

PDWAE053

**Peace Corps/Honduras
Home Gardens In-Service Training
Evaluation**

by

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and

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This project was conducted by the League for International Food Education under Grant No. #DAN-0262-G-SS-4038-00 in coordination with Peace Corps under PASA No. BST-0262-P-PC-4005, both from United States Agency for International Development, Office of Nutrition, Bureau for Science and Technology, Washington, D.C.

INTRODUCTION

The Home Gardens for Nutrition Improvement In-Service Training (IST) was a co-operative effort by Peace Corps/Honduras, OTAPS/Health Sector, Peace Corps, and the S&T/Office of Nutrition, AID to pilot a newly developed training model. The development of the model was the result of the commitment of Peace Corps and AID to promote food production activities, to help families in developing countries meet their nutritional needs, at the household level.

The Home Gardens IST was held November 7-8, 1983, at the Subregional Agricultural Experiment Station in La Esperanza, Honduras. Sixteen Volunteers and eight of their host-country co-workers participated in the training. The group was quite diverse. Volunteers represented the health, education, natural resources, and community development sectors of Peace Corps. The counterparts were housewives, farmers, community workers and a school principal.

The goal of the program was to help the participants gain skills to recognize and strengthen traditional food production practices, specifically for home gardens, in order to improve the nutritional status of the family. Training activities include: collecting household data; mixed garden theory and field observation; nutrition; designing a mixed garden; gardening skills; and project design.

The Office of Nutrition and OTAPS sponsored this evaluation to examine the effectiveness of this pilot effort after the participants had been in the field for approximately one year. The evaluators were asked to assess the relevancy of the training program, the usefulness of the technical information provided, the strengths and weaknesses of the training methods used, and the achievements of the participants.

The evaluation findings are to be used to improve future ISTs planned for FY 1985 and to strengthen the training design of the Nutrition Improvement Through Mixed Gardening in the Humid Tropics, a Trainer's Manual.

The evaluators were:

Denise Conley Lionetti, L.I.F.E. consultant, and former project manager for the Home Gardens IST Program OTAPS/Peace Corps; and Thomas Gardinar, Technical Coordinator for Peace Corps' agriculture technical training at the Center for Human Potential (CHP) in Costa Rica.

EVALUATION DESIGN AND INSTRUMENTS

The evaluators designed the IST evaluation instruments to determine the following:

1. the suitability of the program content to the participants
2. the retention of the information presented
3. the effectiveness of the methodology employed in the training model
4. the extent of the application/promotion of the skills learned, and
5. general comments (i.e., counterpart participation, specific projects being carried out).

These components are clearly specified in the evaluation instruments, except the area of retention which was integrated throughout the questionnaire and participant interviews. (The evaluators didn't want the Peace Corps Volunteers (PCVs) to perceive the questionnaire as a technical quiz.)

The evaluation instrument was translated into Spanish. Local Honduran terms were employed as much as possible and an attempt was made to simplify the language used. A checklist for evaluating mixed gardens was also developed. This instrument is a modified version of the checklist of mixed garden characteristics developed by Paul Sommers in the UNICEF Home Gardens Handbook (pages 24-25).

There were sixteen PCV participants in the IST. Ten filled out the evaluation questionnaire, three had closed service (returned to the U.S.) one had transferred site and project assignment, the remaining two provided feedback by letter or via their Program Manager. Site visits, to interview and observe garden projects, were made by the evaluators to six of the ten PCV participants, who filled out the questionnaire.

Unfortunately, there was no opportunity to test or utilize the Spanish version of the questionnaire. Instead, with the two Honduran participants that were visited, an oral interview was conducted. No other Hondurans were visited because they no longer had PCV counterparts working with them: one PCV had closed service, one Honduran had married and moved, two PCV counterparts had transferred to new communities and two PCVs lost contact after the IST.

SUMMARY COMMENTS

The following are summary comments based on the questionnaire responses and the interviews with the participants, staff and the evaluators observations. The scores found at the beginning of each comment indicates the percentage of responses on the scale of 1-5, 1-2 indicating low scores and 4-5, high scores. The raw data from the questions and the summary of the site visits are attached.

PROGRAM CONTENT

1. To what extent was the program content of the nutrition improvement through mixed gardening in-service training workshop (IST) relevant to your work situation (primary or secondary project)?

40% high scores

40% low scores

Two of the Peace Corps Programmers commented that the training program seemed most relevant for those PCVs that came to the IST with some gardening skills (i.e., from pre-service training) and for those whose job description included gardening. This was surprising because the training was designed for PCVs with little or no gardening or agriculture experience.

Some of the PCVs came to the program hoping to do gardening as a secondary project, but found in reality that their primary job required all of their time. A few of the PCVs proved to have had no interest in gardening from the start and said they came because they were selected by their program managers.

2. The workshop emphasized building on traditional food production practices to improve nutrition. To what extent has this approach been appropriate for your situation?

30% high scores

40% low scores

The numerical responses for this question included all the numbers, 1-5, on the scale. The PCVs seemed to feel that western crops had a higher nutritional value than "local traditional" crops. Also, because they were more familiar with western crops, they tried promoting the principles of mixed gardens using western vegetables instead of traditional vegetables. As would be expected, these PCVs encountered many problems with insects and plant diseases. The concept that traditional vegetables can also be highly nutritional and that these plants are often more resistant to local insects and plant diseases was not realized and integrated into their project.

3. The most useful information/skills were... Why?
The least useful information/skills were... Why?

The list of useful information/skills included a wide variety of items covered in the training program and for almost every item someone liked someone else disliked it. One of the most significant items that was listed by the PCVs was "learning from the local people". This is another key concept of the training program. Local people know the basic "how to's" of mixed gardening -- the role of the Volunteer and the counterpart is to learn from...build on...motivate...and initiate the exchange of information within the community.

4. How well were the following content areas covered in the IST?

EXTENSION (Promotion skills to use at the community level).	NUTRITION	TECHNICAL GARDENING SKILLS	MIXED GARDENS PRACTICE AND THEORY
30% high 20% low	40% high 20% low	70% high 10% low	100% high 0% low

Without exception the Volunteers felt the concept of mixed gardening, both in theory and practice, had been well covered. Also in discussing mixed gardens with the Volunteers they were clearly able to articulate the major concepts from the IST. The Volunteers also indicated that the teaching of technical gardening skills was effective. However, the responses for the coverage of nutrition and extension were less definitive. For some of the participants this was their first exposure to connecting gardens to nutrition improvement, therefore they thought the coverage was sufficient. Others wanted more skills in nutrition extension techniques, which weren't covered in the program and therefore weren't satisfied.

TRAINING METHODS

5. In your opinion, in the IST workshop, how was the time distribution between theory/classroom activities and "hands on" field practices?

The majority of the respondents felt that there was a good balance between the theory/classroom activities and "hands on" field practices.

6. At this point in time what do you remember as being the most effective training methods used in the IST workshop? Least effective?

Here again there was a wide variety of responses ranging from field demonstrations to guest speakers, but one of the most significant referred to "learning from and working with the counterparts".

7. What training methods used in the IST workshop have been transferable in your work at the community level?

The list of methods included were the "hands-on" activities from the IST (i.e., planting a garden with a counterpart, use of visual aids, nutrition games, etc.).

PROMOTION/APPLICATION

8. To what extent have you applied in your community the skills and knowledge gained from the IST workshop? State a specific example of how you have used this information/skills gained from the IST workshop.

20% high

50% low

The low scores on this question raised some concerns about the ability of the participants to transfer the knowledge and skills they had learned to their communities. Some of the PVCs never tried to apply what they learned because they felt their communities were not interested in mixed gardens or they were too involved in their primary projects. Others have tried to promote mixed gardens, but as yet, have not felt successful in completing a project cycle.

Despite the low scores, the PVCs were able to site specific examples of how they used what they learned from the IST in their work (for example: use of organic fertilizers and insecticides, mulching techniques and nutrition talks).

9. Based on the IST workshop and the last 10 months in the field, how technically competent do you feel now?

40% high

50% low

What further technical support/assistance do you need related to gardens and nutrition?

The majority of requests for technical assistance were in the areas of insect and disease identification and control. Many of the PCVs were promoting western vegetables or mono crops (i.e., soy beans) that are not resistant to local pest and plant diseases. This again implies the lack of understanding of the advantages of traditional crops being more adapted to the local conditions. Although, one PCV wanted more information on organic

techniques for the prevention and treatment of insects and diseases, the majority asked for information specifically on chemical fertilizers, insecticides, etc.

Many of the Volunteers work in rural mountain communities that have to plant on slopes and need information on contour methods for gardening.

GENERAL

10. The benefits derived from the co-participation of Hondurans and PCVs in the IST workshop were...

The drawbacks to co-participation were...

How could the Honduran participants have been more fully utilized in the IST workshop?

There was no doubt that the majority of the Volunteers felt the co-participation of Hondurans was a positive experience. The only problem indicated by the PCVs was that the pilot was taught in English, using Spanish translators. They felt this put the host-country participants at a disadvantage (Note: Unfortunately, for this workshop the organizers felt there was no alternative. This was a pilot training and the lead trainer, who also developed the model, did not speak fluent Spanish, although the lectures were in English, all small group work was done in Spanish. In any other situation a Spanish speaking trainer would have been used.)

11. My suggestions for future IST workshops in Gardening/Nutrition are...

Planning and Organization:

--The planning for the training program took place during a transition period of the APCD who initiated the planning stages leaving and a new APCD replacement arriving. Therefore, most of the planning decisions were made by Volunteers who did the best they could under the circumstances. Many of the organizational suggestions, (i.e., description of the course, training site, availability of field materials and tools, data collection) may have been addressed more appropriately if the APCD change had not taken place.

Training Materials:

--At the time of the training program, Information Collection and Exchange (ICE) did not have any appropriate materials in Spanish. Training materials have since been requested from Peace Corps/Ecuador and Costa Rica to begin a collection of Spanish materials.

Length of Training Program:

--The proper length of the training program has been greatly debated. Most trainers know how difficult it is to teach skills in a one week workshop. But on the other hand, Volunteers said they found it difficult to be away from their sites for two weeks. They also felt it was even more difficult for their Honduran co-workers to leave their families for such a long period of time.

Chemical Vs. Organic Methods:

--The training program did not address western crops or chemical pesticides, fertilizers or fungicides because the emphasis was on traditional crops and organic gardening techniques.

Pre-Service Training:

--The PCVs expressed a need to have mixed gardening integrated into pre-service training. The Volunteers who attended the IST seemed willing to help organize and teach the other Volunteers.

12. Briefly describe your mixed garden/nutrition project. (Please include a description of any nutrition activities integrated into your project).

The Volunteers have been involved in nutrition activities ranging from diet assessment, nutrition education, to promoting gardens as a nutrition intervention.

SITE VISITS

Barbara Bomberg, Health PCV
Texiguat, Choluteca

Barbara is working with mixed gardens to some extent. The closest garden, however, was the distance of a four hour hike in the mountains away. Even though the evaluators didn't observe any of her gardens, she told us of one women's group she worked with that called their mixed gardens "ensalada" (salad) gardens. Other than garden projects, Barbara has successfully promoted an income-generating chicken project in her town.

Barbara's counterpart at the IST, a social promotor with CARITAS, had married and moved away to another department.

Teresa Bries, Rural Pilot Schools (RPS) Promotor
San Jeronimo, Comayagua

As a RPS garden promotor, Teresa works almost exclusively in the promotion of western row-type gardens, in community and school projects. She promotes tomatoes, onions, beets, carrots, cabbage, etc., because these are the vegetables promoted by the host-country agency Recursos Naturales, with whom she works. Her emphasis is basically in accordance with Recursos, therefore, she has not promoted mixed gardens. Nevertheless, the evaluators observed that many local people in the community had mixed gardens around their houses.

Desiree Loeb, Health PCV
El Rosario, Comayagua

Desiree had not promoted mixed gardens in her community, she felt the women she worked with were not interested in this approach. She was, however, promoting soybeans, a project supported by Recursos Naturales. Unfortunately, they were having problems with the plants being destroyed by fungi.

A local brother and sister attended the IST with Desiree. She advised that a written questionnaire would be too difficult for the two to fill out, so an interview was done instead. From the interview we learned that they had applied some of the information they had learned at the IST, but had not developed a mixed garden per se. Reyes, a farmer, stated he had learned how to select and protect seeds for planting, he had also learned different planting techniques for cassava and vegetable pear and how to protect the soil with mulches. His sister, Rosy, stated that before the IST she knew nothing about human nutrition and had learned something about the nutritional value of each crop that had been planted during the program.

They stated the reasons it had been difficult to implement what they had learned about mixed gardening was because of the low soil fertility of their land and therefore some crops didn't grow well in their area.

Their only comment on the training methodology was that they preferred field practices over seeing slides. They both also stated that they thoroughly enjoyed the workshop and the opportunity to have participated.

Mia Zmud, Health PCV
Jesus de Otoro, Intibuca

Mia, working with a community group, had planted a combination of a western row-type garden with a mixed garden of sorts (corn interplanted with tomatoes, onions, squash, and fruit trees-cashew, banana, guayaba). The garden was planted on a slope and, unfortunately, it was washed away during some heavy rains. She had also done a lot of work in nutrition education as a basis for introducing gardens.

Mia is planning to start another mixed garden project in the upcoming planting season, incorporating what she has learned from past mistakes.

Linda Schwetz, PCV Rural Pilot Schools Promotor
Vivistorio, Copan

Linda's projects involved planting cassava, carrots, coriander (a popular herb), lettuce, mustard, beets, onions, and garlic into already existing gardens, which had coffee, corn, bananas, sweet potato, taro, and fruit trees (oranges, limes, mango, and zapote). Linda's promotional activities were with schools, local youth groups and housewives clubs in seven communities, involving approximately 25 gardens. Three of the gardens were destroyed by chickens and 15 others were destroyed by a freak hail storm. Undaunted by these misfortunes, she is waiting for the next planting season to start again.

Linda prefers to work with individual family gardens, as opposed to community gardens. She says her community gardens have not been successful, due to the limited sense of cooperation of the participants, leading to problems with the division of labor and how to equitably distribute the harvest.

Linda mentioned that when the traditional "solar" (backyard garden) is planted, the chickens do not eat the crops. However, when western crops are planted they have to be fenced off to prevent chicken damage.

Linda expressed a desire to have more information on the nutritional value of traditional crops and information on organic methods of insect and disease control. She had organized some local townspeople to meet and discuss their technical garden needs. She reported that they wanted more information on crop rotation, prevention of diseases and insects, and suggestions for locally available, low cost, natural controls for insects.

Karen Martens, Rural Pilot School Promotor
El Portillo, Yoro

Karen had enthusiastically started several mixed gardens at the local schools, but they were abandoned just two weeks after they were planted, because Karen had to be evacuated due to a medical problem. She plans to start again now that she has returned. She reported a major obstacle she experienced with the gardens was keeping the pigs and chickens out. She plans to experiment with planting living fences this time.

We observed mixed gardens in the community, which included cacao, citrus, banana, hot pepper, castor bean, and cassava.

Staff Interviews

During the first two days of our visit, Gale Marrow, APCD Health, scheduled a series of staff interviews. The evaluators paid a courtesy call on the Country Director and Programming & Training officer, but spoke at length with the APCDs. The following is a summary of those discussions.

Susan Caporaso, APCD Rural Pilot Schools (RPS)

The Volunteers in the RPS program are required to have backgrounds in 4-H, or have lived or worked in a rural area. Their job is to train rural school teachers in food production and animal raising, they also do community organization.

Sue explained that gardening is an intimate part of the job. During pre-service training the PCVs write lesson plans, practice teaching gardening techniques, and also plant a garden. She felt her PCVs found the IST "very helpful" because it built on skills they had learned during pre-service training. They told her that they were also able to apply what they learned to their jobs. During her site visits she was able to observe mixed gardens started by these Volunteers. Sue also reported that the term "mixed gardens" has been accepted and integrated into the development vocabulary of Peace Corps/Honduras.

Sue suggested that Peace Corps staff need more training in programming so they can be better prepared to integrate ISTs of this kind into their overall project plans.

Alfonso Barahona, APCD Agriculture

Alfonso suggested that the Home Gardens IST should not just be limited to those Volunteers with limited or no agriculture background. He felt that agriculture volunteers could benefit, as well as, contribute to the IST. Alfonso felt that in the future a similar IST could be sponsored by another sector (i.e., health) in collaboration with the agriculture sector. He also said they could identify enough resource people in country to organize a mixed garden training program without outside consultants.

Based on his own experiences with Washington sponsored ISTs, Alfonso said he prefers training programs where he is intimately involved in the planning and implementation. He suggested the following scenerio: 1) a pre-visit by the Washington consultant to discuss the curriculum with the program manager, 2) the country adapts the curriculum to meet their specific needs, 3) then a regional training of trainers is done by the Washington consultant. Alfonso felt that this way would lead to better integration of the IST into the sector plan and more commitment and interest by the APCD to the project.

Alfonso also discussed the plans PC/Honduras has to develop a model farm for their training site. He wants to include a mixed garden as part of that farm. He says PC/Honduras may need assistance from PC/Washington to fully develop their plan, but that the project would need to be coordinated by the Programming and Training Officer.

Alex Corpeno, APCD Community Services

Alex's programs recruit mainly "professional" degreed persons. They work in youth development, business, and co-operatives. He explained that his Volunteers have expressed an interest in including gardens as part of their projects, especially those working with co-operatives and with youth.

Alex shared some of the feedback he had received from Scott Charlesworth, a Volunteer from his program who had attended the training with his counterpart, the school principal from his town. Alex reported that Scott liked the IST because he could bring one of the members of the community he was working in. Scott doesn't have any agriculture background, but felt he learned enough to explain the concepts to the Hondurans he works with. He recommended the IST for all Volunteers if they had the patients to learn. He felt the two week length of the IST was necessary. Scott told his APCD that the IST was a "good cross cultural training - understanding the work is understanding the man".

Scott has changed sites since the IST, but Alex said that Scott worked with his counterpart and his counterparts wife, also the leader of the Amas de Casa (housewives) group in the community. Together they initiated garden projects in several communities.

Alex is very supportive of the idea to develop the model farm, including a mixed garden, at the training site. He feels his Volunteers would benefit from the experience in pre-service training.

Gale Marrow, APCD Health

Gale had barely been in the country for a month before the IST took place. She had inherited the project from the previous APCD.

The health program had six Volunteers participate in the IST, but only two of them actually developed home garden projects. Gale attributed this to the fact that the selection of the participants seemed rather haphazard. Those who attended the IST weren't necessarily interested or in need of the training. This haphazardness also affected "counterpart" selection. She also said that gardening was not part of the job description for the health Volunteers.

Gale reported that she had feedback from some of her Volunteers that the Hondurans already knew the gardening techniques taught during the course. She felt even if that were so, all the better, because the PCVs could compliment that knowledge by helping their counterparts to promote and organize garden projects.

Gale stated that all technical in-service training programs in Honduras must be sponsored from outside (i.e., OTAPS PC/Washington) because Peace Corps/Honduras doesn't include technical ISTs in its overall training cycle or budget. Although their contractor may be capable, all IST money under the present training contract is designated for language training.

Jorge Betancourt, APCD Natural Resources

Jorge had two Volunteers that attended the IST. He said he felt all the Volunteers in his program could use this type of training. He explained that many of the women PCVs are approached by women's groups to assist them in developing gardens. Also many of his fisheries Volunteers want to integrate fisheries, small animal raising, and horticulture into their projects.

Jorge reported that in the upcoming agro-forestry IST, sponsored by OTAPS, he has requested that home gardening be included on the agenda.

RECOMMENDATIONS

Peace Corps/Honduras

1. PC/Honduras needs to determine how mixed gardening and nutrition improvement can be integrated into their various program areas and overall country management plan.
2. The number of training weeks specified for in-service training (150 weeks per year) by PC/Honduras are currently committed solely to language training. Technical in-service training, other than 2-3 day program conferences is not included in the overall in-country training cycle. We suggest that the language training time be reprogrammed to also include technical training. A series of technical (i.e., mixed gardens, project planning, etc.) and Spanish ISTs could be offered within a given year. The Volunteers would be allowed to choose to attend one or two of the ISTs that addressed a specific job need or was suggested by his/her APCD.
3. Training in mixed gardening could be integrated into the pre-service training for all the Volunteers in Honduras. The Agriculture APCD and the Ag. Technical Trainer discussed the possibility of planting a demonstration mixed garden as part of the model farm being developed at the (semi-) permanent training site, where PC/Honduras does all of its in-country training. Financial assistance may be needed from PC/Washington.

Some of the PCVs, who participated in the mixed gardening IST could provide technical assistance in development of the mixed garden. We would suggest: Linda Schwetz, Barbara Bomberg and Mia Zmud.
4. Although the climatic and topographical areas of Honduras (i.e., slopes, semiarid, heavy rainfall, etc.) vary greatly, how to work under those special conditions should be demonstrated in the model garden or addressed in the training as much as possible. Avoid using a site like La Esperanza that does not simulate the typical situation the Volunteers work in.
5. Volunteers need a list of traditional vegetable crops commonly grown in Honduras and their nutritional value. They also need horticulture and nutrition materials in Spanish.

6. The participants from the November IST need the following technical information:
- a list of common local plants and their nutritional value
 - identification of the use of leaves and other plant parts that are edible.
 - insect and disease identification and control using chemical and non-chemical methods.

Peace Corps/Washington

Washington sponsored ISTs are often looked upon by the field, as "package deals", where they are neither encouraged or inclined to fully participate. It needs to be recognized by Peace Corps/Washington and the field that these ISTs are joint efforts. Washington needs to contract with the in-country staff to provide technical assistance in the form of trainers, materials, etc., but the field staff must take full responsibility for the program implementation.

One model to consider, that has been used by other sectors in OTAPS, is to spend more time, with in-country staff involvement, on the planning stage. It would include the following steps:

1. Washington sends the necessary technical materials to an interested field staff person to help them understand what this particular IST is about. These materials would include the training model, the UNICEF Home Gardens Handbook, Gardening for Better Nutrition, Tropical Leaf Vegetables in Human Nutrition.
2. The field staff person in turn makes a commitment to sponsor a mixed gardens IST. This commitment means the country will examine how they will integrate mixed gardening into their on-going programs. This includes: Volunteer job descriptions, the country management plan, technical support systems and even how the country will replicate this IST in the future, without Washington assistance.
3. Washington would send a consultant to the field, 4-6 months in advance of the IST to review or assist in the development of the items discussed above. The consultant would also help the APCD or P&T with the assistance of the Agriculture APCD, define the training needs, adapt the training model to meet those needs, and develop selection criteria for the participants. This person could also help the country begin the actual preparation for the training program by assisting in identifying a training site, setting up staged plantings, identifying resource materials and persons, adapting the pre-training questionnaire, etc. This step could be looked upon as staff development in preparation for the IST.

4. Another alternative, is in step 2 the consultant could do a TOT with a selected group of Volunteers, host country resource people, etc. The trainers from the TOT would then each prepare to do a regional garden IST. The consultant would return to country to monitor and provide technical assistance during the period the ISTs were taking place.
5. One year after the ISTs the APCD would evaluate the program and the progress of the Volunteers. The report would be sent to Washington as part of a monitoring system for the ISTs. If necessary Washington could send a consultant to coordinate the evaluation effort.

Nutrition Improvement Through Mixed Gardening...A Trainers Manual

1. Whenever possible staged plantings of the major crops to be used in the IST, should be planted before the program. The Agriculture APCD or a designated Volunteer could be assigned this task after consultation with the IST trainer.
2. Participants should begin planting as soon as possible in the IST.
3. The session on insects and diseases needs to provide more specific information on insect and disease identification and control. Some time during that session needs to be spent on common chemical control methods the participants may encounter in the field.
4. If possible, participants should build a compost pile. Also a session could be included on manure/compost handling, application, storage. Suggested areas to include are:
 - hands on practice and whys of manure and compost
 - providing straw with bedding to absorb nitrogen in urine of animal manures
 - how to protect manure and compost piles against leaching of nutrients
 - review of the 5 basic factors (aeration, moisture content, particle size, C/N ratio, and dimensions of pile) which influence the decomposition of a compost pile.
5. The nutrition sessions need to be expanded to at least two sessions. Both sessions should emphasize the identification of common traditional foods and their nutritional value. Activities could include:
 - I. Trainers provide participants with samples of as many local foods as possible (include leaves, flowers, seeds, fruits, tubers)

- a. small groups work to classify foods into three basic food groups
 - b. small groups identify vitamin (and mineral) sources by food color
 - c. participants (in small groups) combine foods provided into complimentary protein mixtures.
- II. Participants, in small groups, prepare traditional foods from a mixed garden into new and traditional recipes. Recipes are shared.
 - III. "Hands on" practice identifying and preparing useful plant parts (i.e., yuca and sweet potato leaves, vegetable pear root, pumpkin seeds, etc.).
6. Promotional/extension techniques should be used and emphasized through out the program. Such as:
 - how to do method demonstrations
 - non-formal adult education techniques (role play, problem dramas, picture stories, puppets, games, etc.).
 7. The soil session should be expanded to include basic soil conservation techniques. Possible activities could include:
 - a) how to build an A frame level
 - b) how to calibrate and use an A frame level
 - c) how to lay out a contour line and build a drainage ditch
 - d) how to build individual terraces (or bench terraces)
 - e) practices to protect soil by mulching
 - f) how to calculate the slope of a hill and determine the distances between drainage ditches.
 8. Host country nationals should be included in all of these training programs. They are a major resource to the trainer, the group and for each other. The program reinforces what they already know about traditional agriculture, allows them to compare and exchange ideas with people from different parts of the country. It also helps them realize the connection between nutrition and agriculture and teaches them new skills in community development.

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APPENDICES

A1 - A6

SUMMARY OF EVALUATION QUESTIONNAIRE

QUESTION NUMBER	PROGRAM												HIGH LOW PERCENTAGES	
	HEALTH				RURAL DEVELOP.				NATURAL RESOURCES		COMM. SERVICE			
1														
Relevancy to your work situation	4	2	4	2		5	3	5		2		2	40%	40%
2														
Emphasis on Traditional Garden Practices to improve nutrition	3	1	5	2		4	2	3	4	3		2	30%	40%
3														
Info/Skills														
4														
Coverage of Content Areas:														
--Extension	4	2		5		4	2	3	3	3		3	30%	20%
--Nutrition	3	2	3	3		5	4	3	4	4		3	40%	10%
--Technical Garden Skills	5	3	5	4		5	3	4	5	2		4	70%	10%
--Mixed Gardens Practice/Theory	5	4	5	5		5	5	5	5	4		4	100%	0%
5														
Time Distribution Theory/Practice														
6 & 7 Methods														
8														
Extent of Application in Community	3	1	3	2		4	2	3	4	2		1	20%	50%
9														
Personal Technical Competence	3		3	3		4	4	3	5	4		2	40%	10%

(A-1)

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QUESTION NUMBER THREE

LEAST USEFUL INFORMATION/SKILLS

- diagramming mixed gardens
- not enough on disease/insect recognition and control
- information level provided was too low for campesinos - skills already known by HCNs. (2)
- Slide presentations on mixed gardens in other countries.
- Various simple skills (i.e., hoeing techniques which are much better taught by local workers at my site.
- Household surveys

MOST USEFUL INFORMATION/SKILLS

- organic garden practices e:
how to make fertilizer tea
how to make organic pesticides
- learning about tropical vegetables
- basic idea of mixed gardening (3)
- use of land/space
- using local materials in garden for trellises, fences, stakes
- companion planting
- planting traditional crops
- planting a "local" home garden plot
- looking at nutrient content of vegetables
- identifying leaves, other parts of plants which are nutritional
- learning from the local people

QUESTION NUMBER FIVE

Time Distribution Between Theory and Practice

- good balance (5)
- too much of both theory and practice
- missed out on field practice because of rain
- too much theory (2)
- rain made theory and practice time equal

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QUESTION NUMBER SIX

Least Effective Training Methods

- slide shows
- group discussions - "Hondurans aren't acclimated to this method so they didn't participate"
- Lectures
- Lack of knowledge by trainers of Honduran practices
- We should have worked in groups instead of having individual plots
- Translation (to Spanish) led to some boredom

Most Effective Training Methods

- field trips to look at actual mixed gardens
- actual planting of a home garden
- do it yourself "hands on"
- Field demonstrations
- having other speakers (i.e., Calvina Dupre, Japanese volunteer, skills of Honduran counterparts)
- counterpart/PCV problem solving
- having individual plots w/counterparts
- counterpart teaching
- working with Hondurans in groups

QUESTION NUMBER SEVEN

Training Methods Transferable at the Community Level

- the hands on approach
- on site visits to individual farms
- nutrition games
- planting a garden with a counterpart
- looking at a case study
- field demonstrations
- group participation methods
- use of visual aids, i.e., (Agro-nutriwheel)

QUESTION NUMBER EIGHT (Part two)

Specific Examples of How Information/Skills Gained from I.S.T. Workshop Have Been Used

- Use of organic fertilizers and insecticides
- Mulching Techniques
- How to "Mix plant" (companion plant) common garden plants.
- Worked with a local women's club to plant and plant a demonstration garden.
- Conducted several introduction to mixed gardening lectures/talks.
- Promoted a community garden group using mixed gardening principles.
- Use of nutrition information with Rural Pilot School projects.
- Explanations to local community people of the differences between small mixed gardens and traditional extensive subsistence farming (i.e., growing just corn followed by beans once a year).
- Weed control by ground cover.

QUESTION NUMBER NINE (PART TWO)

FURTHER TECHNICAL SUPPORT ASSISTANCE NEEDED

- more insect and disease identification and control
- soil conservation (contour lines)
- knowledge of chemical fertilizers, insecticides, etc.
- more promotional skills
- support from Honduran institutions - Natural Resources, CARE, etc.
- how to prevent/control insects and disease using low cost non-chemical methods

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QUESTION NUMBER 10

Drawbacks to Co-participation of HCNs

- having to translate to Spanish was boring and time consuming (4)
- since workshop was in English (w/Spanish translation) Hondurans had a hard time understanding (11)
- level of technical skills differed within the group
- a feeling of responsibility for our counterparts

Benefits to Co-participation of HCNs

- HCNs shared their local skills and knowledge with us (8)
- feeling of "union" between my Honduran friend and I which helped in future gardening projects
- social interactions
- good counterpart understanding of planning a garden and the health benefits
- exchange of information
- ideas about what the campesinos would and would not do

Suggestions for better utilization of HCNs

- have written materials in Spanish
- conduct workshop in Spanish (2)
- they were well utilized (2)
- provide HCNs more time to teach the reasons behind locally used methods (2)
- more demonstrations by HCNs of common field practices (2)

QUESTION NUMBER 11

Suggestions for future I.S.T. Workshops in Gardening/Nutrition

- better description of course should be provided to PCV before enrollment
- do a brief study/diagnostic of target population to make course more applicable.
- better preparation to do field work - lacked tools, planting materials.
- do workshop in a place where there are planting problems - La Esperanza site was too ideal (i.e., fertile land and flat).
- use local language of host country (2)
- provide (written) materials in language of country
- less repetitiveness in the course
- two weeks was too long (5)
- orientation on mixed gardens but with emphasis on western style gardening
- have PCV and counterpart present material learned at workshop as a follow-up
- workshop should be part of pre-service training (3)

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QUESTION NUMBER TWELVE

Description of Nutrition Activities From IST Workshop
Integrated into Your Project

- needs assessment in diet decided by local people
- integrated mixed gardens in local school with nutrition lesson
- work in mixed gardens led to focusing primary activities towards nutrition
- awareness of nutritional value of green leaves and other plant parts not commonly eaten by Hondurans and the incorporation of lessons of how they might be better utilized in the local diet.
- Nutrition games to use at community level.

4. How well were the following content areas covered in the IST?

EXTENSION
(Promotion skills
to use at the
community level).

1 2 3 4 5
Not at all Partially Fully

NUTRITION

1 2 3 4 5
Not at all Partially Fully

TECHNICAL
GARDENING SKILLS

1 2 3 4 5
Not at all Partially Fully

MIXED GARDENS
PRACTICE AND
THEORY

1 2 3 4 5
Not at all Partially Fully

TRAINING METHODS

5. In your opinion, in the IST workshop, how was the time distribution between theory/classroom activities and "hands on" field practices?

6. At this point in time what do you remember as being the most effective training methods used in IST workshop?

Least Effective?

/4

How could the Honduran participants have been more fully utilized in the IST workshop?

11. My suggestions for future IST workshops in Gardening/Nutrition are...
12. Briefly describe your mixed garden/nutrition project. (Please include a description of any nutrition activities integrated into your project).

4. ¿Hasta que punto sirvió el contenido de las siguientes áreas del taller?

Abilidades de Promoción de Huertos y Nutrición a nivel de la comunidad.	1 No sirvió	2	3 Aceptable	4	5 Muy bueno
Nutrición Humana	1 No sirvió	2	3 Aceptable	4	5 Muy bueno
Prácticas de Manejo de la Huerta.	1 No sirvió	2	3 Aceptable	4	5 Muy bueno
Teoría y Práctica del concepto de la Huerto Mixto.	1 No sirvió	2	3 Aceptable	4	5 Muy bueno

B. MÉTODOS DE ENSEÑANZA

5. ¿En su opinión cómo fue la distribución de las horas del taller entre teoría en el aula y prácticas en el campo?

6. Enumere los métodos de enseñanza más efectivos del taller de Huertos Mixtos y Nutrición de Noviembre pasado.

¿Cuáles métodos de enseñanza del taller no fueron efectivos?

7. ¿Cuáles métodos de enseñanza utilizados por los instructores del taller de Huertos y Nutrición, ha podido usted utilizar para enseñar a la gente de su propia comunidad?

11. ¿Cuáles son sus sugerencias para otros talleres sobre Huertos y Nutrición?

12. Brevemente explique el proyecto de Huertos y Nutrición que ha podido realizar en su propia comunidad. (Por favor, incluya específicamente los detalles de las actividades de nutrición que ha llevado a cabo en su proyecto).

CHECKLIST FOR MIXED GARDENING

Checklist

Comments

Principles of Mixed Gardens

1. Multipurpose (i.e. food, medicinal, building materials)
2. Multi-storied crops and crops of different root penetration.
3. Weed control by shade crops and trailing edible vines.
4. Mixed cropping - maximizing limited space.
5. Use of local available planting materials.
6. Little or no use of chemical fertilizer and pesticides.
7. Companion planting that helps crop production efficiency.
8. Use of organic matter maximized (i.e. compost, manures, crop residues, kitchen waste).
9. Year round production of crops.
10. Labor requirements minimal.
11. Garden provides a variety of nutrients.
12. Garden is ecologically stable.
13. Combines perennials and annual crops.