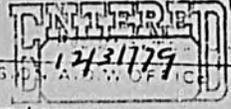


PDABB-337

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PROJECT EVALUATION SUMMARY (PES) - PART I



1. PROJECT TITLE
RURAL COMMUNITY NUTRITION AND INCOME
IMPROVEMENT (CRS/OPG)

2. PROJECT NUMBER
532-0045
3. MISSION OR AID/W OFFICE
USAID/JAMAICA
4. EVALUATION TYPE
 REGULAR EVALUATION SPECIAL EVALUATION

79-8
79-10 Jan
KINGSTON
7617
150280

5. KEY PROJECT IMPLEMENTATION DATES
A. First PRO-AG or Equivalent FY 77
B. Final Obligation Expected FY 79
C. First Input Delivery FY 81

6. ESTIMATED PROJECT FUNDING
A. Total \$ 431,000
B. U.S. \$ 237,000

7. PERIOD COVERED BY EVALUATION
From (month/yr.) April, 1977
To (month/yr.) August, 1979
Date of Evaluation Review October 1979

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study.
(NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., telegram, SPAR, PIO, which will present detailed request.)

B. NAME OF OFFICER RESPONSIBLE FOR ACTION
C. DATE ACTION TO BE COMPLETED

Action Decisions

1. Extend Project Assistance Completion Date (PACD) from April 1980 to April 1981.
2. CRS/Jamaica will submit a revised implementation and financial plan for Years III and IV to USAID/Jamaica.
3. CRS/Jamaica will hire a specialist in cooperatives in Year III.
4. At the end of Year III, CRS/Jamaica will provide AID/Jamaica with a plan for project self-sufficiency after the termination of USAID support. They will also provide an analysis of the feasibility of replication of the project in Jamaica, including recurring costs and personnel and supervisory needs.
5. In Year III and IV, the following activities should be undertaken:
 - a. Collection of health/nutrition data and accurate clinic utilization rates in the project area.
 - b. Increase participation rates, examine factors responsible for low participant continuation rates and reduce attrition in

USAID/J	Nov. 1979
CRS/Jamaica	Dec. 1979
CRS/Jamaica	Jan. 30, 1980
USAID/J CRS/Jamaica	April 1981

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

- | | | |
|--|---|--|
| <input type="checkbox"/> Project Paper | <input checked="" type="checkbox"/> Implementation Plan (e.g., CPI Network) | <input type="checkbox"/> Other (Specify) |
| <input checked="" type="checkbox"/> Financial Plan | <input type="checkbox"/> PIO/T | |
| <input type="checkbox"/> Logical Framework | <input type="checkbox"/> PIO/C | <input type="checkbox"/> Other (Specify) |
| <input type="checkbox"/> Project Agreement | <input type="checkbox"/> PIO/P | |

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

- A. Continue Project Without Change
- B. Change Project Design and/or Change Implementation Plan
- C. Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)

FATHER LOUIS GRENIER, DIRECTOR, CRS/JAMAICA

MRS. GABRIELLE PEAT, PROJ. OFFICER, CRS/JAMAICA

DR. LINDA HAVERBERG, HNP, USAID/JAMAICA (In Draft)

MR. HENRY JOHNSON, PROGRAM OFFICER, USAID/JAMAICA

MR. GARY COOK, HNP, USAID/JAMAICA

DR. FRANK MORRIS, ADIR., USAID/JAMAICA

MS SUSAN MERRILL, ASST. PROGRAM OFFICER, USAID/JAMAICA

12. Mission/AID/W Office Director Approval

Signature: *Glenn O. Patterson*

Typed Name: Glenn O. Patterson

Date:

the kitchen garden component.

- c. Preparation of a training schedule for Year IV for all project personnel and evaluation of the effectiveness of the training under the project to date.
- d. Collection of accurate data on amounts/types of vegetables grown, sold and income generated.
- e. Analysis of data from all components and assessment of replicability of project.

CATHOLIC RELIEF SERVICES/OPERATIONAL PROGRAM
GRANT (CRS/OPG)

RURAL COMMUNITY NUTRITION AND INCOME
IMPROVEMENT (PROJECT-532-0045)

Evaluation of Activities Undertaken During the Period
April, 1977 - August, 1979

I SUMMARY

The project's primary goal is to improve the social and economic conditions of the population in a limited rural area (parts of St. Andrew and St. Catherine) through increases in agricultural production, income, and improvement of health and nutritional status. While the project may lead to increases in agricultural production, income, and improvement of health and external status the deteriorating socio-economic conditions in Jamaica (see Section III) are likely to offset or possibly diminish the impact of the project on the target population. Based on activities carried out during the first two years and plans for the remainder of the project, it is expected that all the specific targets of the project will be met or surpassed.

The number (545) of kitchen gardens established in the project's first two years greatly surpassed the target set by the project paper. Although still in the initial phases of implementation, there were 20 rabbit projects and 24 goat projects at the end of Project Year II, which was 6 short of project projections.

For the health and nutrition component, the project's objectives were to increase the utilization of health facilities and lower Gomez Grade II and III malnutrition in children under 3 years old. Although surveys to assess the nutritional impact of the project on the 0-3 year old target group are not complete the nutritional status of these children is being closely monitored. Clinic attendance by that age group has been increased by 32% during the first two project years. Unfortunately, clinic attendance by pregnant and lactating women fell substantially

when supplementary food was not provided by the Ministry. At the present time, food which was donated by CRS is starting to be distributed and attendance has increased. The third major project target to integrate the work of CHAs and JYCs has been met. These individuals have gained acceptance as health educators and agricultural extension officers by the participants and the entire community. Their work has served to integrate the nutritional and agricultural aspects of the program.

II EVALUATION METHODOLOGY

This evaluation is the first comprehensive joint CRS/USAID evaluation and covers the project's first two years. The purpose is to assess the impact of the project to date and the likelihood of objectives being met. The evaluation was based on several meetings between project personnel and USAID/Jamaica staff, a thorough review of all project documents, activities, and Mission analyses of the project. This PES, based upon jointly agreed upon outline, was prepared by CRS and project staff and reviewed and edited by USAID/Jamaica staff. The document is intended to serve as both an evaluation report for A.I.D. and as a first installment of a case study in community development.

Over the last two years, a series of project reviews have taken place which have been incorporated into this summary. Two were undertaken by Tom Sawyer, CRS Development Consultant, in November 1977 and April 1979. Mrs. Carlene Gardner, a Jamaican sociologist/anthropologist, prepared an analysis of the project, "Assessment of the Small Farmers' Support Scheme", in December 1978. The report, which was based on a questionnaire and interviews included: (a) participants' response to the project (acceptance, continuity, benefits); (b) JYC worker input; (c) project participant contact; (d) integration of agriculture and health/nutrition goals; (e) potential of the project to effect change in eating habits and nutritional status, and (f) community systems which can facilitate the project. At the end of Year I, (Sept. '78) project staff and CRS supervisors also conducted an evaluation of the progress achieved in meeting targets set forth in the implementation plan.

Quarterly project status reports prepared by the project director and his staff describe activities and results achieved during the period under review, and the findings are summarized in this document.

III. CHANGES IN PROJECT SETTING

A. Socio-Economic Conditions

Since the project began, there has been a deterioration in the socio-economic conditions in Jamaica. The economy has been adversely affected by: (1) the oil crisis; (2) the decline in sugar production and sugar prices on the World market; (3) increased international competition in the expansion of bauxite production; (4) rising unemployment (5) worsening terms of trade; (6) the "drying up" of foreign investment; (7) migration of increasing number of professional and skilled people; (8) a flood disaster in western Jamaica which has resulted in damages totalling about 80 million dollars; (9) rising food prices and sporadic food unavailability for certain basic items; (10) high rate of inflation; and (11) increasing crime rates. These conditions are likely to make it more difficult for the project to achieve its stated goal of improving the social and economic well-being of the target population.

Inflation has increased the cost of materials and travel. However, this has been offset somewhat by the favorable rate of exchange of the U.S. dollar over the last two years with the continuous devaluation of the Jamaican dollar. This means that CRS/Jamaica will be able to extend the project completion date for an additional year without further funding. (see Section III C 2).

B. Priorities of Host Government

At the time that the project was designed, one of the priorities of Government of Jamaica was self-sufficiency in food production. This policy is still in effect at the present time and is compatible with the project's goals.

In 1974, a National Food and Nutrition Policy for Jamaica was formulated by the Nutrition Advisory Council of the Government of Jamaica. Under the policy, the Ministry of Health planned to -

1. Improve the staff structure and training of health care personnel.
2. Expand and physically improve the island's Health and Maternal Centers.
3. Increase and improve the system of nutrition surveillance of young children and provide better coverage of mothers and children by the clinic services.
4. Intensify the teaching of basic nutrition through demonstration techniques to community groups, health centers, and other suitable locations.
5. Introduce a supplementary feeding program for needy mothers and children as identified by Clinic Nurses and CHAs in the field.
6. Distribute iron and folic acid tablets to all pregnant women through the Maternal and Child Health Services.

It was the GOJ's objective to reach by 1980 the following

1. Availability of sufficient food i.e. adequate quantities of essential commodities to maintain

good nutrition and dietary well-being of all segments of the population.

2. Annual increases in the proportion of energy and protein requirements supplied from local production.
3. Elimination of malnutrition in vulnerable groups of the population and in particular:
 - a) serious protein-caloric malnutrition and anemia in children up to 5 years of age
 - b) nutritional deficiencies in pregnant and nursing women.

Unfortunately, this ambitious 5-year plan has not been successfully implemented. It is now clear that the targets will not be achieved by 1980. In fact, because of financial and other constraints, the health services have in some respects been curtailed. The changes most directly affecting the project have been shortages of supervisory staff and shortages of food supplements. Shortages of supervisory staff has meant that the work of the CHAs has not been monitored as it should have been and therefore their work output has fallen and demonstrations and nutrition teaching in clinics have declined. The project nutritionist and her team have been obliged, with the sanction of Medical Officers of Health and Public Health Nurses, to assume a measure of supervision of CHAs that was originally the responsibility of MOHEC.

C. Resources Available to the Project

1. Personnel

The CRS/Jamaica Program Director, Fr. Louis J. Grenier, and the CRS/Jamaica Program Assistant, Mrs. Gabrielle Peat, provide overall project management, supervision, and direction. The project staff now consists of a Project Director, Deputy Project Director, Secretary/Bursar, and five full time Peace Corps Volunteers, 15 JYCs and 15 CHAs.

The original project design called for only a full-time Director, Deputy Director, Secretary/Bursar, a part-time nutritionist Peace Corps Volunteer and the Program Director of CRS. There has, therefore, been a substantial increase in number of Peace Corps Volunteers associated with the project. Similarly, there are 15 JYCs involved in the project whereas only 10 were originally planned. There are currently 15 CHAs instead of the 20 originally proposed in the project document.

2. Financial

The project document states that financial contributions to the project would be made by USAID (U.S. \$237,000), the Government of Jamaica (U.S.\$142,000), the Peace Corps (U.S.\$21,300), 4H Clubs (U.S.\$5,700), and Catholic Relief Services (U.S. \$25,000). Each of these local agencies and the Peace Corps have contributed more than was originally planned. There are 12 JYCs paid by the Government of Jamaica

instead of 10 and 15 CHAs instead of 10. Peace Corps contributed 5 volunteers, instead of the one that was planned. Catholic Relief Services is providing management support, backstopping series, and supplementary food, which was not called for by the project paper, 4H Clubs have contributed the use of their facilities at the Salisbury Plain Center for training sessions, storage of supplies, and for care of livestock.

USAID's funding appears sufficient to carry the project for an additional year which will enable the project to more fully meet its objectives. Due to an approximately six month delay in start-up of the project and difficulty in getting livestock and other materials, the project is behind schedule. The additional project year should enable the project to not only meet its objectives, but conduct a more thorough analysis of the project's potential for replication, as well.

IV EXAMINATION OF PROJECT INPUTS

A. Personnel

As mentioned previously, there are more management/supervisory personnel and more JYCs involved in the project than was originally planned. There are, however, five fewer CHAs in Year II than originally planned. All of the supervisory staff have been found to be necessary and in fact, are a key project element. The JYCs require not only classroom instruction but also field training and day-to-day supervision. The CHAs, similarly, need in-service training on a regular basis and a good deal of supervision.

These facts pointed to the need to address the following questions:

- 1) What is the optimum JYC worker/population and CHA/population ratios to achieve the intended results in agriculture and health/nutrition in a community?
- 2) What length of time is required before a JYC and CHA can be truly effective in a community?
- 3) What is the minimum level of supervision and training required for JYCs and CHAs to be effective in this type of work?
- 4) Can the roles presently being assumed by CRS/Jamaica staff and Peace Corps volunteers under the project be taken over by Government of Jamaica staff? Can the project be sustained with only local human resources inputs?

B. Consultants to the Project have included:

1. Mrs. Carlene Gardner, sociologist/anthropologist, at the end of Year I. completed an assessment of the project, and conducted a Community Development Workshop for project staff in April 1979.
2. Mr. Ron Sawyer, Development Consultant to Catholic Relief Services, for informal evaluation of the Project.
3. Dr. Frances Rothert, Medical/Nutrition Consultant to Catholic Relief Services, who offers valuable advice from time to time.
4. Various specialists in the 4-H Movement and the Ministry of Agriculture who offer advice and who assist in the training of JYCs.

Consultants were considered adequate to meet the needs of the project and will provide continuing services in Year III.

C. Commodities

Commodity procurement (e.g. of meshwire, back packs, spray pans, goats, medicines, baby-weighing scales) caused considerable initial delays in implementation, especially in the livestock component. This is no longer a major problem.

USAID has provided all project inputs originally planned in the project document. These include two project vehicles, three slide projectors, three daylight screens, visual kits weighing scales and back packs for CHAs and agricultural supplies. CRS's contribution exceeded that which was originally projected. In addition to the grazing lots and administrative backstopping that CRS has provided, CRS/NY has made available a considerable quantity of vegetable and flower seeds, and 50 metric tons of dried skim milk which was donated by the EEC through CRS Geneva.

D. Training

The following training sessions have been held for project personnel:

- 1) All staff were trained in community development.
- 2) Two-week orientation courses are arranged for each incoming group of JYCs.
- 3) In-the field practical training for JYCs is an on-going activity.
- 4) CHAs attend most sessions of the two-week orientation course for JYCs.
- 5) CHAs are trained by Ministry of Health staff and by the project nutrition team at monthly conferences.
- 6) CHAs are continuously trained by the project nutrition team in the charting and interpretation of the data they collect.

- 7) CHAs are being assisted to carry out food demonstrations in ante-natal and child welfare clinics.

V DETAILED EXAMINATION OF PROJECT OUTPUTS-
ASSESSMENT OF PROGRESS

A. Agricultural Extension

1. Establishment of Kitchen Gardens

Before the JYCs assist persons to establish kitchen gardens, they gather information about their families and living conditions. Selection of participants is based on such criteria as interest, attitude, land conditions, ability to be trained, and socio-economic status. The selected applicants are then revisited, instructed in how to prepare the land, and are given seeds. Usually, information is collected on many more applicants than eventually establish gardens.

A method has been devised of reporting the number of active gardens at any given period during the life of the project. Every six months is considered an active period, which is the optimum length of time needed to prepare the land, sow seeds, reap crops and request new seeds, allowing time for unavoidable delays due to bad weather or a heavy JYC work schedule.

Data collected thus far are presented in table 1. During the last two 6-month periods, only about 50% of those surveyed actually established gardens during the same period. The data also indicate an extremely low continuity rate, which has serious implications for the self-sustaining nature of this activity once AID support terminates. Whereas the targets set forth in the original project paper of 140 gardens established in Year I and 220 in Year II have been surpassed,

the following questions must be answered before any conclusions can be drawn about the significance of these targets and about the "success" of the project in establishing kitchen gardens:

- a. Are targets of 140 gardens in Year I and 220 gardens in Year II adequate in relation to the community's needs, capabilities, and the level of inputs which have been provided by the project?
- b. What factors are responsible for the relatively low continuation rates from one period to the next? What can be/should be done to increase continuation rates?
- c. What is the average size of each garden in terms of acreage and number of crops in production? Should the success of the project in establishing kitchen gardens be judged by the total number of gardens or by qualitative factors such as standards for an "adequate" or "reasonably sized" garden?

ASSESSMENT OF KITCHEN GARDENS

TABLE I.

ESTABLISHMENT OF KITCHEN GARDENS

	No. of Surveys Taken	New Active Gardens	Surveyed But Not Yet Active	Surveyed in Previous Period and Now Active	Continued Active from Previous Period	Total Active Gardens
<u>Year I:</u>						
A. <u>Period I</u> (9/77-2/78)	387	70 $\frac{70}{387} = 18\%$	317		-	70
B. <u>Period II</u> (3/78- 8/78)	234	126 $\frac{126}{234} = 54\%$	108	60 $\frac{60}{317} = 19\%$	34 $\frac{34}{70} = 49\%$	220
C. <u>Total</u>	621	196	425	60	34	290
<u>Year II:</u>						
A. <u>Period III</u> (9/78- 2/79)	297	145 $\frac{145}{297} = 49\%$	152	44*	66**	255
B. <u>Period IV</u> (3/79- 8/79)	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
C. <u>Total</u>	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

* Includes 33 surveyed in Period I and 11 surveyed in Period II

** Includes 30 of the 94 surveyed in Period I and active in Period II (34 had also been active in period I) and 36 of the 126 who were surveyed and became active in Period II.

- d. What sustainable benefits (socio-economic, nutritional, etc.), if any, can be derived from the establishment of a garden for only one 6-month period?
- e. Why do only about 50% of the families surveyed actually establish kitchen gardens? What are the characteristics of these latter families? Are there any common characteristics which can be identified as likely to signal an interested participant who will be successful?

Some of these questions have been addressed by Mrs. Carlene Gardner in her December 1978 "Assessment of the Small Farmers Support Scheme." Based on a survey of approximately 55 participant families and 55 non-participants, Gardner reported that non-participation and attrition were related to lack of interest rather than to failure of JYC workers to follow-up on participants. Many farm families were more interested in large scale production or already had kitchen gardens. Some families, on the other hand, had real problems, which prevented them from participating, e.g. non-ownership of land, animals which could destroy cultivation, and no labor assistance.

Gardner recommended that to increase participation rates and reduce attrition and drop-outs, the project should seek to build more consensus about the needs which it is trying to meet, and that greater use should be made of community support systems to carry out initial recruitment and follow-up, so that project personnel can focus on extension education and servicing of garden plots. Furthermore, it was felt that the kitchen garden scheme should involve more

women and children in the care of the garden. (participation in the project is seen by the community as part of the man's role as a farmer.) This should also result in greater integration of the health/nutrition goals of the project. The Gardner report was also able to identify characteristics of participants and non-participants. The findings and recommendations of the Gardner report should be implemented.

During Year I, the crops grown were those already popular in the area, e.g. calaloo, cabbage, tomato, red peas and cucumber. Most of these grow quickly, and quick results encouraged participants who ate what they needed, gave some to neighbours and sold the surplus.

In Year II, crops such as carrots, turnips and mustard greens were encouraged. The nutrition team introduced the use of dark green leafy vegetables - not only the familiar callaloo, but mustard greens, pac choi, turnip greens, and radish greens - in the daily diet.

It was noticeable that a demand was created for vegetables that were hitherto unfamiliar and participants had no difficulty in selling surpluses of these. It appears that selection of vegetables for kitchens is not directly related to alleviating nutritional problems but to obtaining quick results to gain acceptance for the scheme and to provide an income supplement from sale of surplus.

2. Community Participation

Community participation in all districts of the project area was low at the start of the project. Some people were suspicious of the JYCs when they gathered their baseline surveys. It was rumoured that they were Government agents gathering information for tax purposes.

Other people were hesitant about participating because of their experience with broken promises by government agricultural agencies.

This initial mistrust and hesitancy was overcome when the JYC's worked closely with the first participants to ensure good results from well-established gardens. This success attracted new participants such that by the end of Year I, the JYC's were too few in number to cope with all the applications. The demand continued in Year II and although there were more JYC's a limit had to be placed on the number of new gardens and keeping their number within manageable limits.

In Harkers Hall, members of the community came together to plant a kitchen garden at the Health Center. A similar garden is being planted at Parks Road Health Center and one is planned for Lawrence Tavern Health Center. The CHA's and the horticulture specialist have worked together at Harkers Hall to show clinic mothers that vegetables can be grown in containers, such as old rubber tires and tins of various sizes, if land space is limited.

3. Income Generation

An estimate of the total amounts and value of the crops grown in kitchen gardens in Year II is presented in Table 2. The dollar values are based on the average retail market price of these commodities. The quantities of the crops were estimated by project staff based on observation of the gardens in production because participants were reluctant to report on quantities produced. Dry weather cut down production of some gardens and heavy rains in June 1977 washed out some gardens. No data is available on what percentage of the amount grown was actually sold. However, the data suggests that the 255 gardens in Year II produced approximately J\$38,000 worth of vegetables some of which was consumed by at least 255 families of approximately

six persons each (or 1530 persons) and some of which was sold. If we assume that 25% of the vegetables grown were sold, then the estimated income from the sale of vegetables for each participant (an average) was J\$40 per participant family, over and above the vegetables grown and consumed (and thus income saved) by the family. Since no data is available on the average amount of each crop grown, amount sold of what was grown, amount consumed of what was grown, and since the production estimates are crude at best, it is difficult to say with certainty how much income was generated and how many families benefitted from increased income. This information will be requested for gardens planted in Year III.

TABLE 2:

ESTIMATES OF TOTAL QUANTITY AND MARKET
VALUE (IN J\$) OF CROPS GROWN IN KITCHEN
GARDENS IN YEAR II

<u>Crop</u>	<u>Quantity</u>	<u>Per unit</u>	<u>Value (in J\$)</u> <u>Total</u>
Beets	360 lbs.	.80/lb.	288.00
Beans (string)	500 lbs.	.55/lb.	275.00
Beans (Other)	380 lbs.	.50/lb.	190.00
Carrots	3,200 lbs.	.80/lb.	2560.00
Cabbage	7,500 lbs.	.80/lb.	6000.00
Cucumber	2,100 lbs.	.35/lb.	735.00
Callaloo	2,500 lbs.	.50/lb.	1250.00
Lettuce	1,300 lbs.	.40/lb.	520.00
Mustard	4,400 lbs.	.40/lb.	1760.00
Okra	190 lbs.	.30/lb.	57.00
Onions	100 lbs.	4.00/lb.	400.00
Peas (red)	25 qts.	4.00/qt.	100.00
Pac Choi	9,700 lbs.	.40/lb.	3880.00
Pepper (sweet)	500 lbs.	.80/lb.	400.00
Tomato	5,000 lbs.	3.00/lb.	15,000.00
Turnips	6,600 lbs.	.70/lb.	4,620.00
Radish	100 lbs.	.30/lb.	<u>30.00</u>
			\$38,065.00

B. Livestock Rearing/Animal Husbandry

1. Rabbit and Goat Projects

At the end of Year II, there were 20 rabbit and 24 goat projects which was 6 short of the projected target of 50 animal husbandry projects. Originally 48 livestock units had been started, but 4 participants left the area. Procurement of suitable goats at reasonable prices has been difficult. High mortality rates in goats, newborn kids and young rabbits has been a major problem. As a result, project personnel have decided to increase the rabbit units higher than was originally planned. Under this component, assistance for construction of livestock pens and stock have been provided to 4-H Clubs at Cavaliers, Essex Hall, Cassava River, and Rock Hall.

The extent of income generation cannot be measured at this point, since only a few rabbits have been sold. At this stage, participants are concentrating on building up their stocks, rather than selling them. Year III, we will be examining the income generating capacity of this component, and the significance of the number of livestock units, in relation to community needs and capabilities.

2. Cooperative/Revolving Fund

This aspect of the project was slow in getting started due to unavailability of materials and healthy animals. Because of this delay, insufficient time has elapsed for the first of four payments to be due to the Revolving Fund. Thus, this element of the project cannot yet be evaluated.

The establishment of the livestock cooperative has also been delayed. Livestock participants have been given some training in the

principles of cooperatives, and several other training courses in this subject are scheduled to begin shortly. It is expected that the cooperative will be set up during the first half of Project Year III.

C. 4-H Clubs

One of the objectives of the project is to establish or improve where they already exist 4-H Clubs in the schools of the target area. At the inception of the project, 7 4-H Clubs existed in the area. At present, there are thirteen clubs in the following locations; Salisbury Plain, Allman Hill, Glengoffe, Cassava River, St. Mary's College (Above Rocks), Oberlin High School (Lawrence Tavern, St. Faiths, Mt. Industry, Cavaliers, Rock Hall, GratefuI Hill, Sargeantville School, and Essex Hall. The JYCs regularly attended 4-H Club meeting to share their knowledge and skill with the members. The club members grow vegetables and some of them also rear rabbits as part of their activities. The Salisbury Plain's 4-H Club has a large goat project.

Initially, one of the major constraints to 4-H gardening activities in schools was the lack of tools. Project staff, therefore, decided to loan tools to certain schools and a considerable expansion and improvement in vegetable production resulted.

On April 5, 1979, the Clubs in the St. Catherine section of the project area took active part in the Annual 4-H Parish Achievement Day held in Spanish Town. As part of the activities, they displayed vegetables produced with the help and guidance of JYCs and supervisory project staff. The project staff took that opportunity to set up an educational exhibit displaying three of the project components-vegetable and livestock production, nutrition, and 4-H activities. The project clearly has had a positive impact on the 4-H clubs in the area.

Whether this favorable change can be sustained and built upon at the end of the program needs to be examined.

D. Health and Nutrition Component

1. Major problems encountered to date

Due to Ministry of Health and Peace Corps Volunteer personnel shortages, budget, and a lack of scales for CHAs this component lagged for the first year and a half. In the project design, it was envisaged that a full-time nutritionist Peace Corps Volunteer would be made available for this aspect of the project. As a result of the delayed start-up of the project, the Volunteer's MOHEC parish responsibilities, and transportation problems, the volunteer was able to work only part-time on the project. Because this time was insufficient to meet the objectives of the program, the Volunteer is now full-time on the project. In addition, there has been a shortage of Senior Public Health Staff in Lawrence Tavern, Rock Hall, and Parks Road. With the approval of MOHEC, the project nutritionists have been providing monthly in-service training sessions for CHAs.

Ministry budget constraints have prohibited travel by the MOHEC nutrition assistants for most of late 1978 and 1979. Their presence at CHA conferences is highly desirable because they plan demonstrations and nutrition talks at clinics. They are responsible for monitoring the data gathered by CHAs on nutritional status of children under 3 years. This information is vital to measure the impact of the project. In the interim, the nutrition assistants have been transported to CHA sessions by project staff and project nutritionists have been assisting in the monitoring of data.

Because of supply shortages, ante natal clinics in the project area no longer provide iron tablets to pregnant women, which could affect improvement of nutritional status under the project. If the Ministry of Health approves CRS/Jamaica would seek supplies from the Catholic Medical Mission Board in the U.S.

2. Project objectives in this area were:

- a. to reduce the prevalence of Gomez Grade II and III malnutrition in children under three years

There has been much progress made in monitoring the nutritional status of children in the project area. Monthly growth charts are prepared by CHAs who keep records of weights/ages and Gomez classifications. Special attention is paid to the families with Grade III children. The nutritionists and CHAs gather the following information on each mother and child; (1) the age, marital status, and literacy of the mother, (2) birth weights and order of child, (3) breastfeeding, and feeding habits, and (4) economic status of the family. This will provide baseline data against which to measure the project's impact.

A survey of breastfeeding patterns in the project area have also been carried out, and, when completed, a sustained program to promote breastfeeding in the area will begin. CHAs have been prepared to give food demonstrations at child welfare clinics, with emphasis placed on weaning diets and use of multimix feeding principles. Children 1-3 years are receiving 4 lbs per month of dried skim milk (DSM) at child welfare clinics, and pregnant and lactating women are also receiving DSM as a food supplement, through the clinics.

In order to determine nutritional status of the children in the project area, all children attending child welfare clinics in 1976 were included in a survey which determined the child's nutritional status. Figures for the 5 clinics - Park Road,

Above Rocks, Harkers Hall, Lawrence Tavern, Rock Hall are given below.
 In St. Catherine, only 30% of children in the 0-3 year group were seen in
 clinics, in St. Andrew, the percentage covered was approximately 33%.

Nutritional Status (1976)

Total no. of children attending clinics - 690*

	<u>No. of children</u>	
Above normal	48	7%
Normal	420	61%
Grade I	184	27%
Grade II	33	5%
Grade III	<u>2</u>	<u>0%</u>
	687	100%

These figures may be considered the nutritional baseline data for
 children under 3 years before the project started. In the quarter ending
 April 1979, there were 204 families with a total of 286 children under three
 years participating in the project. All of the children were weighed and
 their nutritional status is as follows:

Above normal	3	1%
Normal	48	52%
Grade I	104	36%
Grade II	30	10%
Grade III	<u>1</u>	<u>1%</u>
	286	100%

*Three of the children were not weighed.

Although the above data gives some indication of what is happening to the target population, it is really too soon to have an accurate assessment of project's nutritional impact. If an impact had been made at the end of Year II, it would have been difficult to measure at the present time. It is necessary to obtain the current nutritional status of all the children in the project area. It must also be taken into consideration that CHAs are not aware of all children in the area, as they are not able to cover the area completely. There is evidence that severely malnourished children exist in the project area and are not recorded in CHA/MOHEC Flow Sheets.

(b) To improve eating habits (and nutritional status) among the population in general, but particularly among those involved with kitchen gardens and livestock raising.

For this target, a simplified food intake survey is being carried out. The survey will be repeated at the end of the project to examine changes in eating patterns in the project area.

The nutrition team has been promoting the idea of at least one dark green leafy vegetable, which contains iron, everyday. The agriculture specialists were given a list showing the higher food values of the dark green leafy vegetables, in comparison with chocho, and other more commonly grown vegetables. By Year II, dark green, leafy vegetables were introduced, and they proved acceptable to taste and easy to grow. From a nutritional

standpoint, kitchen gardens should feature peas and beans, which have a higher quality and greater quantity of protein than most other vegetables. The agricultural chart shown on page 35a shows only 24 quarts of red peas reaped. The cultivation of peas needs to be stressed and experiments conducted to develop strains with high yields, and resistant to disease and pests. Participants will be encouraged to eat more peas frequently and to accept peas as a food that is highly desirable for babies over 6 months.

All evidence indicates that there has been some improvement in eating habits. Participants and non-participants now have a greater quantity and wider variety of vegetables than before the project.

C. Greater utilization of health clinics in the area by the target population

Attendance at clinics by children under 3 years of age is monitored and classified according to clinic attenders, non-clinic and delinquent attenders (i.e. children who have not attended clinic for a 3 month period). In 1976 at the inception of the project, only 30% of the children in the 0-3 year groups were seen in clinics; in St. Andrew, the percentage coverage was approximately 23%. In the quarter ending April 1979, there were 204 families with a total of 286 children under 3 years participating in the project. Their clinic

attendance was as follows:

Clinic attendance	55%
Non-clinic attendance	21%
Delinquent "	24%

There is clearly a marked improvement among clinic attendance of children in this age group. This improvement is probably related to the distribution of DSM to young children (4 lbs per child per month) at all clinics in the area.

CHA's and the project nutrition team encourage pregnant women to attend clinics early and at regular intervals. Additionally, attendance at ante natal clinics fell off quite markedly when there was no supplementary food. Mothers complained that the high cost of living, high transportation costs, and time involved, did not justify a visit to the clinic if food was not distributed. DSM is now being distributed to 270 women at ante natal clinics (4 lbs. per month).

It has also been realized that clinic attendance could be improved through a more meaningful educational program for expectant mothers. To this end, the CHAs are to present a slide series at ante natal clinics on breastfeeding and nutrition for the pregnant woman. Women who are successfully breastfeeding will be asked to attend clinics in order to motivate young pregnant women to breastfeed their babies. With these steps it is expected that clinic attendance will improve.

3. Impact of the Health/Nutrition Component

When the project was designed, nutrition was considered only a minor component. At the present time, this area has become an integral

part of the project with a status at least equal to the agriculture and small livestock components. Much progress has been made in making the participants aware of nutritional practices and the project has adapted its agricultural components to meet nutritional needs of the participants. In fact, during Year II, in response to the needs of large families and those with malnourished children, the Peace Corps agriculture specialists have been promoting "Container Gardens", for those with little or no land space. CHAs and JYCs do much to integrate the nutritional and agricultural goals of the project. CHAs point out needy families and JYCs persuade these families to establish a garden. The Peace Corps has played a major role in the success of this component. The nutrition team, which is composed of 3 PCVs, has introduced new vegetables, implemented a major new program to promote improved eating habits and breastfeeding practices, and assisted in the supervision of the CHAs and JYCs in the area.

E. Integration of JYC Workers and CIAs

1. Training of the Groups

a) JYCs

When JYCs join the project, they are not usually skilled in agriculture and must be given adequate training by the supervisory staff, project consultants, and advisers before being sent out into the field. This training provides the simple principles and skills necessary for kitchen garden cultivation and small livestock rearing. Basic nutrition knowledge is included to enhance the effectiveness of the worker in the field and to facilitate collaboration with the CIAs.

A one-week orientation course at Salisbury Plain was conducted for JYCs at the start of the first Project year. In the second Project year, the course was extended to 2 weeks. In addition, JYCs participate in a number of training days, which are held at Salisbury Plain 4-H Center, to give them practical experience in vegetable cultivation and small livestock rearing and in dealing with problems that are likely to arise in the field. Supervisory staff make regular visits to kitchen gardens to give demonstrations that provide training to both participants and JYC workers. Regular two-hour conferences for supervisory staff and JYC workers allow for evaluation of the work and for the planning of strategies.

Mrs. Gardener in her study of December 1978 recommended that the project should develop and utilize a training manual/handbook.

She also recommended that "the JYC training program should include special courses on community development, group work, methods of instruction and the use of visual aids, and both classroom and in-the-field sessions. These recommendations were made after the orientation course for Year II had been given. As a result the course for Year III, held in September 1979, incorporated these suggestions and in Year III a Training Manual/Handbook will be prepared.

The method of selection of JYC workers has been found to be of critical importance. In Year I, the JYC Office made the selection by computer. Most of those selected came from Kingston and had no interest in agriculture, which posed major problems. In Year II, the JYC Office was prevailed upon to select candidates from high schools in the project area who were also residents of the project area and had performed well in agricultural classes. This selection procedure was found to be a considerable improvement and was also used for Year III. Despite these improved procedures, several JYCs have been very slow in responding to training and have not been effective as extension officers. This raises the question of what should be the minimum criteria for selection. This question will be examined in detail in Year III.

(b) CHAs

CHAs are employed and trained by the Ministry of Health. No educational qualification is required of them other than literacy. They are given a two-month period of training in basic health care and nutrition education by the Ministry. In-service training is supposed to be a major part of the program.

CHAs, as part of their regular duties are responsible for: (1) making house-to-house visits and weighing and recording the weights of children up to 3 years; (2) attending clinics to teach improved eating habits and food preparation; and (3) encourage the use of nutritious home-grown products.

Two objectives of the CHA program which are similar to those of the project are:

- i) encourage the growing of more nutritious foods in kitchen gardens; and,
- ii) to identify house-holds with children at risk or in poor health, to provide counsel.

Thus the activities in which the CHAs are involved under the project are identical to what is expected of them in their Ministry of Health job.

In order to assist the CHAs to perform their duties of recording weights and keeping records, it is necessary for some supervisory Ministry of Health staff (e.g. Public Health Nurses or nutrition assistants) to monitor CHA records on a regular basis. Because of budgetary constraints and staff shortages Ministry of Health personnel have not been available to do this. Therefore, the Project's nutrition team (Peace Corps Staff) has been working closely with the CHAs examining their records, correcting errors and generally monitoring the record-keeping which must be accurate in order to be useful or meaningful. The project nutrition team also attends monthly CHA conferences and suggests topics for a series of demonstrations. Practice demonstrations are then given by CHAs to the conference group, providing a further opportunity for in-service training.

From time to time, CHAs attend conferences with JYC workers including the orientation course and project supervisory staff, which are aimed at smooth integration of JYC and CHA work. JYCs are trained to work with kitchen gardens and small livestock and are required to have a limited knowledge of nutrition. CHAs have training in basic nutrition and health care and are required to have a limited knowledge about kitchen garden cultivation. Since both JYCs and CHAs are employed for work in defined sections of the project area, it is clear that i) their functions overlap slightly; ii) their roles can be integrated; iii) each category of worker enhances the value of the other; and iv) their integration is bound to benefit the community.

In year II, the "lessons learned" in the area of CHA training will be documented in the project reports which will be incorporated.

- a. The JYCs have gained acceptance by the participants and by the communities in general. This is even more marked in the case in those JYCs who have stayed with the project for more than one year.
- b. The project has contributed positively to food production in the target area.
- c. The target population has been eating more vegetables and a wider variety. Assuming an average family size of six, this means that in Year I, with 290 gardens established, 1740 people benefitted directly and in Year II, with 255 gardens, 1530 people benefitted directly.
- d. Participants have acknowledged the economic benefits to themselves through the gardens, especially in these times of economic hardship.
- e. In both Years I and II the number of gardens established has far exceeded the project targets.

3. Impact

Judging from the number of persons wishing to participate in the project and to learn more about vegetable cultivation, it may be said that the project is having a positive impact on the agricultural practices, the agricultural productivity, the food intake, and income-generating potential of the target community. During Year III, an attempt should be made to quantify the impact in these areas. Clearly, the JYCs, working with staff of the 4-H Club Movement, the Jamaica Agricultural Society, and the Ministry of Agriculture have created a favorable environment in the target community for implementing agricultural projects. The implications of this for replication elsewhere should be analyzed.

F. Prospects of Achieving Project Goal and Purpose

Based on the activities carried out during the first two years and the plans for the remainder of the project, it is expected that the specific objectives of the project will be achieved. However, the deteriorating socio-economic conditions in Jamaica are likely to offset or possibly diminish the impact of this project on the social and economic well-being of the target population. The project nevertheless will make it possible for the population of the project area to be better off than it would have been in light of the deteriorating economic situation in Jamaica.

The following conditions are considered critical to the project's success:

- 1) Continuation of both the CHA and JYC programs and involvement and cooperation of these workers and their organizations in project activities
- 2) Availability of Peace Corps Volunteers for the horticulture, small livestock, and health/nutrition components
- 3) Absence of severe drought, floods, or other natural disasters
- 4) Effective management of the livestock revolving fund.

VI LESSONS LEARNED

These lessons include the following:

- A. JYCs should ideally have been assigned to the project for two years, rather than one year.

- B. The orientation course for JYCs should be 2 weeks in length and the content of the course needs to be examined in light of the JYCs performance.

- C. A staff evaluation procedure should be established and implemented from the orientation period or start of an individual period of service.

- D. A single communications system among all the organizational components of the project and clear lines of authority between staff members should have been established at the onset of the project.

- E. A vegetable garden for the home should be of the size or have sufficient production capacity to provide for the family's consumption requirements, with some excess for barter or sale.

VII BENEFICIARIES

Direct project beneficiaries include those families with vegetable gardens (currently 545 families or 3270 individuals), families with livestock units (now 42), and the 923 children and 270 women involved in the nutrition component. All have had some degree of improved nutritional status through increased availability and access to nutritious foods, or feeding programs and health information provided at clinics. CHAs and JYCs have benefitted from the additional training and supervision received under the project. Midwives in the area have gained a knowledge of nutrition and gardening. The community members have acquired a greater supply of vegetables and less costly sources of protein.

VIII RECOMMENDED PROJECT CHANGES FOR YEAR III

Program strategy should remain the same, although much greater emphasis will be placed on participant involvement. There has been a growing recognition that the participant must become more involved, in order to insure continuation and expansion of project objectives after its termination.

Mrs. Gardner made the following observations and recommendations on the subject of community participation:

1. Greater involvement of the project communities should be obtained.
 2. Community organizations should be made aware of the goals of the project, and more frequent contact between project personnel and these organizations should occur.
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