and provided valuable input and assistance.

All of the PCV s attending are within a few months of terminating. They were asked to provide on-going evaluation of workshop content, activities, and training methodologies. They were utilized as group leaders, and asked to prepare or participate in specific activities. Two of the volunteers had been put in charge of logistics and detail work the proceeding week and continued as assistants throughout the workshop. Their help was a great asset in carrying out the workshop.

Presentations and group exercises on the first day led the participants to analyze their local diet, discuss the causes and consequences of malnutrition, and to focus on the factors

in the community and within families which lead to malnutrition and poor health. The food systems calendar and a community diagnosis were presented as tools with which to detect these underlying factors in an effort to solve them and hence, prevent malnutrition.

The second day was devoted to a discussion of the objectives of growth monitoring, an explanation of the two methodologies, and interpretation of the data, followed by several hours of practical experience in a nearby day care center.

On Wednesday morning, topics which should be covered in counselling mothers were outlined. These included pre-natal care and nutrition, infant feeding, and utilization of CARE food. Recuperation of malnourished children was briefly discussed. In the afternoon, the entire group was transported to a village where they conducted a community diagnosis, interviewed mothers, and weighed and measured children in their homes.

On the final day, participants were asked to develop plans for implementing a growth monitoring program in their community. This served also as an evaluation of what they had learned in the course. Each participant also completed a formal evaluation of the course. Their comprehension and skills will have to be evaluated over time in their work sites.

FINALIZATION OF TRAINING PLAN

Each morning during the workshop, participants were involved in oral exercises to assess their comprehension of the previous day's content. These evaluations, their formal evaluation, the PCV's on-going comments, and the training team's own assessments were all used as a basis for making a final draft of the proposed training plan. This was completed on the same day the workshop ended while it was still fresh in everyone's mind. A major consideration was to condense the important material

to fit a shorter time frame which would be feasible for training MOH personnel. Another consideration in making the final plan, was adapting methodology to be used in a rural site with limited facilities and equipment. The final plan which is attached may be adopted by CARE and the MOH for their future training in growth monitoring.

RECOMMENDATIONS AND CONCLUSIONS

1. Planning sessions should be held in a quiet place apart from the Direccion General or the Peace Corps Office to avoid interruptions and distractions.
2. No agenda should be written up before the planning/training session. The set time frame and pre-determined content limited flexibility for planning the most effective IST. All of the trainers felt the subject could have been covered in less time.
3. The cooperation and participation of the PCV's in this IST were excellent. Ideally, the volunteers who have more time left in the country would benefit more and would be able to follow-up longer with their promoters and auxillary nurses.
4. For the IST field trip to the village, rental of a microbus would have expediated that activity considerably.
5. CARE, INCAP, and UNICEF could have been more involved in determining training strategies, objectives, and content. This would have necessitated making arrangements far in advance.
6. This IST might have been better planned as an event entirely separate from the staff conference, thus giving the APCD and the consultant a few days prior to the planning session to devote attention to pre-planning activities.

AGENDA

WORKSHOP ON GROWTH MONITORING

Antigua, Guatemala
March 9-12, 1987

TIME	MONDAY 9	RESPONSIBLE PERSON	TUESDAY 10	RESPONSIBLE PERSON	WEDNESDAY 11	RESPONSIBLE PERSON	THURSDAY 12
7:00 8:00	BREAKFAST		BREAKFAST		BREAKFAST		BREAKFAST
8:00	Welcome	Luis Ariza	Growth Monitoring	Luis Ariza	Nutrition of the pregnant mother	Margarita de Alonzo	Elaboration of the Action and presentation of the Plan
9:00	Presentation of the workshop's objectives	Margarita de Alonzo	- Objectives - Growth Chart - Age weight - Data entry		Introduction of solid foods to small children	Cristina Martinez	
9:45	Working groups Exploration of the daily consumption in the communities	Cristina Martinez					
9:45 10:00	RECESS		RECESS		RECESS		RECESS
10:00	Adequate diet Utilization of available foods	Margarita de Alonzo	Data Interpretation	Luis Ariza	Nutrition of child with on risk of malnutrition	Luis Ariza	Recommendations and conclusions Closure (Luis Ariza)
12:30	Improvement of the availability of foods at community and family level	Cristina Martinez	Preparation of the field practice	Manuel Marroquin	Recuperation of the malnourished child Utilization of the foods supply by CARE	Cheryl Cutowaky	
12:30 14:00	LUNCH		LUNCH		LUNCH		LUNCH
14:00	Malnutrition	Cristina Martinez	Practice and standardization in a child care center	Luis Ariza	Community Practice	Luis Ariza and group	
16:00	Health and community problem identification	Margarita de Alonzo					
16:00 16:15	RECESS		RECESS		RECESS		RECESS
16:15	Film: Hungry Angels		Discussion of practice and found situations	Group	Practice summary Socio-drama	Group	
18:00							
19:00	DINNER		DINNER		DINNER		DINNER
20:00	Food lottery	Cheryl Cutowaky Marianne Joyce			Film		

LISTA DE PARTICIPANTES EN TALLER "MONITOREO DE CRECIMIENTO"

MARZO 9-12, 1987

1. Lynne Varney, Centro de Salud, San Raimundo, Guatemala
 - a. Norma Marroquín de Castillo, Trabajadora Social, Centro de Salud, San Raimundo
 - b. Agustín Figueroa Estrada, Promotor de Salud
2. Cynthia Robillard, Centro de Salud, San Pedro Sacatepéquez, Guatemala
 - a. María Dolores Hernández, Auxiliar de Enfermería, Centro de Salud, San Pedro Sacatepéquez
 - b. Gladys García del Cid, Promotora de Salud
3. Jane King, Centro de Salud, San Pedro Ayampuc, Guatemala
 - a. Sofía A. de Muralles, Auxiliar de Enfermería, Aldea La Lagunilla
 - b. Sandra Maribel Muralles Muralles, Promotora de Salud
4. Cheryl Gutowsky, Nueva Chinautla, Guatemala
 - a. Rosa Marina del Cid, Promotora de Salud
 - b. Enriqueta López de Alvarado, Auxiliar de Enfermería, Centro de Salud, Nueva Chinautla, Guatemala
5. Brenda Brown, Centro de Salud, San Juan Sacatepéquez, Guatemala
 - a. Ricardo Pirir, Promotor de Salud
 - b. Carlos Humberto Ceren Yanez, Auxiliar de Enfermería, Puesto de Salud Los Pirires, San Juan Sacatepéquez
6. Ann Heffernan, Centro de Salud, Sansare, El Progreso
 - a. Elva Arcely de Paz, Promotora de Salud
 - b. Rodolfo Méndez Juárez, Técnico en Salud Rural, Centro de Salud, Sansare
7. Mary Feagin, Centro de Salud, San Antonio La Paz, El Progreso
 - a. Hortencia Morales de Osorio, Promotora de Salud
 - b. Sóstenes Morataya, Promotor de Salud
8. Lawrence Pontrelli, Centro de Salud, Morazán, El Progreso
 - a. Janet Estrada, Promotora de Salud
 - b. Victoria Romero Guzmán, Auxiliar de Enfermería, Morazán
9. Richard Backman, Centro de Salud, San Agustín Acasaguastlán, El Progreso
 - a. Sandra Quintana, Auxiliar de Enfermería, Centro de Salud, San Ag. A.
 - b. Lucida Eneida Hernández Lopez, Promotora de Salud
10. Marianne Joyce, Puesto de Salud, Panquix, Totonicapán
 - a. Magdalena García López, Auxiliar de Enfermería, Puesto de Salud, Panquix
 - b. Miguel Rafael Tzoc García, Promotor de Salud

TRAINING PLAN OF GROWTH MONITORING

1. Malnutrition
 - a. Symptoms:
 - Protein-energy malnutrition
 - Anemia
 - b. Consequences:
 - Loss of size (stunting)
 - Slow physical and mental development
2. Adequate diet
 - a. Daily community consumption
 - b. Better reach of food at family and community level
 - c. The diet of pregnant and lactating women
 - d. Introduction of solid food to small children
 - e. Feeding children that are at risk of malnutrition
3. Conditional factors of malnutrition
 - a. Community
 - Environmental health
 - b. Family
 - Economic, social and cultural factors
 - c. Infections, parasites, other diseases, transmittable diseases and immunizations
 - d. Availability of food
 - e. Diagnosis of the nutrition and health situation, utilization of a community study and interviews
4. Human relations between the health worker and patients
5. Growth monitoring
 - a. Objectives
 - b. Anthropometric measurements
 - Growth chart and weight for age
 - Process explanation
 - c. Registration and interpretation of data
 - d. Importance of standardization
6. Field practice

Training Process - Special Report

Situation encountered in Guatemala

1. The Guatemalan Ministry of Health has begun to revamp its health care delivery system gradually instituting a new method called channeling. The child survival program is being introduced simultaneously with this new system. Channeling is a move to get health care personnel out of the clinics and dispensaries to do a major part of their work in preventive health care in the communities and in the people's homes. Each auxiliary nurse, health technician, and health promotor will be assigned from 20 to 50 families for which they are responsible for immunizations, ORT, growth monitoring, health education, family planning, etc. This new system with the child survival components is being introduced very gradually region by region. It had been instituted in approximately one-fifth of the country by March first. Some regions, including the one from which half of the IST participants come, are not stated to begin channeling and hence child survival until June of next year.

2. Growth Monitoring

At present there exist two methods of growth monitoring within the Ministry. The Maternal-Child health department which is charge of the child survival program expects health care personnel to conduct monthly monitoring using weight for age. In this, they are backed by UNICEF. Purpose is to detect child health status. Late last year, the Nutrition Department in cooperation with CARE adopted the Nabarro-McNab Graph (wt for ht) to place in each health clinic. CARE's primary objective was to detect communities with the highest prevalence of malnutrition in order to redistribute allotments of PL-480 food. The Nutrition Department, however, feels that the graph should be used as the monthly growth monitoring method rather than for intermittent checks of population nutrition status. To that end, they have constructed portable Nabarro graphs to be used by health personnel in the channeling system.

Each of the growth monitoring systems comes with separate forms and parent records which will present a burden to the health workers. Seeing that conflicting colors on the parent records would cause confusion, the trainers decided to resolve that by taking the colors off the weight for age chart. Confusion and misunderstanding will still result from the fact that many children who are malnourished by the weight for age standard will appear normal on the Nabarro graph.

The trainers spent approximately one-half of the time allotted for IST preparation discussing this issue, but were forced to leave the two systems in effect because of differing objectives. Each of the three backing institutions consulted, UNICEF, INCAP, and CARE, presented distinct viewpoints based on their perspectives and goals. Representatives of each institution were to meet with the three MOH nutritionists on March 15.

3. Luis, from the MOH Nutrition Department, is responsible for implementation of the Nabarro graphs and for training the MOH personnel in growth monitoring. He has already begun training in the regions where canalization is already in effect. Before the IST, Luis was decidedly opposed to nutrition education. He believes the answer to malnutrition is to provide supplemental food (PL-480). He is interested in developing formulas of these foods for pregnant women and for the recuperation of malnourished children.

The trainers spent approximately ten percent of the total preparation time discussing the value and effectiveness of different nutrition education approaches. While direct evaluation was impossible, Luis did show a positive attitude change on the subject.

MOH Training Plan

The Nutrition Department and CARE have developed a long range plan for training MOH personnel in growth monitoring and use of the Nabarro-McNab graphs. The plan is to begin training with the doctors and graduate nurses who are in charge of area health units. They will be trained together in their region by Luis. After being oriented and trained, each of them will be responsible for training the staff at their particular health unit.

Trainers

Luis Ariza - will be responsible for training the professional staff (Drs. and graduate nurses) for whom he has already worked out a training plan. He has previously done training on diverse levels. While pre-evaluations by a CARE staff member and PCV indicated that he was not effective, nor able to gear his presentations to the level of his audience, during the IST his performance was good to excellent. He saw this experience as a favor to Peace Corps and a way to promote the Nabarro graphs. Follow-up might show positive changes in his training plan/method and incorporation of nutrition education.

Cristina Martinez's primary job is in staff development particularly the development of training manuals. She, more than the others, understood that the objective of this experience was to create a workable training methodology. She enjoyed the

experience and performed well considering her lack of background in teaching methods. She plans to produce a training manual for health promotor training based on this experience.

Margarita Alonzo is not involved in either training nor the production of training materials. She was appointed by her department at P.C.'s request because she is a nutritionist. Furthermore, she was not relieved of her other responsibilities during this time and therefore, was unable to devote her full time and attention. She had taken teacher's training prior to entering nutrition studies at INCAP. This training in Guatemala emphasized formal, non-dynamic type of teaching. During the IST, she felt very much out of her element. She does exhibit outstanding skills in planning and evaluation. She can be expected to proceed with resolving the two-system GM issue even if it means her department giving in.

Planning Process

There were several factors which had to be taken into account when working with the trainers.

1. The group started with a pre-set agenda developed by Luis and the APCD. The other two trainers had also seen the agenda with the idea that it was to be followed. Some activities such as the trip to the day care center had been definitely arranged. The time-frame was fixed and could not be altered.
2. The trainers all came to the planning with considerable experience in training and/or growth monitoring. Because of their educational background, they are strong on theory. Also, being from middle class urban areas, they do not always identify with the needs of the rural poor.
3. The participants in the IST came from very different levels: the PCV's are all college graduates, the auxiliary nurses and technicians have high school-level training or less, and the health promotors ranged from barely literate to high school-level. Furthermore, they are from or work in areas of the country with very distinct ethnic and geographic differences.

Mechanics of Planning/Training

The first activity was to define objectives for our own work. A copy of these objectives is attached. From there, we began to formulate broad outcome objectives for the IST which were eventually reduced to specific behavioral objectives for the content.

Discussion of content in relation to outcome objectives was aided by reviewing several of the resources including the Ferris-Morris Module and also the new INCAP manual on growth monitoring. Particular attention was devoted to the Swazi manual. Final

decisions on content were most influenced by the trainers' weighing of importance and the pre-made agenda, which was modified significantly.

The trainers felt that future training on growth monitoring would be limited to two days due to practical constraints such as the participants' work load, per diem, etc. They also felt that it would be feasible to present the desired content in that amount of time. Therefore, we found ourselves stretching the content to fit the IST time-frame. Also, content had to be juggled around scheduled activities which led to some discontinuity. In trying two different approaches to some nutrition education elements, apparent repetition resulted.

After deciding on content, weighting, and timing, the learning objectives were modified, and lesson plans developed. This work was done individually and then evaluated by the group for teaching methods and strategies.

In these evaluations and in discussing the issue of the two growth monitoring systems, the group or myself used role-playing to better conceptualize misunderstanding which might occur. In the discussions of nutrition education, all trainers shared personal experiences in that area in an attempt to clarify the issue.

Prior to any decisions on content, the trainers had input from PCV s who were later IST participants. These volunteers presented their assessment of their counterparts' background in, and attitude towards nutrition and growth monitoring. All PCV participants had previously completed written assessments in skills in these areas. These assessments' were used in place of a pre-test.

A major learning activity for the trainers was the development of a survey form and an interview questionnaire (for mothers) to be used in carrying out a community diagnosis. This was significant to the trainers in helping them conceptualize the reality of the rural population and factors affecting health and nutrition status. To develop these diagnostic tools, the group first defined objectives and then formulated the questions to elicit the desired information.

A weakness in the planning was lack of development of daily evaluation activities. These were later developed on the spot and, while relatively effective, proved to be time-consuming and uninspiring to the participants. A final evaluation levice was developed and utilized. The emphasis of this evaluation was not so much on methodology as on practicality and comprehension of content. This will prove useful in development of content for a training manual or for future courses.

On the final day of the IST, the trainers drew up an outline of the content which they felt should be included in training for

growth monitoring. This outline and the Swazi manual were taken by Cristina to be used as the basis for developing any future training manual.

Evaluation and Adaptation of Resources

After selecting the references related to the content for the training, I distributed them to the 3 trainers to review over the weekend and first days of the planning. All three read and understand English reasonably well. Only the Ferris-Morris Module was translated to assure clarity.

The Peru manual initially attracted the most attention but discussion determined that it provided no new significant concepts nor methodologies for training. It was decided that it was not directly applicable in Guatemala because of the distinct differences in foods between the two countries.

The Swazi manual was perhaps the most useful and appealing. Not only was the subject matter clearly and logically presented, the illustrations were found to be excellent as teaching tools. Three were given to an artist to enlarge and adapt and were subsequently used in the IST. Cristina retained a photocopy of this manual to use as a model.

All trainers have their own copies of the WHO "The Growth Chart" and consider it indispensable for a reference. We devoted some attention to the section on training health workers. It was also useful in the discussions on the objectives and relative merits of the different anthropometrics.

While I personally found the APHA "Growth Monitoring" booklet interesting and helpful, the trainers found it hard to follow and were unable to glean useful information or techniques. They did, however, use selected portions of the CCCD manual section on health education to back up their ideas and plans.

In the nutrition education discussions with Luis, both "Growth Monitoring and Nutrition Education: Can Unification Mean Survival?" by Griffiths and chapter 5 of Improving the Nutritional Status of Children During the Weaning Period were used by Cristina, Margarita, and myself to explain nutrition education out of the stereotyped, traditional contexts. Concepts from the latter publication were developed and presented in the IST.

The food systems calendar was proposed by Cristina as a method for the course. She had previously used a different version and we were able to successfully combine and adapt the two. The problem we encountered with this activity during the course was that the participants were from such widely differing climatic, and hence, agricultural areas that group work was nearly impossible. Having each participant make his/her own

calendar and bring a growth chart from his/her area would have been a better approach. This activity would be much easier and more effective when the training is done on site in a particular region.

The most used resource was the manual "Physical Anthropometric Studies" which was developed by INCAP in 1986 as a guide to training personnel in growth monitoring. While this is presented in a rather technical fashion, the concepts are all there and the information is specific to Guatemala. The trainers seemed able to adapt the theory to a less-technical level.

EVALUATION

"Inservice Training in Growth Monitoring"- Module by M. Ferris-Morris

1. The content and level are good for IST participants with little or no previous concept or practice in growth monitoring.
2. The approach implies that we are starting from scratch in developing a growth monitoring program, which in this case, we were not. Guatemala has two GM systems with strict format and differing objectives, and a highly structured national plan for implementation and training.
3. I found it was difficult to persuade these trainers, who have highly-technical backgrounds and pre-set ideas about growth monitoring and nutrition education, that the concepts presented in the modules were sufficient for imparting the intended messages. For example, they are/were convinced that it is impossible to talk about nutrition and healthy eating without explaining the Three Basic Food Groups. The Peace Corps volunteers felt the same way as the trainers on this point.
4. In the second module on determining needs of the community and prioritizing problems, this would be most effective and best carried out by the participants in their own communities. The same is true for the fourth module, which builds on the second. Ideally, the first and third modules could be presented in a regional or national training, and then, the second and fourth conducted as "walk-through" exercises once the participants are back in their sites. The best method would be for the trainer to go to them there, but it is possible they could be given instructions to carry out the activities in part two over a weekend, and return with the results to the training center where they could then proceed with the activity of part four based on the data they collected.
5. As far as trainers(host-country) using this Module, I think in most cases it would be adaptable. The only section that seemed hard to follow was part four. One drawback in trainers using the module as it is presented is that they would normally not have access to the resources which are constantly referred to. If this was to be used by host-country trainers, the information would have to be written into the module. The other major weakness in the module being used by them, is that teaching methods are not really outlined in the model. The overall strategies are there, but most trainers would need more ideas of methodology to get the concepts across. Otherwise, they would need much more time to develop and test the appropriate methods themselves.

Overall, the module is good and could be successfully used by any U.S. trainer doing an IST for either PCV's or host-country nationals who have little or no background in growth monitoring. It will need work to make it more useable by host-country trainers with technical backgrounds and some previous training experience.

PEACE CORPS



January 21, 1987

MEMORANDUM

TO: Dr. Kanwar Habib Khan, PCD, Sierra Leone

FROM: Peggy Meices, *PM* Nutrition Specialist, OTAPS

SUBJECT: Mixed Gardening Training Final Report, December 1986
by PSCs Winston Carroo and Dorothy Bell

Enclosed is the final report from the Sierra Leone Mixed Gardening Training. In addition to this report consultant Dorothy Bell has prepared a supplement evaluating the lesson plans with specific suggestions for improvement. The copy of the supplement is available on request from the Health Sector.

cc: Jim Ekstrom, Dir., Program Support, OTAPS
Ike Hatchimonji, Agricultural Officer, AID
Agricultural Sector, OTAPS
Anna West, Country Desk Officer, Sierra Leone,
Programming and Training Unit, Africa Region

BETTER NUTRITION THROUGH MIXED GARDENING

FINAL TRAINING REPORT

SIERRA LEONE

DECEMBER 1 - 9, 1986

Prepared by

Winston Carroo and Dorothy S. Bell

Consultants in Agriculture and Nutrition

December 22, 1986

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INTRODUCTION

A workshop entitled Better Nutrition through Mixed Gardening, was conducted in the Sierra Leone in the village of Songo from December 1st through December 9th, 1986. The program was organized by Peggy Meites in the Office of Training and Program Support at the request of Peace Corps/Sierra Leone. In Sierra Leone the program was managed by Peace Corps APCD Brian Richmond who also attended the workshop as a participant. The purpose of the workshop was to investigate the nutritional well-being of children under 5 years of age, learn about their proper nutrition, and investigate the strategy of mixed gardening for producing foods appropriate to the nutrition of children and families as a whole. In addition, new materials in project planning and evaluation were introduced for the first time.

Twenty Peace Corps Volunteers, Host Country Nationals, and a Peace Corps APCD/Health attended the workshop as participants. The background of the Host Country Nationals was varied from an instructor of Agricultural Science to the Head Chef of a hostel. Ten of the Peace Corps Volunteers were involved in health programs while an eleventh was an education volunteer.

The training was conducted in English. While all the participants had some level of understanding of this language, it is clear that some of the Host Country Nationals would have been more comfortable and understood more if Krio had also been used. However, since all Host Country Nationals participated with a counterpart, support for any language problem was available all the time.

The workshop was successfully conducted and participants and trainers left feeling positive about the work which had been completed. Many of the participants indicated plans for nutrition oriented work, some through gardening, in their future plans. In addition, new understandings of the effectiveness of the workshop and the development of materials took place which the trainers feel will aid in the development of the workshop series as a whole.

TRAINING DESIGN

The training design employed during the workshop was one which emphasized problem solving. It stressed the methods for problem identification, program planning, implementation, monitoring, and evaluation. Although the workshop addressed topics and problems with reference to the community of Songo, using a problem solving approach allows the participants to use the methods and concepts which were demonstrated to be applicable in their own communities, with some modification. In addition, practical sessions were used to demonstrate and practice standard techniques which can be applied to nutrition and gardening projects throughout Sierra Leone.

The content of the workshop sessions included specific gardening and nutrition topics using an integrated approach. This involved the assessment of the family's food needs and designing gardening activities based on these needs given climatic, cultural, economic, and technical constraints. Meeting nutritional needs using locally grown crops was emphasized as a viable and preferred means, as opposed to the introduction of new crops.

The workshop took place during seven and one half working days, with Sunday off. Each day consisted of eight hours of instruction with a total of sixty hours for the entire workshop. These sixty hours of structured classroom, field, and group assignment work were divided as follows:

Introduction and Closure	4	hours
Gardening	26.5	
Nutrition	15	
Program Planning	<u>14.5</u>	
Total	60	hours

The training design, content, and methodologies allowed flexibility in meeting participants needs with individual sessions and within sessions. Sessions on Fruit Tree Production and Watering were added at the request of participants. The Garden Planning exercise also allowed participants a choice of scenarios to work on, providing an opportunity to work on plans for nutritionally oriented mixed gardens for household or institutional use (schools), according to their interests.

The instructional methods used during the workshop included lectures, demonstrations, role plays, field work, and classroom practicals. Group work was stressed over individual projects and all practical, field, and problem solving exercises were done within this context.

The local community was incorporated into the workshop as a training resource. Residents were invited to assist the participants in the construction of the Food Calendar and children at a local school participated as subjects for an exercise in the Weights and Measures session.

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUN.	MONDAY	TUESDAY
8:00	INTRODUCTION: OVERVIEW AND EXPECTATIONS	FIELD PREPARA- TION AND PLANTING	PRINCIPLES OF PLANTING	MIXED GARDENING	COMPOSTING AND MANURE TEA	FREE	FREE	FIELD MAINTENANCE	
9:55									
10:10	AG. OVERVIEW of Sierra Leone		WEIGHTS AND MEASURES	FIELD VISIT TO A MIXED GARDEN	SOIL MANAGE- MENT	INSECT AND DISEASE CONTROL	FREE	GARDEN PLAN PRESEN- TATIONS	PROGRAM PLANNING PRESENTATIONS
12:00									
1:00	NUTRITION OVERVIEW of Sierra Leone	FOOD CALENDAR	CONTINUED	WEANING AND RECOVERY DIETS	PLANT NUTRITION	GARDEN PLAN PREPARATION	FREE	PROGRAM PLANNING, MON- ITORING, AND EVALUATION	
2:55									
3:10	SEED SAVING AND STORAGE AND GERMINATION TEST		FRUIT TREE PRODUCTION		FERTILIZER USE		FREE		
5:00									

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TRAINING SITE AND LOGISTICS

The training site used for this workshop was the Peace Corps Training Center in the village of Songo, located about one hours drive from Freetown. This site has been used by Peace Corps for the past two years for Pre-Service In-Country Training as well as for In-Service Trainings. Songo was once a major commercial center located along the railway. The rail service was discontinued several years ago which greatly reduced business opportunities and stimulated a decline in population through migration. As a result there are many unoccupied buildings which have been renovated for use by Peace Corps in Sierra Leone. Several buildings are used for training activities, all within five minutes walk of one another. Classroom, dining, and office facilities for the workshop were adequate and well prepared.

The logistical arrangements at the training site were excellent. The workshop started 4 days after the agriculture Pre-Service Training so the site was in an active stage and did not require many of the customary start up activities. Housing for the participants was pre-arranged with families in the community, and all meals were taken together at the Peace Corps dining hall.

The field and garden were already established. With the assistance of two volunteers working in Songo, George Zeller and Peter Walker preparation of fields and assembly of tools and materials were done without any delay or difficulty. Most of the tools and materials required for the workshop were already at the site as well as training materials such as chalk, flip charts, and chalkboards.

The community was very responsive to the workshop, not only housing the participants, but in attending the session on the Food Calendar and providing resources for other sessions as well. The community's political fronts were very active while the workshop was in progress which lead to public rioting all night of the third day of the workshop. However, community members were very attentive to the health and well-being of the workshop participants during this difficulty. The only negative impact that this had on the workshop was that few people got any sleep on that night. This affected the vigor with which we were able to tackle work throughout the rest of the workshop.

There were some problems with the pre-planning logistics which impacted negatively on the workshop:

1. No preparations were made in response to cables sent requesting specific materials for the workshop. Eventually all of the materials needed were located, but this took valuable pre-planning time.

2. Meetings with officials at the Ministry of Agriculture were set, however, the Ministry Officials did not attend. It was also not possible to meet with the APCD for Agriculture or the Country Director as they were both busy with other business at the time. Thus it was not possible to establish the Government and/or Peace Corps goals and policies regarding food production. This lack of information is in part responsible for the lack of incorporation of agricultural practices of Sierra Leone as noted by some participants in their evaluation of the workshop.
3. Circulation of information to potential participants was difficult. Lack of response to a letter (October 10) requesting names of persons interested in attending a workshop in Better Nutrition through Mixed Gardening resulted in an attempt to contact people by individual letter and in face to face meetings on the part of APCD Brian Richmond. This delay precluded circulating any additional information about the workshop including a more detailed description of the workshop, and the pre-workshop survey. This delay also precluded developing a profile of the participant skills and expectations.
4. APCD Richmond's concept of the content of the workshop was different from that established in Washington between OTAPS and the trainers. Richmond was working from the ICE Manual T-19, Nutrition Improvement through Mixed Gardening, while the trainers were working from the L.I.F.E up-dated manual and other resources. In addition, the logistics list provided to Richmond indicated necessary resource for subjects not covered in the workshop as defined in Washington such as small animal husbandry and food storage.
5. A schedule for workshop preparation of five days in Freetown and a day trip to Songo was presetned to the trainers. In reality we were only able to spend three hours at the training site due to APCD Richmond's other responsibilities. In retrospect, preparation for the workshop could have been more productive if the week had been spent at the training site and one day spent in Freetown (immediately preceding the workshop). The time spent at the training site during the planning phase (3 hours) was inadequate to assess community resources in terms of existing family gardens and other relevant information.

Miss Silvetta Scott, Head Nutritionist for the Sierra Leone Ministry of Health, was initially responsible for stimulating interest in this workshop through a request for funding to conduct a workshop in nutrition. The content of her proposed workshop followed the concepts of the workshop in Better Nutrition through mixed gardening but the participants were to be officials and professionals. She was invited to participate as a trainer in this workshop

which, however, her contract had not been settled by the time we had arrived. A failure to conclude this negotiation resulted in her withdrawal three days before the workshop began.

Peace Corps Volunteer, Liz Robinson relinquished her role as a participant to help develop and train the nutrition portion of the workshop. The lecture on Weights and Measures was completely handled by Robinson and was well received. Her aid in developing the other sessions and provision of an in-country perspective were invaluable to the running of a successful workshop.

CURRICULUM OVERVIEW AND MODIFICATIONS: GARDENING

There were significant modifications to the curriculum for the gardening component of the workshop. In terms of content, two sessions were added based on requests by the participants. These sessions were Fruit Tree Production and Watering Vegetables. In terms of actual presentation of concepts and techniques, all sessions had to be reworked with considerations for local cultural and environmental factors, and resources available. A brief overview of each of the gardening sessions follows.

1. AGRICULTURAL OVERVIEW OF SIERRA LEONE (1 hour)

The primary objective of this session was to identify the range and relative quantities of agricultural products by region. Participants broke into groups according to the regions from which they came, discussed the assignment, and made presentations to the entire group.

2. SEED SAVING, STORAGE AND GERMINATION TEST (2 hours)

Discussion of the methods and techniques of collection, processing and storage of vegetable seeds on a gardening or small farm scale. Germination tests were done on various varieties of vegetable seeds.

3. FIELD PREPARATION AND PLANTING (4 hours)

This practical field exercise involved the preparation of a raised bed, a flat bed, and a ridge. Cassava and sweet potatoes were planted on the ridge, corn interplanted with cowpeas on the flat bed, and peanuts on the raised bed. A demonstration of transplanting tomato seedlings was also shown.

4. THE PRINCIPLES OF PLANTING (2 hours)

This session entailed a discussion of appropriate types of soil preparation and planting techniques. Different types of beds, double digging, dribble planting, cluster planting, seed bed preparation, and transplanting were discussed. Calculating the amount of seed required for planting specific areas was also done.

5. FRUIT TREE PRODUCTION (2 hours)

This class discussion concerned fruit tree production including the methods of propagation, environmental requirements and care. A budding and grafting demonstration was done.

6. MIXED GARDENING AND FIELD VISIT (4 hours)

In this session, a 3 hour field visit followed a 1 hour discussion of the definition and structure of a mixed garden, and its role in the family food system. The field visit involved mapping the Peace Corps garden.

7. COMPOSTING AND MANURE TEA (2 hours)

This was a group exercise in the field, during which participants constructed a compost pile and made a fertilizer solution from poultry manure.

8. SOIL MANAGEMENT (1 hour)

This session was a classroom discussion involving the different textural types of soils, their characteristics, and suitability for plant growth. Methods and practices of good soil management and conservation were discussed.

9. PLANT NUTRITION AND FERTILIZER USE (2.5 hours)

During this session, the nutrients required by plants and their use were discussed. The use of chemical fertilizers was also discussed. Methods of composting were explained as well as their use and application. Sources of manures and other organic fertilizers and methods of storage were discussed with reference to local availability.

10. INSECT AND DISEASE CONTROL (2 hours)

This session presented the major insect and disease pests common to Sierra Leone. Participants examined live specimens collected just prior to the class. The relationship between visual damage and the feeding habits of insects was illustrated. The major agents of disease and the symptoms were discussed and observed. A brief discussion of chemical methods of prevention and control was conducted. Non chemical methods of control were discussed in depth, as pesticides are not widely available (nor used) in Sierra Leone.

11. WATERING (1 hour)

This session dealt with the water needs of plants as affected by soil, environment, and crop characteristics. Watering techniques and symptoms of water stress were also discussed.

12. **FIELD MAINTENANCE** (2 hours)

Watering, weeding, and replanting (where necessary), of plants planted in earlier sessions.

CURRICULUM OVERVIEW AND MODIFICATIONS: NUTRITION

In this section the nutrition specific sessions will be discussed briefly. A longer description of the materials covered has been prepared and presented to Peggy Meites (Health/ OTAPS) as a supplement to this report.

1. INTRODUCTION TO NUTRITION SESSIONS 15 minutes

An overview of the nutrition materials prepared for the workshop were presented in order that participants might be informed as to the nature of this portion of the workshop. This was also done to provide them with an opportunity to respond to the workshop in terms of meeting their needs for information and skills. The target group, children under five years of age, and the concept of household food production were introduced.

2. NUTRITION OVERVIEW OF SIERRA LEONE 1 hour

In promoting a problem solving approach in the workshop the first step was the identification of nutrition related problems of the target group. Presenting material on nutrition problems in Sierra Leone set the stage for all the other sessions with very country specific problems which could be addressed in solution development exercises. The nutritional well-being of children in Sierra Leone was discussed using statistics and examples from recent studies as well as observations made by participants. Protein energy malnutrition and the forms that it takes were also described and illustrated as they relate to local nutrition problems among children under 5 years of age.

3. THE CYCLE OF MALNUTRITION 1 hour

This session illustrated how individual factors which influence malnutrition may work together to hasten a decline in health where a child is malnourished. A cyclical model was used in this discussion which highlighted the function of low food intake. The process was also discussed where a child is fed a healthy diet. This session was very theoretical and, while it provides a good background for the concepts used, it is impractical at the classroom level. A more relevant and extension oriented model, based on this theoretical background, has been suggested in the supplement to this report.

4. THE FOOD CALENDAR 4 hours

The constraints which affect nutritional well-being and food production and consumption were discussed during this session. This was done by creating a calendar that examined the problems communities and families face in achieving food security throughout the year. Periods of food shortage and abundance were identified by examining variables such as foods eaten in each season, cash income and expenses, intensity of labor, and illness. The relationships between these variables was then examined as they affect nutritional well-being throughout the year. This session was very successful in processing a lot of information in a short amount of time with the aid of village informants and with some modifications of the established lesson plan. All the participants enjoyed this session and felt that it was worthwhile. The information generated provided a data base for much of the work that followed.

5. WEIGHTS AND MEASURES 4 hours

This session was conducted to impart skills necessary to monitor nutritional well-being in children using anthropometric measurements. A lecture on anthropometric measurements was developed and delivered by Liz Robinson, P.C.V. which covered a thorough discussion of different types of growth monitoring and their advantages and disadvantages. A practical classroom exercise, using the road to health format, was conducted followed by two field exercises in measuring the height of school children and building appropriate technology scales. Participants were divided into two groups for the field exercises and reported back to one another at the end of the session.

6. WEANING AND RECOVERY DIETS 5 hours

The purpose of this session was to provide guidelines for preparing diets for children under five with special attention to local feeding habits and food resources. The concept of calorie dense foods was examined as well as the use of the food square in diet composition. Site specific food lists were created, identifying quantities that matched nutrient information in published resources, in order that the information might be used in diet preparation. A recovery diet formula, to be used to make additions to the maintenance diet after an illness, was also discussed.

THE NUTRITION HALL

The Nutrition Hall was established in response to requests for information about vitamins and minerals raised by participants, and to health problems identified in the Nutrition Overview of Sierra Leone. Flip charts on these subjects were prepared and hung in a hallway as well as charts on specific nutrition subjects used in some of the sessions. People could go and study the charts at their leisure, providing an effective way to illustrate some additional information relevant to materials covered in class.

CURRICULUM OVERVIEW AND MODIFICATIONS: PROGRAM PLANNING

Two sessions are covered under the title of Program Planning. These are The Garden Plan and Program Planning, Monitoring, and Evaluation (PPME). Although these two sessions were conceptually separate in the pre-workshop phase, they were conducted as a continuation of one another in practice. They both deal with planning nutritionally oriented projects. The Garden Plan was conducted first and the PPME session built on what had already been established in each group's Garden Plan. Although a garden plan has often been an element of these workshops, the inclusion of monitoring and evaluation in project planning is new. The experiences gained in training this material indicated that it was an important element of the workshop and should be incorporated on a regular basis. Improvements in the lesson plan are outlined in the supplement prepared for Peggy Meites in the Office of Training and Program Support/Health.

1. THE GARDEN PLAN 8 hours

The purpose of this session is to practice designing a nutritionally oriented garden project in order to investigate some of the problems and elements that would be encountered in a real program. This was done by developing scenarios based on culture specific information and criteria for examination in the development of garden plans. The exercise was conducted by breaking into 4 groups of 4 - 6 members. Two groups worked on the school garden scenario while the other two worked on the home garden problem. Each group presented their plans as a panel illustrating their materials on flip charts.

2. Project Planning, Monitoring, and Evaluation 6.5 hours

This session was conducted to offer a structure for project monitoring and evaluation for the planning of future projects in order to increase the likelihood of success in any undertaking. Practical application of monitoring and evaluation techniques was simulated by additional work on the Garden Plans developed in the previous session. Techniques and discussion of a simple project planning format were illustrated followed by an assignment. Results were unsatisfactory due to participant fatigue and unwillingness to take on an additional assignment.

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EVALUATION

Although the workshop was successful in terms of completing the sessions agreed upon by participants and the training staff more could have been achieved in terms of meeting the needs of the participants within the context of the nutrition and gardening. This conclusion is based on the pre-workshop survey and an evaluation conducted in a post-workshop survey.

The pre-workshop survey provided with the logistics materials (see Appendix 3), was not circulated before the workshop began. The problems in contacting participants and conducting the survey are discussed under the title of Training Site and Logistics in this report. Instead, APCD Richmond conducted the survey at the end of the first day after the sessions were completed. This timing had several effects;

1. Since the morning had been spent discussing the expectations of the participants and an overview of the materials that had been prepared, returning to this subject at this time was redundant.
2. The trainers had little time to review the surveys since the training had begun and other tasks required attention. Due to the time constraint, the surveys were not reviewed until after the workshop ended. A review of these survey forms could have resulted in curriculum changes had the information been available at the beginning of the in-country planning phase of the workshop.
3. Conducting the survey in their seats at the workshop precluded one of the purposes of the survey, which is that the prospective participants have an opportunity to look around their sites and investigate what is going on around them in preparation for the workshop. Upon a cursory examination of the surveys it was clear that the type of information elicited by the survey forms in this setting was inadequate to the purpose of workshop planning. Responses were too simplistic and masked the complexity of food production and consumption. Food lists were short and obvious. That "women" did the gardening masked a complexity of household interaction surrounding gardening activities. It remains unclear as to whether or not more complete responses would have been provided had the survey been conducted before the workshop.

The interest in gardening outside of the household illustrated on the pre-workshop survey is important to future workshops. There was a closely ranked interest in different gardening focuses from 15 for household gardens, 9 for school gardens, and 7 for community gardens. The five responses concerning "other" focused on curriculum

development. If these gardening focuses are important to the workshop additional materials need to be developed for school and community gardens which provide case examples, common problems, and solution development strategies. The interest in curriculum development also points to the importance of incorporating extension techniques in all lesson plans whenever possible.

The post-workshop survey was conducted by writing a series of eight questions on the chalk board and providing scaled response choices. Additional comments were optional. The questions and ranked responses are listed below where the number of responses out of 18 surveys is listed first followed by the percentage in parenthesis.

1. The information that you received about the workshop was:

a) very good	b) good	c) fair	d) poor
6(35)	6(35)	3(17)	2(12)

2. The arrangements for housing and meals at the site were:

a) very good	b) good	c) fair	d) poor
14(78)	4(22)	0(0)	0(0)

3. The daily schedule of classes was:

a) about right	b) too many classes	c) too few classes
15(83)	0(0)	3(17)

4. The mixture of nutrition and gardening sessions was:

a) well balanced	b) too much nutrition	c) too much gardening
10(56)	7(39)	1(5)

5. In terms of your current and future work did you find the workshop to be:

a) very useful	b) useful	c) useless
10(56)	8(44)	0(0)

6. Did the workshop meet your expectations:

a) yes	b) no
13(72)	5(28)

7. In general, the workshop was:

a) very good	b) good	c) fair	d) poor
6(33)	10(56)	2(11)	0(0)

8. What future workshops would be useful to you?

Suggestions for further In Service Trainings which were relevant included Food Processing and Storage, First Aid, Nutrition with an Emphasis on Pregnant and Lactating Women, and Extension Methods in Health Education.

The comments of the participants can be reviewed in Appendix 4. Some of those comments are summarized, in light of the training as a whole, in the following text.

A review of the responses to the post-workshop survey indicated that the participants, for the most part, gained information which will be of value in their work. Most of the negative comments concerned the lack of timely information about the workshop. This was especially important to Peace Corps Volunteers who invited counterparts but had no information on which to select their guests or to explain to them what the workshop was about. This affected both the participants and the trainers in the preparation of a workshop tailored to participant needs and expectations.

The responses of the Peace Corps Volunteers (7 out of 10) indicated that most of the nutrition material had been covered in the Pre-Service Training. This was a surprise to the trainers since this was never mentioned by the participants at any time during the workshop. In addition, the Pre-Service Training lesson plans for the Health Volunteers, made available by APCD Richmond, indicated that there was no overlap in the materials presented. This problem is discussed and solutions developed under the discussion of the session on Introduction to Nutrition Session. As repetitive as this material may have been for some of the volunteers several said that it had been a good review. In addition, it is important to note that many of the participants indicated that nutrition would be a component of their future plans (see Appendix 1).

Conducting the survey on the chalk board enhanced several problems. It was clear, in reviewing the responses, that not all of the Host

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Country Nationals understood the questions in the format that they were offered. Secondly, the Peace Corps Volunteers had some difficulty in following directions. Instead of ranking their responses they went immediately to comments. These problems could be mediated by providing a form or workshop evaluation sheet in the training packet which could be photocopied before the workshop began (since a photocopy machine and typewriter were not available at the training site). An oral review of each question may also reduce confusion.

The participation of both the Peace Corps Volunteers and their counterparts was very good. All sessions were well attended and group assignments were completed satisfactorily. The presentations of the final assignment in Program Planning, Monitoring and Evaluation were disappointing, however, this was partly due to the timing and structuring of the assignment.

The Sierra Leonian Counterparts made valuable contributions to specific sessions and the interaction with the Volunteers was very positive. However, there were difficulties in language and in the level of comprehension of the materials presented. Adequate pre-workshop information about the participants with enough lead time, could have alleviated this problem. In addition, the nutrition lesson plans need to be reviewed and de-jargonized in order to make information presented in those lessons more readily understandable to all of the participants.

RECOMMENDATIONS

The following recommendations are based on our experiences in conducting the Better Nutrition through Mixed Gardening Workshop in Sierra Leone beginning on December 1 and ending on December 9, 1986. Where these recommendations concern certain sessions or topics they are discussed fully within that section of the report.

- 1) Logistics lists sent to the in-country staff should be limited to only those materials required for the subjects which will be covered in any one workshop.
- 2) A check-off sheet for workshop preparation including participant selection and feedback should be created to facilitate the accomplishment of pre-workshop tasks. The check-off list, when used, is expected to aid in the timely completion of tasks. This would improve the feedback of information to Washington where information collected using the check-off worksheet was sent to Washington in an expediant fashion.
- 3) An example of materials to be sent to the participants should be put together separately from the other logistic materials in order to facilitate their recognition. This may simply mean pulling those participant relevant materials already prepared out of the of the package stapeling and labeling them separately before sending the materials.
- 4) The idea of Volunteer Leaders, as workshop liasons, should be investigated. Facilitating the workshop, from initial interest to final report, may be an ideal secondary project for a school teacher or other Volunteer. This would help reduce some of the preparation problems and develop skills for the Volunteer.
- 5) Materials on school and community gardens should be developed that include case studies, common problems, and solution development strategies.
- 6) Preparation time needs to be closely examined for site preparation, logistical support, timely and adequate pre-workshop participant information, site specific background on which to base lesson plans, the appropriatness of the site, and the state of the training materials from Washington. Little productive work was achieved in the pre-planning phase due to the lack of preparation in the items listed above and the short time available for preparation. This meant that a lot of time was spent preparing daily for sessions during the workshop. In light of the fact that all responsibilities fell on the two trainers, this work load had a negative affect on the workshop.
- 7) New lesson plans for gardening need to be developed to include local cropping systems. This requires an open framework with

defined rationale and goals, adequate preparation time, and strong informants with long term practical experience in traditional food production. Without incorporating this type of information participants are left with a bag of new gardening techniques without a framework of local understanding in which to use them; technology out of context.

- 8) All lesson plans need to be reworked with strong emphasis on rationale, goals, and trainer background materials. Even the agricultural materials, which at first glance seem to be straight forward, had to be reworked for local context and training resources. This is a constant factor in taking a workshop to new places every time. Solid background information and experienced trainers are the backbone of this type of workshop and materials prepared in this fashion would facilitate the production of site specific lesson plans.
- 9) The development of materials for this workshop may benefit from the complete reporting of lesson plans by trainers. Resource materials are rediscovered and developed each time in the current framework. This is counterproductive where trainers end up reinventing the same faulty wheel each time. This would require adequate time for report preparation and clear instruction on what constitutes a lesson plan report within the trainer's contract.
- 10) Extension techniques need to be incorporated into the training material whenever possible. This is especially true of the nutrition material where extension techniques were requested but time to develop them or train them separately was not available. Incorporating extension techniques in the nutrition material would make it more interesting for those who had had some of the material before and make it more accessible for those who were completely unfamiliar with it. If the information cannot be trained incorporating extension techniques, or with a very limited amount of lecture material, it may be important to ask to what point the material is being presented in a workshop which is limited in time and focuses on project interventions. Everything presented should be useful.
- 11) Nutrition lesson plans need to be reviewed and and rewritten in plain, easy to understand English. This would reduce confusion and make the subjects easier to understand for unskilled participants. In addition, language which is inappropriate to village level work requires conceptual translations which are unnecessary if the materials were stated clearly from the beginning. The lesson plan on the Cycle of Malnutrition is a good example of this problem.
- 12) A series of additional references and lesson plans (rationale for fitting into the workshop) need to be developed. This would provide trainers with the flexibility to provide a workshop

appropriate to the needs of the participants and nutrition related problems in the countries in which the workshop is being conducted. Such sessions should include:

- The production of appropriate technology baby scales.
- The nutritional needs of school children.
- The extension techniques of prioritizing needs.
- Food storage research and improvements.
- Household food production strategies, their investigation and interpretation.
- Creative thinking, to reduce the "But they don't do that in my village" block.
- Case studies in food change, to illustrate that it is possible.

13) The training resource materials for nutrition from Washington need to be developed to the point that they may be reproduced and distributed as handouts where appropriate, used by the Peace Corps Staff in future training efforts, and/or as reference materials for participants in their ongoing work. Some of these materials were prepared during this training but it was costly in terms of time. In addition, there were errors in hand written charts that had not yet been cleaned up which caused problems in attempting to train the materials.

14) No matter how extensive the pre-workshop information is, or how selective the process is for choosing participants, the group will have different skill backgrounds as long as the group is composed of both Peace Corps Volunteers and Host Country Nationals. Because of this, a decision needs to be made concerning the ends to which the workshop is being offered. Following Peace Corps philosophy it makes sense that Host Country Nationals should be targeted as the primary recipients of information and aid in the development of skills. Peace Corps Volunteers would participate in the workshop as aids to Host Country Nationals, helping in the development of skills and in the development of projects designed based on the workshop. However, in conducting the workshop it was found that these relationships were reversed. The materials are slanted to the capabilities and intellectual needs of Peace Corps Volunteers, often placing sessions beyond the grasp of host country participants. At the end of the workshop it is probable that most of the Peace Corps Volunteers could design a nutrition related project concerning gardening. It is unclear whether or not most of the Host Country Nationals would feel

comfortable doing the same. During this workshop Peace Corps Volunteers were also given the lead in defining expectations from the beginning. They were simply more articulate and comfortable with the format on the first day. By the end of the workshop they were controlling the activities of the group assignments. It is therefore suggested that the focus of the training has been on Peace Corps Volunteers with Host Country Nationals in support roles as information sources. Given Peace Corps philosophy these roles should be reversed.

- 15) The fair and equitable contracting of personnel to conduct this workshop needs to be examined. The given framework of 22 days was not enough time to prepare, deliver, and process this workshop. One trainer spent a week in the Washington, D.C. office preparing materials for the workshop and a week preparing the final report and debriefing with Health/OTAPS. Neither of these periods of work were covered within the 22 day contract. Both trainers put additional days of work in workshop preparation and report preparation during travel days and on holidays and Sundays which fell within the contract period. None of this time or effort was covered by the 22 day contract limit. It is felt that these periods of time spent in preparation and processing were essential to the success of this workshop and the development of a report which will aid in the production of future improved workshops. It is therefore recommended that future contracts more fully specify the nature of the work to be performed, realistic time frames be set, and pre- and post-performance related work be accounted for within the conditions of the contract.

APPENDIX 1

PARTICIPANT ADDRESSES AND PLANS

Helen J. Beck, P.C.V.
Masanga Leprosy Hospital
Masanga
c/o Makeni Peace Corps Office

Plans for a home garden. All of the nutrition information will be helpful in teaching and lectures. I may even try a small chicken farm.

Angella M. Conteh
Meals for Millions, Freedom from Hunger Foundation
Binkolo-Bombali District

Making a garden for myself in a swamp in one of the communities where we work where it has not yet been introduced, and to teach mothers to improve on their vegetable gardens for their children's nutritional needs.

Mr Joseph M. M. Conteh
Agriculture Department
Makeni Teachers College
P.O. Box 32
Makeni
Sierra Leone, West Africa

Residence:
Back of the Mollleleh Compound
Off College Campus
Makeni-Magburaka Road, Makeni

I would like to continue and improve my home garden and my small piggery which I manage at the back of my house. I also hope to impart the knowledge I have gained to my students in the training college where I am already working as a Lecturer of Agricultural Science and General Science.

Peggy Digles, P.C.V.
Masongbo, Safucoco Limba

Assist on going plans for school garden December to June. Host mothers doing gardens. Workshop with Traditional Birth Attendants and VHW's and MFM in Binkolo in January.

Anne Feldstein, P.C.V. Health
Mayoso Village, Magburaka - Mile 91 Road
Peace Corps Makeni Office

I'd like to obtain a scale and begin an Under 5's Clinic in the village using weights and heights as indicators about the nutritional standing of local children. With the gathered information, I'd prepare health talks focusing on nutrition. I'd also like to continue working with the women on the concept of weaning foods (which they don't use) and try to use the recipe for basic mix that we were given. I'd also like to improve my own garden for demonstration use.

John Anderson Kamara
c/o Mr. Davidson Kamara H/T
Mayoso
P.O. Box 32
Magburaka
Sierra Leone, West Africa

I would like to continue my agricultural studies and learn more about how to feed young ones.

Mrs. Isatu E. Kpakra, M.C.H.
Tungie
Goroma Mende Chiefdom
Kenema District
c/o Government Hospital
Kenema, Sierra Leone

My plans would be to relay this important message, especially the teaching of nutrition which is part of my work as a nurse, and to continue my home gardening.

Brenda Kuehmichel, P.C.V. Health
Rogbessah/Tonkolil District
c/o Makeni Peace Corps Office

In terms of follow-up I simply want to make my own garden in the swamp, first. Depending on what happens and how successful I am, I'd like to consider using foods for the gardento teach school children and women in the village about better nutrition.

John Macauley
11b Old Railway Line
Tengbeh Town, Freetown

The plan I have to follow-up this program is to plant a commercial garden down at Hamilton Village to help broadcast nutritious food at a reasonable price to people, firms, small households, hotels, and children's villages.

Lanasan S. Mara
Koinadugu Town, Sengbe Chiefdom
Koinadugu District
Sierra Leone, West Africa

I would like to continue my home garden work.

Cindy McCallum, P.C.V.
Peace Corps Office, Makeni

I Live in Tungea, Gorama Mende Chiefdom.

I would like to plant a garden for myself. I also plan to investigate the interest that primary schools have in making a school garden. In the interest is high and people seem motivated I will assist in finding resources and organizing the garden.

Mr. Thomas A. Menjor, Dispenser
Tungie
Gorama Mende Chiefdom
Kenema District
c/o Government Hospital
Sierra Leone, West Africa

My plan would be to relay this important message to the people in my community and the continue the gardening as I have been taught.

Cindy Nofzinger, P.C.V.
Masanga Leprosy Hospital

Work on developing lesson plans for implementing a garden/nutrition program in the schools. And then hopefully implement a program.

Jana Potter, P.C.V.
c/o Peace Corps Office, Makeni

I will be implementing an experimental school garden in at least one (possibly more), primary school in order to develop and field test a resource manual for using a school garden as a teaching tool for an integrated core curriculum (i.e., science, maths, social studies, and english language). I will be doing a similar resource manual for fish ponds.

Brian Richmond, A.P.C.D. Health
Peace Corps Office
8, Lamina Snkoh, Freetown

I will be using the information gained to:

Establish my own home garden;
Help out with the establishment of a group garden in the community of Hamilton;
Promote the concept of nutritionally-oriented mixed gardens among P.C.V.'s in-country; and
Include the nutrition/mixed garden concept in future Pre-Service Trainings.

Elizabeth (Liz) Robinson
Taninahun/Maten (Pujehun District)
Bo Peace Corps Office

Investigate the feasibility with my target villages for school, home, or community gardens to increase the nutritional status for children under 5, school age children, women of child bearing age, and other members of the community. I am already scheduled to present the information from this workshop to my project sponsors - Bo Pujehun Nutrition Unit, Bo, to help coordinate future nutrition programs in my area.

Joel Salter, P.C.V.
Hastings
c/o Peace Corps, Freetown

I plan to use what I have learned here in a community gardening effort near my home in Hastings. I will also use the nutrition information and garden practices in my own backyard as a demonstration garden provided things grow.

Rod Streeper, P.C.V.
Makeni

I have my own home garden and am surrounded by other home gardens at my house. By using some of the techniques learned at this workshop, I hope to pass on some of the better gardening practices. I am at my site enough, and know my community well enough, so that I will be able to make helpful suggestions as well.

Mr. Amadu Thullaah
Rogbesses Kolifa Chiefdom
Postal Address: c/o Leprosy Hospital

To Continue home gardening.

Appendix 2

OFFICE

8, LAMINA SANKOH STREET
FREETOWN
TELEPHONE 24451/2/3

MAIL

PRIVATE MAIL BAG
FREETOWN, SIERRA LEONE.

LETTER OF CERTIFICATION

This is to certify that

participated in a course on

"NUTRITIONALLY ORIENTED MIXED-GARDENING"

held in the community of Songo from

December 1st through December 9th, 1986.

Dorothy Bell
Training Consultant/Nutrition

Winston Carroo
Training Consultant/Agriculture

Brian Richmond
APCD/Health & Rural Development



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Appendix 3

Pre-Workshop Survey

Name: _____

Work Location (village): _____

Primary Work Assignment (title) _____

1. What are the current gardening activities in your community?
% of community that has household gardens _____

2. What are typical crops/vegetables grown in the garden?

3. Which of these garden crops are;
marketed _____ consumed _____

Who does the marketing? men _____ women _____ children _____

4. Are small animals raised in the home garden?
No _____
Yes _____...if yes...which animals are raised?

5. Is gardening a womens or a mens acitivity?

6. Are any garden crops or vegetables stored or dried? List
crops and techniques used.

7. Is there a "hunger season", or a time during the year when
household food is in short supply?
No _____
Yes _____...if yes... when is this time? _____

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8. Is there a time during the year when people have a greater need for cash?

No _____

Yes _____ if yes...when? _____

9. Are there any garden crops or vegetables which are not feed to young children (under 5 years of age), or pregnant or nursing mothers? List crops.

10. How do you plan to us the gardening and household food asses-
sment skills gained from the training?

Develop....School gardens _____
Community gardens _____
Househodl gardens _____
Other projects _____

11. Who do you expect would benefit most in your community if you promote nutrition-oriented mixed gardening activities after this training?

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PARTICIPANT COMMENTS IN EVALUATING THE WORKSHOP**

1. The information that you received about the workshop was: ?
 - * I did not know that nutrition was going to be part of the workshop. The announcement just said mixed gardening, but didn't explain mixed gardening.
 - * The announcement/information received was: variable (unfortunately, many of the participants did not receive the information sent).
 - * GOOD - although much of the info was review
 - * I was intimidated by the statement that only 10 people could attend so I didn't respond because I didn't think I'd get picked. Also, we needed more information to tell our counterparts - logistics (were lanterns, mosquito nets, etc, provided), and what would be covered in the workshop.
 - * Poor - I was unable to explain to my counterpart what the workshop's agenda, objectives or goals were.
 - * Good. We already received much of the nutritional information in our Pre-Service Training. I thought the garden information was very good.

2. The arrangements for housing and meals at the site were: ?
 - * very good, well prepared and managed
 - * Meals Very Good
Housing Poor.
 - * great food, & Pa Brima Kamara's family was very nice.
 - * Very Good. The meals & housing situation were excellent.

3. The daily schedule of classes was: ?
 - * About right. Perhaps there could have been a few more props to keep people awake through some of the longer classes-- perhaps some more class participation. It really gets hard to pay attention w/the heat & humidity.

4. The mixture of nutrition and gardening sessions was: ?
- * too much nutrition - most of the nutrition presented is covered during pre-service training for all health volunteers by health volunteers. Therefore, because of the content, the nutrition section was too much & repetitive. Also felt the two sections could have been mixed more.
 - * As a health volunteer, I already had a lot of the information that was provided.
 - * Too much nutrition. It was nice to spend as much time as we did on gardening, but you could probably shorten it a few days & take out some of the nutrition. Nine days is a long time to be out of our sites.
5. In terms of your current and future work did you find the work to be: ?
- * useful - learned a lot about gardening practices which I'm sure will be beneficial & helpful for future work & personal purposes.
 - * gardening component very useful
nutrition component useful to useless (because much of it was a repeat of material covered in Peace Corps training)
 - * Useful - but a better knowledge of the audience background would help tremendously. I felt much of the information was general knowledge.
 - * I could have used more info about intercropping - I don't think the Sierra Leoneans believe that there is a benefit from this - or that there is a benefit to plant spacing.
 - * I will be able to use what I've learned on a secondary project.
6. Did the workshop meet your expectations?
- * Sort of - Felt that there was a lack of incorporating what the current agriculture/gardening practices are here in Sierra Leone and how they could be improved upon. I think local resources were underutilized i.e. Sierra Leoneans involved in agriculture/gardening programs, also current PCV's, aggies, have had experience & have knowledge of current practices, problems as regards to agriculture/gardening - feel this resource was underutilized.

* Not completely

I wish there was more information on Sierra Leone specific plants (i.e. companion plants, sun light needs, water needs, which seasons etc. the books we have received are for other countries and don't cover some of the main crops grown here)

There wasn't enough integration between the two program components. re How can we introduce gardening techniques to increase food production during Aug and Sept. or can we change the gardens so that food can be produced during the hungry season.

The calendar exercise w/inviting S. L.ians was good but I feel much more could be said in the conclusion - how does it fit in w/gardening,...

* Yes. It provided a good integration of health and agriculture and indicated a direction that we can stress for future PCVs

* I expected a better working knowledge of the nutrition aspect of the workshop.

* Yes, actually met my personal needs better than I anticipated.

* Yes. The workshop covered all I expected it to.

7. In general, the workshop was: ?

* good/fair did help to give a clearer picture of the work, steps necessary for implementing school, community and home gardens. Felt that the assignment given at the end of class on Monday was ill timed. Could have been incorporated into the 1st assignment/presentation. Wish suggestions for food storage/preservation were incorporated as little seems to be done in this area & could possible help to minimize food shortages during hungry season.

* The workshop was good, I made a lot of friends, gained experiences into both classes etc.

* Very good. (It would have helped to have integrated the last exercise earlier on.)

* fair - I felt the nutrition portion could have been better organized and presented. several of the activities were busy work.

* Very good - except the breaking up of the home/school garden plans (?) The information of problem, goal objectives exercises should have been combined - these presentations separated did

cause an attitude of non participation in the majority of the group for the second exercise.

* Good. I really enjoyed it -- the trainers & general atmosphere were very pleasant. I got what I came here for and enjoyed it. I thought the trainers knew the material well and that it was conveyed in a fairly effective manner. Perhaps it would have been useful to have a standardized schedule to go by -- it might have worked out better. As it was, we received a fair amount of material from various sources that will definitely be of use, and this should also serve us well in the future as we can get more of the same type of information from ICE.

8. What future workshops would be useful to you?

* Methods of appropriately, culturally introducing these practices, Food Storage preservation/storage "getting the message across"

* More on food processing, storage, drying and how these affect the nutritional content of food.

* I would like to follow-up workshop in both Agriculture and Health education.

* Food preservation and storage.

* A good question calling for some imagination - um

- The causes of poverty in "Stalone".

- General first-Aid I believe would be useful especially with regards to cut's and broken homes.

* Sierra Leone specific funding sources - Workshop designe to assist health workers who are in villages without project support. It's hard to know where to start and what to do.

* I will be investigating monies availability on my own, at this time, I have no suggestion for a follow up workshop.

* Workshops should be individualized & not necessarily tie in with this one. We could have gotten a list of applicable ICE manuals.

** These texts are not edited.