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UNITED STATES DEPARTMENT of AGRICULTURE

FINAL EVALUATION of AGRO-INDUSTRIAL
EXPORT DEVELOPMENT PROJECT
No. 522-0120

Prepared for
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I. Introduction

This evaluation of the project to develop agro-industrial exports covers the period 1976 - September 30, 1981. A mid-term evaluation was made by Checchi and Company in July 1978. Another evaluation was made by the Honduran Ministry of Natural Resources (MNR) in June 1980 which covered the crop years 1978/1979 and 1979/1980.

The evaluation team consisted of Kenneth Laurent, Technical Assistance Division, Office of International Cooperation and Development, U.S. Department of Agriculture, and David Fledderjohn, Chief of Party, Guatemala, Agricultural Cooperative Development International (ACDI).

The team studied available reports, spent three days in the Comayagua Valley with MNR personnel, members of the Standard Fruit Company team, members of the asentamientos* and cooperatives, and officials of the Cooperativa Agrícola Regional Comayagua Ltda. (CARCOMAL). Other meetings were held with officials of MNR in Tegucigalpa. A visit was also made to Choluteca to discuss with an official of Productos Acuáticos y Terrestres, S.A. (PATSA) his experience in producing and exporting melons to the U.S. during the past several years.

Discussions were also held with the USAID/H personnel who worked with the project during the past three years.

The evaluation team feels that all discussions were open and frank and that there was a genuine desire on the part of those involved to overcome the problems encountered and to make the project a success. To all of those who gave their time, suggestions and criticisms, we express our thanks.

II. Project Background

A. Project Paper

In 1973, USAID/H prepared an assessment of Honduran agriculture and concluded that the limited effective demand for agricultural crops in local markets severely limited the growth of the agricultural sector. This study, and others, concluded that Honduras has the necessary land and labor resources, climate, and geographic location to export non-traditional agricultural crops to the U.S and Europe. Large quantities of traditional export crops - bananas and coffee - were already being exported.

An outgrowth of the sector assessment was a Project Paper which developed an agro-industrial program for which the U.S. would provide \$1.7 million and the Government of Honduras (GOH) \$3.6 million over a four year period. This program was approved in August 1976.

*Farmers who received land through the Agrarian Reform Program

The overall goal of the project was to increase incomes of small farmers in the project area. The purpose of the project was to develop a GOH capability to establish agribusiness export projects which directly integrate small farmers into the development process. (A general evaluation of the goal and purposes will be given in Section V.)

To accomplish the above, the project focused on the following activities:

1. Institutional Development

A Project Management Group (PMG) was to be formed consisting of personnel from the Ministry of Economy's (MOE) General Directorate for Foreign Trade (GDFT). This group was to provide oversight to the project.

As part of the institutional development, four persons were to be trained at the Master's degree level in agribusiness marketing. Another was to attend a nine month USDA seminar on agribusiness. Two marketing internships were to be established with an agribusiness corporation currently operating in Honduras and the U.S.

The World Trade Institute (WTI) would develop an in-country seminar on marketing Honduran agro-industrial products in the U.S., develop marketing manuals for processed products, and provide market intelligence.

Finally, the Instituto Centroamericano de Administración de Empresas (INCAE) was to develop a series of agribusiness seminars using actual case studies from Latin America.

An interagency agreement, involving the MOE, the MNR, the National Development Bank (BNF),* the National Agrarian Institute (INA), and the National Investment Corporation (CONADI), was to be signed and an evaluation committee established. The evaluation committee, chaired by the PMG, was to hold weekly or semi-monthly meetings to resolve implementation problems.

2. Processed Vegetable Project

Mejores Alimentos, S.A., operated a fruit and vegetable processing plant in Comayagua. It was to have a key role in the development of an export program for processed vegetables. At the time, all production from the plant was sold in Central America, but the company was interested in an increased supply of raw materials, especially tomatoes, and agreed to cooperate in the program, which included technical assistance in production, and test marketing of tomato products in the international market.

Mejores Alimentos was to develop a contract, setting fixed prices for tomatoes delivered to the plant. And, as noted above, the World Trade Institute (WTI) was to provide assistance to the company in marketing and in market intelligence.

To accomplish Phase I, a demonstration project involving small farmers was to be undertaken. Technicians, with experience in soil fertility and nutrition

*Since named Banco Nacional de Desarrollo Agrícola (BANADESA)

irrigation, disease and pest control, etc. were to be recruited. Farm planning was to be provided through special technical assistance, and two internships would be provided to MNR personnel to study specialized tomato production.

By the end of the fourth year of the project, farmers would be planting 1,500 mz. of tomatoes and Mejores Alimentos would be exporting 4,000 mt. of tomato paste and peeled tomatoes to U.S. institutional markets. Test marketing of pizza sauce was to be undertaken to further expand the market.

3. Fresh Vegetable Project

To further develop the export potential for vegetables, the project proposed to carry out feasibility studies of production and packing house operations. Once potential crops were identified, experiments would be carried out to determine those having export possibilities. Marketing of vegetables would be performed by Productos Acuáticos y Terrestres, S.A. (PATSA), a subsidiary of United Fruit.

Once the experimental plots had established economic levels of production of the qualities required for export, production would be expanded, reaching a level of 180 - 300 mz. by the end of the fourth year and the company would be exporting approximately 400 mt. of vegetables.

To assist in this phase, agricultural specialists and research assistance would be provided, as would a packinghouse manager. Six interns would receive special training.

III. The First Two Years

A. Processed Vegetable Project

Phase I of the Project Paper called for planting 325 mz. of tomatoes under contract to Mejores Alimentos. A price was set at L. 100 per ton,* with an expected yield of 20 tons/mz. Production credit was to be disbursed directly from the National Development Bank (BNF). A technical team comprised of a long term advisor financed by USAID/H and four MNR extension agronomists were to be provided. Two MNR extension agents were to receive tomato internships. An agronomic assessment, focussing on soil nutrition and irrigation availability was to be undertaken. Demonstration plantings were to be made at each site selected and a technological package designed. A Small Farmer Technology Project was to provide assistance in developing effective small farm systems planning.

The actual Phase I consisted of 66 mz (50 in Las Cañas and 16 in San Pablo). By the time the project agreements were signed, it was too late for USAID/H to hire a tomato specialist. However, Mejores Alimentos did hire a specialist to oversee its production and to help as he could with the asentamiento groups. MNR provided four technicians, but the Checchi Team could find no evidence of their presence. 1/

*One Lempira = U.S. \$0.50.

1/ Checchi and Company. An Evaluation of the Agro-Industrial Export Development Project in Honduras. Report submitted to USAID/Honduras. Washington, D.C. July 28, 1978 p. 21.

When the project got underway in January, 1977, only the Mejores Altos technician had any technical experience with tomatoes, very few of the members of the asentamiento had previously grown tomatoes, and, as was discovered at Cañas, there was not enough available labor to carry out the required tasks which they were needed.

The contract with Mejores Alimentos provided for a fixed price of L. per ton (found to be a "metric ton" instead of the usual short ton), and farmers had to pay for transport to the plant. Farmers were required to buy inputs from Mejores Alimentos and the company billed BNF directly for payment. When tomato shipments arrived at the plant, they were severely discounted for quality - up to 30 percent, in some cases.

Losses to farmers were heavy - over L. 31,000 in Las Cañas and over L. 16,000 in San Pablo. Farmers in the asentamiento groups blamed Mejores Alimentos for much of this loss and the company blamed the growers for failure to follow directions, for selling tomatoes on the local market instead of delivering to the plant, etc. Whatever the reasons, the experience of the 1976/77 crop effectively stopped all activity in the processed vegetable phase of the project. Mejores Alimentos did not deliver product to the U.S. institutional market as programmed because it was able to sell its total output in Central America and felt it needed to gain a stronger position in that market before testing a more or less unknown situation in the U.S.

B. Fresh Vegetable Project

In May 1976, the Servicio de Investigación Agropecuaria Tropical, Sociedad Anónima (SIATSA) completed a study of the agronomic feasibility of establishing a fresh vegetable export industry in the Comayagua Valley. 2/ A second feasibility study was completed by SIATSA in September, 1976, which covered Tepeque, La Entrada, La Esperanza, Siguatepeque, and the Quimistan Valley. 3/ In the fall of 1976, SIATSA began variety trials of tomatoes, cucumbers, okra, summer squash, and green beans. These trials were completed in June 1977. WTI made market analyses for several crops and test marketed some canned green beans, several loads of fresh tomatoes, and a few other products from Mejores Alimentos. These test runs indicated the products were acceptable in the U.S. market.

During the first two years of the project, USAID/H provided a person almost full-time to assist in coordinating the activities of USAID/H and various government entities. The person supplied by USAID/H had a major responsibility in developing the Project Paper and, therefore, was fully familiar with the activities of the project and how they were to be implemented.

During 1976, a seminar was given by INCAE for approximately 25 persons. Included were discussions of an integrative approach to managing agro-industrial institutions and other topics to create an awareness of the process required in exporting agro-industrial products.

2/ SIATSA. Basic Agronomic Study of the Potential for Growing Vegetables for Export, Primarily in the Comayagua Valley. La Lima, Honduras. July 1976.

3/ SIATSA. Basic Agronomic Study of the Potential for Growing Vegetables for Export in the Comayagua Valley and Other Areas of Honduras. La Lima, Honduras. September 7, 1976.

The variety trials undertaken by SIATSA in the fall of 1976 and completed in the spring of 1977, indicated that further trials should be undertaken with tomatoes and cucumbers. The government developed a proposal for future work and put it out for bids.

The Standard Fruit Company (SFC), which has offices in La Ceiba, won the contract. SFC exports large quantities of bananas from Honduras as well as pineapple and grapefruit. At the time it won the contract, it was carrying out intensive experiments on non-traditional crops such as cucumber. (It has since closed down these experiments.) Prior to winning the contract, it had prepared a report on the feasibility of establishing a fresh vegetable export industry in Honduras. ^{4/}

The 1977/78 contract called for establishing trials at two locations: Las Cañas in the Comayagua Valley and El Sisín in the Department of Copan.

The trials in El Sisín consisted of 1.1 hectares (has.) of cucumbers and 1.5 has. of tomatoes; those in Las Cañas 1.6 has. of cucumbers and 1.8 has. of tomatoes. The production of cucumbers was exceptional - over 100 mt. per ha., while those of tomatoes were fair - 25 to 35 mt/ha.

Trial shipments of approximately 2,200 boxes of cucumbers and 1,500 boxes of tomatoes were made to the New York market. These were handled by a SFC subsidiary. (This subsidiary no longer handles products from the project and other arrangements have had to be made.) All shipments of cucumbers arriving in New York were of acceptable quality. The tomatoes arrived in poor condition and large quantities had to be discarded. SFC Quality Control specialists were unable to establish the cause of the poor condition of the tomatoes.

The final report for the crop year 1977/78, stated that MNR failed to provide machinery and equipment on time, at Las Cañas. Consequently, planting and other necessary activities were either not done on time or SFC personnel often had to be occupied trying to arrange for equipment when they needed to work more closely with farmers. Other problems during this test were vascular wilt in El Sisín and wind damage to cucumbers in Las Cañas.

The Standard Fruit Company was awarded a contract to provide similar services for the 1978/79 crop season. The results will be presented in Section IV.

It was obvious by this time that the project was not developing as envisioned in the Project Paper, and USAID/H arranged to have an indepth evaluation made by Checchi and Company. Since this was an important review and evaluation of the project, with recommendations for its future direction, the report will be treated in depth. All of the information that follows is derived directly from the report. A USAID/H review of the evaluation follows after the discussion of the Checchi report.

^{4/} Standard Fruit Company. Feasibility Study for Establishment of an Export Fresh Vegetable Industry in Honduras. Phase I. La Ceiba, Honduras. May 1977.

C. Checchi Evaluation 5/

The Checchi report was prepared during July, 1978. The findings of the evaluation team are given in summary form.

1. General Conclusions

- a. The basic concept of the project was excellent.
- b. The time frame for the project was too short. Only one-fourth of the funds had been expended after two years.
- c. The fresh vegetable project had a positive effect upon small farmers, government ministries and the SFC.
- d. The processed vegetable project was at a complete standstill. The processor was averse to working with small farmers. The marketing strategy was different from that proposed in the Project Paper.
- e. Mejores Alimentos suffered a lack of credibility among vegetable growers in the areas. Low prices paid and late payments were the main causes.
- f. The institutional building aspect had very little effect and its spread effects were minimal.

2. Processed Vegetable Project

- a. Mejores Alimentos continued to suffer from a bad reputation arising from its failure to pay some farmers for up to two years after delivery of produce.
- b. Mejores Alimentos' own yields were below the level plant management claimed were necessary for farmers to make money.
- c. Mejores Alimentos refused to pay a price which would enable the farmer to stay in business while bringing yields up to a profitable level.
- d. Mejores Alimentos was incapable of developing a raw material supply and could not enter the U.S. market as originally envisioned by the Project Paper. Its corporate strategy was to expand its share of the Central American market.
- e. The company originally required that fertilizer and insecticides be bought from the company store. This requirement was eliminated.
- f. Mejores Alimentos tried to sign five-year contracts with farmers. Farmers considered these contracts unreasonable.

- g. Farmers had to pay for transport to the plant. This was difficult for small farmers to do.
- h. The technical assistance provided through the USAID/H grant was found by Mejores Alimentos to be satisfactory in both processing techniques and marketing. Evaluators felt the company's major problem was raw material supply, not technical processing or marketing knowhow.
- i. CONADI, as Mejores Alimentos' major stockholder, was not committed to AID's goal of assisting small farmers or of promoting exports to U.S. markets.
- j. This demonstration project differed from the fresh vegetable demonstration project in that farmers bore all the risk. Several groups lost heavily.
- k. Two groups of farmers took the position that they would never in the future deal with Mejores Alimentos.

3. Fresh Vegetable Project

- a. The original concept was well-conceived and was proceeding satisfactorily.
- b. The recommendations of SFC has for the most part been implemented and resulted in demonstration experiences.
- c. The incentives built into the project - paying wages and allowing campesinos to sell locally non-exportable product - resulted in misimpressions and possible counterproductive effects.
- d. Technically, tomato production was deemed by SFC technicians to be at least two years away from commercial levels. There were fewer technical problems with cucumber production and those would likely be resolved during the next growing season.
- e. Several shipments of tomatoes were rejected by USDA because of deteriorated condition. The Quality Control staff of SFC was unable to pinpoint the cause.
- f. Cucumbers were produced with amazingly high yields (one planting in Copán yielded over 83 tons per manzana), and reached New York in very good condition.
- g. Top-level MNR officials did not feel the project was their responsibility, but were committed to carrying out the technical aspects.
- h. The PATSA operation in Choluteca offered important clues as to the appropriate model of organization to carry out export operations.
- i. If a management-marketing contract were given to SFC, it was unlikely that SFC would permit a campesino controlled organization to participate in the marketing process.

- j. If given a marketing contract, SFC would not likely pay farmers a fixed price.
- k. The impact on the target group was positive:
 - (1) Reversal of Cañas' demoralization and a revival of belief in own capabilities.
 - (2) Employment of women at salaries equal to men was received enthusiastically by women.
 - (3) The wage rate of L. 3.00 was L. 0.50 over the legal minimum.
 - (4) Massive technology transfer was attempted both in growing and packaging, and was largely successful.
 - (5) Packing plant capital costs were held to a minimum and intensive labor technology was used.
 - (6) The project demonstrated the desirability of vegetable growing to many groups that had no previous experience.
 - (7) No groups of farmers in Comayagua nor Copán were encountered who did not wish to join the project.
 - (8) The project caused peasant groups and their organizations to be more businesslike.
 - (9) The project cucumbers glutted the market, but the effect on other producers was probably minimal since off-season cucumber production was small.
 - (10) On-farm organizational problems were encountered early in the project.
 - (11) SFC's decision not to inform peasants or MNR personnel of tomato shipment losses may turn out to be counterproductive. Producers cannot resolve problems of which they are unaware.
- l. Interest of CONADI in the project.
 - (1) The institution was interested in investing in a fresh vegetable plant located alongside Mejores Alimentos.
 - (2) CONADI could legally lend to cooperatives. It had never done so, but was willing to participate in financing any project for which USAID/H provided money.
- m. There were 30 to 50 experienced medium-sized tomato growers capable of planting 20 mz. each. Once technical problems were overcome, there should be no problem in rapidly increasing the scale of exports to fully commercial levels.

4. General Recommendations

a. Project Length. Should be extended four years.

b. Processed Vegetable Project.

(1) USAID/H should provide technical assistance to Mejores Alimentos in the form of a feasibility study of the company paying more for the product, providing additional field services, and providing transportation to the small farmer.

(2) If (a) gave positive results, USAID/H should subsidize one or possibly two agronomists to work with small farmers or groups.

(3) The hiring of a plant pathologist should be considered.

c. Fresh Vegetable Project.

(1) A project management contract should be signed with SFC.

(2) The MNR should coordinate the project and plant test plots of the two key crops.

(3) The packing plant should purchase the entire supply and market non-exportable product on local markets.

(4) Participating farm groups should obtain credit to pay labor during the growing season.

(5) A project management contract-for four years of project coordination, agronomic outreach, counterpart training, and technical research-should be prepared before the 1979 planting season..

d. Institution Building.

(1) In general, institution-building activities should be de-emphasized.

(2) Some limited institutional support should be given MNR to bolster its vegetable research and extension capabilities.

(3) Continue INCAE seminars.

D. Project Evaluation Summary (PES)

USAID/H reviewed the Checchi report and made the following recommendations:

1. The project should be extended for four years.

2. The obligation of funds should be linked to periodic evaluations.

3. A long-term management contract should not be signed until an evaluation had been made of the previous crop cycle. The management contract should be for one to two years; with an extension clause.

4. A Personal Service Contractor should be hired to assume advisory and coordination duties under MNR.
5. USAID/H should sign a new project agreement with MNR (instead of MOE).
6. The fresh fruit demonstration project should continue.
7. The SFC should move beyond the experimental stage and establish proper incentives, controls, and standards of a business enterprise.
8. CONADI and the Latin American Agricultural Development Corporation (LAAD) might take joint ownership in the plant.
9. USAID/H should provide Mejores Alimentos a technical assistance package for a financial and marketing analysis of increasing prices to small farmers. USAID/H would hire one or two field men if studies indicated the plan would be feasible.
10. USAID/H did not share Checchi's views regarding the institutional benefits of the project. It agreed with Checchi that one person receive BS level training in horticulture and that INCAE seminars continue, but be open to both public and private sector participants.

IV. The Period July 1978 Through September 1981

A. Processed Vegetable Project

This phase of the project has been inactive since 1977 when the asentamientos groups lost heavily in the first stage.

The Checchi report suggested that USAID/H provide assistance to Mejores Alimentos in undertaking a feasibility study. This study was to explore what levels of production and prices would be required to make the production of processing tomatoes feasible for small producers. This was explored with Mejores Alimentos, but the management had no interest in such a study nor in trying to incorporate small producers into their procurement program.

B. Fresh Vegetable Project

1. 1978/79 Crop Season 6/

Field trials of tomatoes and cucumbers continued during the 1978/79 crop season. Las Cañas and El Sisín participated, as did a new asentamiento group, La Jigua. The latter carried out small demonstrations of tomatoes and cucumbers on one-half acre plots.

A total of 2.4 has. of tomatoes and 4.9 has. of cucumbers were planted in Las Cañas and El Sisín. Tomato yields in Las Cañas averaged 36 mt. per ha.

6/ Standard Fruit Company. Final Report of Production and Exportation Trials with Cucumber and Tomato from the Valleys of Comayagua and La Entrada Conducted in 1978-79. La Ceiba, Honduras. August 10, 1979.

and cucumbers 81 mt. per ha. Yields in El Sisín averaged 34 mt. per ha. for tomatoes and 88 mt. per ha. for cucumbers. The small plots in La Jigua gave yields at the rate of 22 mt. per ha. of tomatoes and 53 mt. per ha. of cucumbers. Fifty-three percent of the tomatoes and 46 percent of the cucumbers from Las Cañas and El Sisín were exportable. Large quantities of cucumbers from Las Cañas could not be exported because of wind damage.

Eleven mixed loads of tomatoes and cucumbers were sent to New York and arrived in good condition. They were sold by the Fresh Fruit Division of Castle and Cooke at prices averaging \$4.64 for tomatoes (30 lbs. box) and \$3.84 for cucumbers (26 lbs. box). The total received after paying transportation from Honduras, handling and brokerage (\$2.09 per box) was \$15,900 or L. 31, 800.

Direct costs were calculated at L. 72,000 and included farm production costs, transportation from fields to packing sheds, and packing for export. Local sales of non-exportable tomatoes and cucumbers were estimated at L. 25,000, for an estimated income of 57,000, resulting in a loss of L. 15,000. The costs do not include technical assistance provided by SFC and MNR, costs of conducting experiments at La Jigua, nor capital investments.

The season's trials further demonstrated that exceptional yields of cucumbers could be obtained, and that the product was very acceptable in U.S. markets. Tomato yields were still below acceptable levels.

The SFC recommended the following program for the 1979/80 season:

- a. Concentrate trials in the Comayagua Valley so as to provide better control of production (El Sisín is in the Department of El Copán).
- b. Las Cañas: plant 4 has. of tomatoes; 2 has. of cucumbers.
12 de Enero: plant 3.25 has. of tomatoes; 0.80 has. of cucumbers (under drip irrigation).
- c. Establish windbreaks where needed, carry out small experiments, level land, build a green house for producing tomato transplants, and install a drip irrigation system at 12 de Enero.

2. 1979/80 Crop Season 7/

Although originally SFC recommended 7 has. of tomatoes and 3 has. of cucumbers, and the 1979/80 contract specified approximately 9 has. of each crop, the area actually planted was 4 has. of tomatoes and 10 has. of cucumbers. Of the total area, 10.4 has. were in Las Cañas and 3.7 has. were in 12 de Enero.

7/ Standard Fruit Company. Final Report of Production Trials with Cucumbers and Tomatoes for Exportation in the Comayagua Valley in 1979/80. La Ceiba, Honduras. June 30, 1980.

Production of tomatoes in the two areas averaged 50 mt. per ha. - considerably better than the 40 mt. per ha. obtained the previous year. All of these tomatoes were sold in local markets.

Average yields of cucumbers declined from 83 mt. per ha. in 1978/79 to 50 mt. per ha. The reasons given were the low temperatures in the Valley that seriously affected germination and perhaps problems with the fertilization program.

Prior to the beginning of the season, the Fresh Fruit Division of Castle and Cooke withdrew as the selling agent for the project. Arrangements were made with a broker in Pompano Beach, Florida, to handle export shipments of cucumbers. A total of 8,678 boxes (1 1/9 bu. of approximately 50 lbs. each) were packed and 7,926 boxes shipped. The quality was generally good, although one load was damaged due to a malfunctioning refrigeration unit. Two other lots had excessive rejects due to rot, thought to be caused by excess nitrogen fertilization. Fortunately, prices were high during parts of the season, and averaged \$9.25 per box for all loads. The total income was \$25,042, marketing costs \$1,908, leaving a net of \$23,134. This amount was used to reduce the total cost of the SFC contract. (In effect, farmers paid this amount for some of the technical assistance and other inputs supplied by SFC.)

Local sales of tomatoes totaled L. 29,825 and those of cucumbers L. 23,775, for a total income to farmers L. 53,600. Since SFC had paid for labor and all other input costs, this amount was pure gain. SFC calculated total field costs at L. 28,189 for tomatoes and L. 100,474 for cucumbers. If returns from export sales and local sales had been applied against these costs, tomatoes would have made a slight profit, while cucumbers would have lost L. 30,000. As in the previous year, no technical assistance, capital costs, or packing costs were charged against the grower other than the approximately L. 46,000 that resulted from export sales and which reduced SFC's costs.

Recommendations for the 1980/81 crop years included:

- a. Expose the program to other cooperatives and to the private sector.
- b. Concentrate on training cooperative members in agronomic aspects, administration and organization of personnel, and accounting methods.
- c. Train MNR extension agents.
- d. Concentrate on investigating the production aspects of cucumbers for export.
- e. Construct a packing plant.

3. 1980/81 Crop Season

A decision was made by MNR to concentrate on cucumber production for export. This decision was made even though the project had had relatively good success in developing commercial tomato production in the dry season. Also, as originally envisioned, tomatoes appeared to offer the broadest market possibilities of the various crops that could be exported from Honduras.

During the 1980/81 crop season, the number of asentamientos groups was increased to four: Las Cañas, 12 de Enero, La Paz No. 1, and Lo de Reina. A total of 36.9 has. were planted, of which 28.6 has. were in Las Cañas. The project differed from previous years in that loans were obtained from BANADESA to finance production costs. Previously, SFC had financed these costs, but since the project had increased in size, it could no longer do so. Also, accounting for labor and other inputs was done by the asentamiento groups with the help of MNR personnel. A packing plant was built and equipped in time to handle shipments for export. (The plant went into operation with very little time for training personnel and working out the bugs. Consequently, labor costs were high during the year.)

The average yield was approximately 36 mt. per ha. which was less than half the yields obtained in 1978/79, and only three-fourths the yields of 1979/80, which was a poor year. Only 14.5 mt. per ha. were exportable, or less than 40 percent of production. Again, abnormally cool weather, low plant populations due to improper land leveling, high male to female flower ratios, the presence of fruit rot and virus, inexperienced farmer groups, and lack of proper technical assistance, were cited as causes of low yields. Despite the very low production, prices received were good and total income to farmers was L. 15,000 over their costs, after paying L. 8,300 in interest charges to BANADESA. Included in their costs were L. 110,000 for labor, a large part of which went to the farmers and their families. However, farmers did not pay any of the costs of technical assistance, capital investments, nor for the packing operation.

Farmers were helped by a fairly good market in the U.S. The average price received was \$9.66 for a 1 1/9 bu. box. The average transport and marketing cost per box, including repacking, was \$6.32, leaving a net of \$3.35 which was distributed to farm groups according to their portion of the sales and the prices received for individual shipments.

It is interesting to speculate what the results would have been if farmers had obtained the high yields of the 1978/79 season when they exceeded 80 mt./ha. If exportable yield was 50 percent, farmers would have exported almost 60,000 boxes. This would have yielded L. 565,000 instead of L. 217,000 - or L. 348,000 more. This would have exceeded the cost of packing and the SFC technical assistance cost by L. 4,000. It would not have paid for technical assistance provided by MNR, nor for any interest or amortization charges on capital investments.

The recommendations of SFC for the future of the project will be given in their entirety. 8/

Project Status:

"Neither the cooperatives nor MNR are sufficiently prepared to continue the exportation of fresh produce without technical assistance. The cooperatives

8/ Standard Fruit Company. Final Report, Comayagua Valley Cucumber Export Project 1980/81. Submitted to the Ministry of Natural Resources, Republic of Honduras. La Ceiba, June 13, 1981.

are not sufficiently organized internally to manage production efforts, maintain accounting, or make decisions for the proper conduct of an export business. One MNR technician has resigned, the project coordinator will be leaving in August for post graduate studies, and another MNR technician, a Peace Corps Volunteer, will terminate service in November or February. Two MNR technicians are expected to return after studying abroad for over two years. These technicians should not be expected to manage the production and the project after being absent for over two years, but rather they should be able to add significantly to the project.

"Without further technical and managerial assistance for at least another season this project does not possess a positive potential for success. Technical assistance for the forthcoming season is not only recommended, it is absolutely necessary."

Organizational Development:

"It is imperative that an organization or institution be formed to internally manage this export business so that success is not dependent upon technical assistance provided by an entity such as SFC or the presence of the MNR. Technical assistance can be purchased; however, managerial assistance must be internal. The MNR should function in its proper roles, that is extension, research and project expansion and diversification. It is most likely that such organizational development will take more than one year, but if efforts are properly made considerable progress could be achieved in one season."

Administration:

"A centralized office must be established to provide a center of communications and organization. This facility should have a telephone and provide secretarial services. This office should control all activities related to the project."

Agricultural Aspects:

"Careful attention must be taken with all agricultural operations. The success of an export business will depend upon production, cost control, and fruit quality. Due to the narrow time period, all plantings must be made on schedule and all agricultural operations must be carefully performed to insure maximum production and fruit quality."

Diversification:

"Other crops for export must be investigated. This could prove to be a lengthy process, but is necessary to insure against possible cucumber market failures. Diversification should not be limited to exportable crops, as cash crops for land and crop rotation programs are absolutely necessary."

Marketing:

"Marketing of cucumber should continue along the lines developed over the last two seasons. The marketer should be selected on the following basis:

1. Sales ability
2. Cost
3. Reliability and honesty
4. Should have repacking ability."

C. Institution Building

The main institution-building activities during the past three years have involved sending two MNR technicians to the U.S. for training at the B.S. level in vegetable crop production. One of these participants stayed on to complete most of the requirements for a Master's Degree in Agricultural Economics. He recently prepared a report for USAID/H comparing three vegetable export operations in Central America. 9/ Both of these participants have returned and are now with the project. A seminar on marketing of agricultural products in international markets was held in August 1979. The effect of this seminar is not known since none of the participants are involved in the project. Responsibility for the project was transferred from the MOE to MNR. The MNR had been performing the production aspects and now has become responsible for marketing as well.

In 1980, USAID/H financed a study by ACDI to determine how the project could best be organized to help small farmers in the Valley of Comayagua. 10/ The study concluded that the project would require continued technical assistance if it is to be successful. There was not yet a solid base in the asentamientos groups to support a project of this size. The study recommended that a strong effort be made to assist and train the asentamientos groups so that they could be responsible for administration of the project at some time in the future.

D. Summary of the Period July 1978 - September 1981

Responsibility for the project was transferred from MOE to MNR the latter part of 1978.

The processed vegetable phase of this project continued to be inactive.

The fresh vegetable project has been proceeding slowly. Because of the subsidy provided by the project, asentamiento groups have earned money despite some poor production performances. In addition, they have received over L. 100,000 in wages from the SFC contract for working their own farms.

In the 1980/81 season, a major step was taken when BANADESA provided loans to asentamientos farmers for producing cucumbers. These loans were repaid. The SFC contract paid all packing costs, paid for certain technical assistance, built and equipped a packing plant and made other capital outlays.

9/ Belibasis, Emil. Comparison of Three Fruit and Vegetable Export Operations in Central America. Prepared for USAID/H. Gainesville, Florida. June 1981.

10/ Desarrollo Internacional de Cooperativas Agrícola (ACDI). Estudio de Factibilidad para un Proyecto de Producción y Exportación de Pepino en el Valle de Comayagua. Preparado por la USAID/H. Tegucigalpa, Honduras. Octubre de 1980.

During the 1979/80 period, trial shipments of tomatoes to the U.S. were discontinued and tomatoes were dropped from the program in the 1980/81 crop season. Only a limited amount of research of any nature was undertaken during the past three years.

Turnover of technical personnel from MNR has been high. Between 1978 and 1981, there has been a complete turnover of technicians. Five are normally assigned to the project and four of these left in 1978/79 to be replaced with persons that had to be trained. The project coordinator, who had worked with the project for four years left in August for graduate study in the U.S. However, two persons who have recently received degrees in vegetable production returned to the project in August. They should be very helpful during the 1981/82 season.

It has been established that Honduras can produce cucumbers for export, providing all activities are performed properly. Progress was being made in bringing tomato production to commercial levels when this phase of the project was dropped.

V. General Evaluation

A. Project Goal

The project goal to increase incomes of small farmers was not reached when one considers that the actual number affected is only a fraction of the number envisioned in the Project Paper. Those in the project have had incomes increased, mainly through direct subsidies.

B. Project Purpose

The purpose was to develop GOH capacity to establish agribusiness export projects which will directly integrate small farmers into the development process. Verifiable indicators that this had taken place were:

1. Coordinating mechanism for Demonstration projects designed and functioning by 1977, refined by 1978:
 - a. "Interagency agreements signed."
No agreement was signed.
 - b. "Evaluation committee meeting and resolving problems."
No evaluation committee was formed.
2. New product development process operational by 1979.
 - a. "Implementation of one new agribusiness enterprise by end of project."
No new agribusiness projects were undertaken.
 - b. "Project development fund budgeted at \$60,000 per year by GOH at end of project."
No project development fund established by GOH.

3. "496 farm families have 805 m² under cultivation on a contractual basis by 1979."
An estimated 140 farm families were farming approximately 58 m²., producing cucumbers for export. None under contract.
4. "8,500 tons of processed product exported by 1979."
No processed product exported.
5. "1,800 tons of fresh product started by 1979."
Approximately 580 mt. of cucumbers exported in the 1980/81 crop year.
6. "Honduran agro-project products being sold in U.S."
Cucumbers produced under contract were being sold in the U.S.

C: Project Outputs

1. Project Management Group established and trained.
 - a. Magnitude and Outputs
 1. "Five professionals joined in early 1977."
No Project Management Group established.
 2. "Four members of PMG and other GOH agency staffs receive MBAs in 1979."
Two professionals were sent abroad for Master's Degree training. Two technicians were sent abroad for training in vegetable crop production.
 3. "Two agribusiness seminars held in-country:
One in 1977
One in 1978"
Agribusiness seminars were held in 1977 and 1978
 4. "Two members of PMG received five marketing internships in U.S."
No one from PMG received an internship to study marketing.
 2. Implementation of demonstration projects.
 - a. Plans
"Three year plan developed during first 6 months in 1977. Yearly operational plans developed before GOH budget cycle."
No three year plan developed during first 6 months in 1977.
Standard Fruit Company prepared annual implementation plans for the fresh fruit project prior to the crop season.
 - b. Feasibility studies
"Engineering, financial and production feasibility studies completed for fresh project."
These studies were completed on schedule.

c. Production credit

"Minimum of \$675,000 in loans made annually by 1979.

Processed - \$455,000

Fresh - \$220,000"

No loans for the processed vegetable project made in 1979. Approximately \$115,000 in loans were made to cucumber producers in the 1980/81 crop year. (First loans made.)

d. Production technical assistance

"Nine MNR extension agents working full time."

Five MNR extension agents were working full time in 1980/81. These were minimally trained.

e. Production trials

"Seven crops tested by 1978."

Two crops - cucumbers and tomatoes - were tested to any extent.

f. Quality control

"Output acceptable in U.S. markets."

Both cucumbers and fresh tomatoes were acceptable in U.S. markets.

g. Farmers-contracting system established.

"Farmers deliver products to plant. Plant buys all acceptable produce at pre-established price."

Processed tomatoes were delivered to the processing plant during the 1976/77 season. Prices were pre-established. Rejections of product were high and there was confusion as to the weight unit to be used - metric or short tons. Farmers under the project have not delivered processing tomatoes to the plant since that time.

h. Packing facility in operation

"Packing plant constructed and equipped by November 1978."

Plant constructed and equipped by January 1981.

i. Baseline data development

"Three baseline surveys completed in project area and evaluated."

No baseline surveys completed. One evaluation undertaken by USAID/H in July 1978, and in June 1980 the MNR made an evaluation of the crop years 1978/79 and 1979/80.

VI. Observations and Conclusions

- A. The project failed to meet its goal of improving the incomes of a significant number of farmers. However, incomes of some farmers were increased and there was a demonstrated potential for improving the incomes of a much larger number once all production and marketing problems are worked out.

- B. The project purpose to develop a GOH capability to carry out export development projects was not accomplished. The proposed project management group involving several ministries was never developed. Most of the project management was carried out by the Standard Fruit Company under a year-to-year contract. The project did demonstrate that fresh vegetables from Honduras could be marketed successfully in the U.S. By 1981, farmers were planting over 35 has. of cucumbers for export.
- C. The formal training aspects of the program met most of the targets that had been set, although not all those trained contributed to the project after they returned. The technicians who were to be sent for practical training under an intern program were never sent.
- D. Three agribusiness seminars were put on by INCAE and private consultants. It is doubtful if these had any real effect on the development of this project. There may have been some residual benefit in that a number of government officials became better informed about the prospects and problems of marketing agricultural products in international markets.
- E. By the end of September 1981, USAID/H will have disbursed approximately \$1.2 million for the project. It is not known how much the GOH has contributed, but it is far less than the \$3.6 million it pledged. Probably its contribution has been less than half that of AID's.

During the first two years of the project USAID/H provided a project manager almost full-time to coordinate USAID/H's role in the project. However, after this time, the "backstopping" effort declined sharply, so that by 1979 the USAID/H person who had project responsibility spent only about 5 percent of his time on the project. The level of support has increased during the last year. It appears that for several years, USAID/H did not consider the project to be of significant importance to give it the attention needed. The institutional aspects of training were well-taken care of, but this was not the most important need of the project during certain phases.

- F. As mentioned above, the GOH probably contributed less than half the monetary input that AID did. Also, it appears that there were disagreements early in program between the MNR and MOE as to the direction the program should take. The coordinating function, that was so important to the success of the project, was never put into place. The high turnover rate of personnel is a good indication of the GOH's low level of interest in this project. It is not clear to us whether this low level of interest still exists but it seems so. The reorganization of ministries midway through the project had its effect, both in personnel changes and low level of commitment. Recent financial problems in Honduras have also had an effect.
- G. The original project was for four years, later extended to five years. Given the program to carry out field trials, train farmers in a new, sophisticated technology, the high rate of turnover of MNR personnel, the time required to develop the marketing strategy, and the problem of working with farmers who had recently been demoralized by a failure in producing tomatoes for processing, it is not surprising that the fresh vegetable project is not

further along. Probably no commercial company that was producing vegetables in a new area would have undertaken commercial production sooner than the fourth year, and this only after a very intensive research program, both in production and marketing. Realistically, this project needs 3 to 5 years more before it will be economically viable. Production and exportable yields must be increased so that the overhead per box sold is reduced to the point where a profit is attainable when market prices are at an average level. This probably means exporting other crops in addition to cucumbers. The possibility of being involved in year round production and marketing of rainy season crops should be investigated.

- H. The SFC personnel in charge of the project have been dedicated and capable. It is highly unlikely that the fresh vegetable phase would have achieved the level it has without this technical assistance. The facility with which SFC has been able to procure inputs for the project has helped considerably. The timeliness of procuring inputs has kept certain operations from being complete failures. The lesson here is that whoever is in charge must have this same facility. A government organization will not be able to procure inputs in a timely and efficient manner.

The SFC has fulfilled its obligation to keep adequate records on its field operations. Its annual reports are highly detailed and contain a vast amount of information about the yearly operation, both for production and marketing. These reports have helped SFC and MNR personnel plan the following year's operation with confidence.

Two problems have arisen with respect to SFC. First, the marketing linkage with a Castle and Cooke subsidiary in the U.S. never did develop satisfactorily and was discontinued after the 1978/79 crop season. This was unfortunate since such a linkage was basic to the success of the project. Apparently, the Castle and Cooke subsidiary in the U.S. never did have a real commitment to marketing the project's fresh produce. As a consequence, the project has had to make sales arrangements with brokers in Florida on a year-to-year basis. There have been many such arrangements in the past (between producers in Honduras, El Salvador and Guatemala) and few, if any, have been satisfactory over time.

A second problem is that SFC has discontinued its research work on vegetables. One thing lacking has been an active research program that undergirds the project. Although the project manager provided by SFC is a competent researcher, he has no time to devote to research. In the early stages of the project, technology developed at the SFC research station was used. Actually, the research department of MNR should have played an active role in the project, but it did not. Researchers from MNR participated in the 1976/77 SIATSA research trials, but that was all.

- I. Production for fresh vegetables capability has been strengthened considerably during the life of the project; the marketing linkage has not.
- J. The direction and operation of the fresh vegetable project has been carried out by the SFC project manager and the MNR coordinator. The MNR coordinator left for further academic training in August 1981 and will be lost to the project for the next 2 to 3 years. The role of the project manager for the

1981/82 season has been relegated to that of an advisor and an MNR employee who has been abroad for academic training for the past two years as been designated project manager. The SFC advisor, who has been with the project more than two years, expects to leave at the end of the 1981/82 crop year. This project will require outside assistance beyond the 1981/82 season. Even though the designated MNR project manager has gained valuable training abroad, he needs several years' experience under competent guidance to completely manage the project.

K. From a revealing interview with the owner of the Mejores Alimentos processing facility, the evaluation team concluded that there are reasons to be optimistic about reviving the processed tomato alternative of the project. Due to a series of problems derived from loss of market area which was prompted by Honduras' withdrawal from the Central American Common Market and the war with El Salvador, Mejores Alimentos suffered large losses. This led to the sale, in 1975, of the majority interest in the plant to CONADI, the Honduran Industrial Development Corporation, and the subsequent installation of CONADI management. In the opinion of the previous (and current) owner of Mejores Alimentos, CONADI management was "a disaster" and he cited several examples of inefficiencies. More particularly he cited a fundamental error of the CONADI management in that it concentrated its production and marketing strategy on the internal Honduran market with the result that the capacity of the installation was poorly utilized, losses became even higher and the volume of sales dwindled to the point that continued operation under this arrangement could not be justified. In 1981, the original owner bought the plant back from CONADI and has projected ambitious plans to increase production of tomato products dramatically and to sell in the international market. This history is noted because it sets the processed tomato option of the project in an interesting perspective whose salient points are:

1. Producers of tomatoes related to this project have experience only with CONADI management, which we can safely assume was considerably different from the direction the plant is taking from 1981 onward. The current owner even went as far as to say "Whatever problems producers had with the plant in recent years were probably the fault of the plant itself."
2. The plant must obtain more tomatoes if it is to survive. A subsidiary of Mejores Alimentos will plant 350 manzanas on its own account this year and contract for 150 more, but this still falls far short of the volume needed to make the plant profitable and competitive in the external market. Last year, the plant operated only at about 1/6th of its capacity.
3. Mejores Alimentos is convinced by recent technical advice that, through the perfection of a few key practices (land preparation, planting system and weed control), levels of field production can be raised economically from an average of 17 metric tons per manzana to 25, and 30 tons should be attainable in a short time. According to their figures, this level of production at the projected plant buying price of \$75.00/M.T., is profitable to farmers.
4. The owner stated that the plant urgently needs to improve relations with producers in the Comayagua Valley and he has insisted that the current management team concentrate more of their efforts in helping producers not only to supply the needed product, but to make their production profitable.

All of this sounds good and, even discounting for the ebulliance of the plant owner, the perspective of the tomato industry in Comayagua is brighter than the history of the project to date would indicate.

- L. The processing phase of the program failed during the first year of operation because it attempted commercial production of tomatoes before the asentamientos groups were prepared to undertake the project. None of the experimentation, field trials, training and subsidies that characterized the fresh vegetable projects, prepared the farmers for commercial production.
- M. Technical assistance provided by MNR was never fully satisfactory. Turnover of personnel was high and those that were assigned as replacements were inadequately trained in production of vegetables and had to be trained by SFC personnel, taking valuable time from other activities that SFC personnel were responsible for.

Two technicians who were with the project were sent to the U.S. for two years to earn degrees in vegetable production and agricultural economics. They have returned and if they stay with the project for the next few years they should have a positive effect on its chances for success.

N. Credit

The credit support improvised for the project appears to have worked well. We foresee problems, however. The fact that most asentamientos do not have legal status and, therefore, cannot borrow directly from BANADESA, except by all members cosigning the loan as they did before, poses a dilemma. Ideally, grower groups should have direct access to their source of financing; in lieu of this, the regional cooperative (CARCOMAL) has been instituted as an intermediate entity. Not all grower groups are affiliated to CARCOMAL and, therefore, must be given separate treatment. The charge of 2 percent on loan application amounts (plus interest) on ANACH affiliated asentamientos to be paid to CARCOMAL may have one or more of the following results:

- 1) Resentment toward and eventual disaffiliation from CARCOMAL-ANACH base level groups, 2) Questions as to the legality or ethics of their charge to support or capitalize CARCOMAL, 3) Frictions between ANACH, UNC and FECORAH, arising from unequal treatment by BANADESA.
- O. One of the main reasons for the demise of the processed tomato portion of the project was the vagueness of the contractual arrangement made between grower groups and the Mejores Alimentos processing facility. Frictions arising from issues of weights, payments, conditions of delivery, input supply source and quality requirements could have been reduced or eliminated if there had been a more open and frank dialogue during the contracting process.

As a first step, growers should be assisted in arriving at production decisions by helping them understand the elements of economic realities (feasibility) of a crop. From this point, representative of growers should participate in negotiations with processors on all aspects of the contractual agreement: price, delivery, schedules, measures, quality

requirements, payments, etc.) well in advance of the planting season. The bitterness which has developed among tomato growers of the project toward Mayores Alimentos is most unfortunate. As a contrast, the harmony observed between the growers of melons and PATSA is exemplary*. There are surely lessons to be learned from the experience there.

- F. During the entire history of the project, farmers were not involved, trained nor organized in a manner which should have prepared them for more active and effective participation at this stage of the work. Good opportunities to develop an awareness, essential skills and the impetus for permanent organization among producers, were lost.

Some institution-building has taken place, the most important of which has occurred at the asentamientos level. This development will be treated separately in Appendix I.

- Q. PATSA has operated in the Choluteca area for seven years. It markets its melons through a United Fruit subsidiary in the U.S. Farmers in the area seem to be well-satisfied with the arrangement. Since the company offers a contract price that is set well in advance of the planting dates, farmers are protected from the vicissitudes of the market. The better job they do, the more they make, even if the market falls. PATSA has the advantage of being located in Honduras year-round and its personnel can devote full time to the process of improving production practices, training personnel and farmers, and maintaining good relations. Such an arrangement is far superior to depending upon a broker who has no investment in the product and who is physically located outside of Honduras.

Coordination in the Choluteca project is through a local cooperative, control is in the hands of the target group, with governmental agencies providing essential backstopping in technical assistance and in supplying credit.

- R. The project originally found that seven crops (cucumbers, tomatoes, okra, greenbeans, summer squash, asparagus and strawberries) merited further testing for export possibilities. Cucumbers and tomatoes were selected for field trials. The field tests have shown that cucumbers and tomatoes can be exported successfully. However, tomatoes were dropped when it became necessary to send the products to Miami for a broker to sell. Fresh tomatoes cannot enter the Florida market area without fumigation for fruit fly which is expensive. They can be shipped to points north of Baltimore if the trailers remain sealed. This limits market possibilities somewhat. However, the field trials were showing progress each year and there appeared a good chance that production of tomatoes would reach levels where they would be competitive.

It is doubtful if this project can develop enough volume, selling cucumbers alone, to carry the administrative and technical assistance that will be required. It is necessary that other crops be developed to

* This impression was given by the manager of PATSA operation in Choluteca. The same impression was gained subsequently in a private interview with directors of the melon growers' cooperative "CREHSUL".

spread the cost. An option would be to combine operations with PATSA (see item Q), to reduce the overhead burden for both operations. An effort should be made to determine if various Honduran vegetables would be competitive in the area north of Baltimore where they can enter without fumigation, and whether direct transportation can be arranged to this region.

- S. There is a considerable infrastructure in place in Honduras that provides a basic underpinning for any export project. There are established firms that provide refrigerated trailers and roll on-roll off service for regular weekly shipments to Miami and the Gulf Ports.

The experience gained during the past 10 years or so of start-ups and failures have provided many private entrepreneurs, government officials, and farmers with a realistic base with which to develop an export program.

Entities, such as Standard Fruit, United Fruit, and Mejores Alimentos have had experience in exporting to Central American and international markets. United Fruit has an established unit for selling fresh fruits and vegetables in the U.S. These experiences can be called upon and used in marketing export crops.

The MOE's General Directorate for Foreign Trade has the capacity to make market analyses and develop an on-going market intelligence system in support of this project.

The training and experience the two MNR technicians received at the University of Florida should be valuable assets in the years ahead, as well the hands-on training MNR technicians have received from the Standard Fruit Company.

T. Time Span for Assistance

Outside assistance will be required for perhaps 3 to 5 years to make this project self-supporting and to provide the basis for large-scale expansion of commercial vegetable production in the Comayagua Valley and elsewhere in Honduras.

U. Local Markets

Ways must be found to dispose of non-exportable product, either in local markets or as further-processed, in ways that will maximize returns to farmers. As production increases, disposal of non-exportable products will become a serious problem.

VII. Summary of Arguments for Continuing or Discontinuing the Project

The evaluation team was aware that the USAID/Honduras Mission had been discussing the alternatives of extending this project vs. discontinuing it. Midway through the evaluation exercise and in ignorance of points raised on either side within the Mission, the team drafted its own summary of arguments gleaned from information on the project and opinions of the evaluators. These arguments, stated in succinct (and possibly overstated) form are included here prior to the section titled "Recommendations".

A. Points in Support of Continuing the Project (With Some Possible Modifications)

1. Experience in projects such as this, does not come cheap. Much has been learned about the crops, people, market and growing areas to date. If AID were to drop the project now, nearly all would be lost. It is evident now that this project needed 6 - 10 years and more money.
2. Growing traditional grain crops in the prime valley areas of the country is not only marginally profitable for farmers, but a poor utilization of the resource base here. It is not yet time to "give up and go back to corn and beans" but rather keep looking for the best comparative advantage for the resources at hand. Example: tabasco peppers' success.
3. Research is still in its infancy in diversified crops for many areas of the country. With the rush to produce and "go commercial" research lagged behind. This can be remedied from here on.
4. Cucumbers are probably now on the brink of high profitability. Once this crop is established, there will be a clamor to grow them and other crops in the countryside.
5. Something had to be done with/for the asentamientos located in the high potential area. Their people are aggressive, organized and aspire to better their lives. This project is in line with the times.
6. Both big fruit companies have capabilities and interest in diversified agriculture in Honduras. The work they can do in the project is not only good public relations for them, but they work at a reasonable price and probably benefit from the research and trials also.
7. In the long run, labor intensive agriculture must move gradually to areas such as Honduras because labor is becoming more expensive in the older, established areas - even in Mexico. Honduras has good access to the eastern seaboard markets. Now is the time to invest in production capability.

B. Points of Support of Either Total Discontinuance or Radical Redesign of the Project

1. GOH support in direction and maintenance of the project has been poor. The Ministry of Finance has dropped out altogether and Natural Resources inputs are minimal and far short of what was agreed upon.
2. Total costs of the project per farm family assisted thus far are high and the project is still far from being finished and fully viable.
3. This kind of agriculture is not highly replicable in the country because it is limited to irrigated valleys. How many target group farmers could possible be reached under this limitation?
4. Given the established loyalties of campesino groups, differences between them, plus diverse attitudes found in individual farmers, it would be extremely

difficult to devise and build an organizational structure of wide utility and acceptance to assume the management of an export enterprise.

5. Agricultural feasibility is in doubt. Of several crops identified and tried, the two "best" or easiest, with the best economic potential, only one (cucumbers) has survived at this point of the project. Tomatoes, the "heart" of the project may be difficult to revive.
6. Risk, both market and agricultural, is too high to ever expect farmers or supporting institutions to carry.
7. Farmers have so little understanding of the experience to date that there is little popular support nor enthusiasm for the whole project - except for AID continuing to give them a "free ride". They have been misled and spoiled with subsidies and to turn this around would be very difficult.
8. The medfly problem threatens too many potential products for fresh export (tomatoes, eggplant, tropical fruits). And the experience with the processing alternative is disappointing, to say the least.

VIII. Recommendations

A. USAID/R assistance to this project should be extended for three years.

B. USAID/R should provide a project officer who can devote sufficient time to see that the project is being carried out as planned or is modified quickly if conditions change.

C. The overall management of the project, particularly at the level of the Comayagua valley, must be clarified and strengthened. External assistance in this area should be contemplated with the understanding that roles assumed by experts brought to the project be supported by apprentices or understudies selected to have the potential to assume management responsibility within a reasonable period of time. Specifically, it is recommended that a project manager with wide experience and entrepreneurial expertise be contracted to direct the project during one year and serve as its principal advisor during a second. An organization chart to illustrate a structure is shown on page 35.

D. Technical Assistance

Trained technicians should be assigned to the project by MNR and other government entities. These should be complemented by technicians supplied by the entity selected to operate the project. The operators of the project should have selection control over technicians provided by whatever agency. Since technicians may come from several agencies, they should be integrated into the project as a unit.

E. Research and Trials

A research program must be designed immediately that will provide answers to the most pressing problems. Some of the research areas would include irrigation techniques, land preparation, weed control, fertilization, insect and

disease control, postharvest losses, transplants vs. direct seeding, and trellis vs. on-ground production. The research division of MNR should be directly involved, but alternative sources of research assistance should be obtained.

F. Farm Demonstrations

Every new asentamiento group that enters into the program should have a progressive field trial system, beginning with small plots. These should be enlarged as fast as the farmers gain the necessary expertise. A subsidy should be considered for the initial trials with a clear understanding that no subsidy will be supplied once commercial production begins. The economics of going into commercial production should be carefully worked out and explained to the farmers so they can make a decision to participate or not. No new crops should be planted in commercial acreages without adequate field trial experience having been gained.

G. Diversification

An immediate effort should be made to diversify production. This should be done by re-introducing tomatoes into the program, both for the fresh market and for processing. Trials should begin on other crops that have present possibilities for both the fresh and processed markets.

H. Marketing

PATSA should be asked to present a proposal for handling sales of cucumbers produced in the Comayagua Valley. There is still time to work out an arrangement for the 1981/82 season if PATSA is interested, and if the proposal from PATSA is economically viable for cucumber producers in the Valley. Enough experience has been gained to date to make this determination.

I. Mejores Alimentos

An initiative should be made to Mejores Alimentos to see if arrangements can be worked out for producing tomatoes for processing. Any arrangements should include small field trials by asentamiento groups with technical assistance being supplied through joint efforts by MNR and Mejores Alimentos technicians. Assistance from the U.S. could add an important dimension to this program. Production of processing tomatoes should be expanded only as fast as farmers demonstrate competence in producing them.

Commercial exports of processed products should be made to the U.S. and other international markets only after the Central American market has been satisfied. However, trial shipments should begin as soon as possible.

J. Local Markets

Studies should be undertaken to find new and/or better markets for non-exportable products. Further processing of some of these products should be investigated.

K. Lending Policy

A clear, uniform policy of lending for production and capital improvements on asentamientos or individual farms should be developed. This policy should be widely disseminated to all levels of participants in the project to avoid misinterpretation, doubt or suspicions as to the conditions under which financing may be supplied by BANADESA.

L. Institution Building at Asentamiento or Cooperative Level *

In any consideration of expansion or continuation in this project, it is recommended that as a first step, a concentrated effort be directed toward building farmer awareness of the enterprise in which they are involved. Secondly, producers and their family members should be incorporated into roles which go beyond their traditional function as field hands. Third, a permanent and self-supporting institutional arrangement capable of supporting production and handling the marketing function should be developed.

M. Inputs

An institutional arrangement must be worked out to obtain agricultural inputs in a timely manner. This cannot be done through a government-run agency.

* See appendix I for a detailed outline for developing an institution-building program at cooperative level.

APPENDIX I

Building an Institutional Base in the Target Group

As the project was originally conceived, Honduran institutions both private and public were to be developed to the point that there would be a local capability to direct and support the export of diversified crops. To date, little progress toward this goal of a self-sustaining institutional base has been made. In the public sphere only production credit from BANADESA has been instituted as a regular part of the Bank's program; other essential development services have largely been provided from AID inputs and, therefore, have less probability of continuing beyond the period of external assistance. It is to the credit of project managers that adjustments and improvisations have been made to carry the project this far.

At the farm level the experience of growing cucumbers and tomatoes has required a degree of organization among producer groups which could provide the basis for more permanent, formal and effective grower participation in the future. A good measure of the harmony apparent within groups of producers may be attributed to the fact that they have a common bond of having achieved collective possession rights of valuable land through the agrarian reform of the early seventies. Collective production and other forms of group action are, therefore, less difficult in this setting than would be the case in situations of individual land tenure.

Lengthy interviews with members of four* of the five asentamientos groups participating in the growing of cucumbers for export for the 1981-82 season revealed that elements of sound although rudimentary organization have been achieved which should contribute to the process of institution building if and when the project is oriented in this direction. Some examples:

- Trial plantings on each farm were made for the purposes of demonstration, practice in techniques of production, orientation of the growers and evaluation of agronomic performance, prior to the establishment of commercial-scale production. Decisions to plant were then reached with grower groups in an awareness of the techniques to be used although little emphasis on the economic realities of the crop was made.
- Decisions as to how much and where on the farm cucumbers were to be planted were reached through joint participation of the technical staff and member-growers. Prime lands with the best access to irrigation water were selected on each farm. Cucumbers, therefore, took priority for dry season production in the asentamiento lands.
- Once commercial production was started the groups organized their work schedules, devised a division of labor and named "coordinators" who carried out the functions

of timekeeper, payroll clerk and field boss. The groups also arranged for the supply of additional labor in their own communities and took the responsibility of training and supervising these field hands.*

- With the exception of Las Cañas which works its entire farm collectively, the growing of cucumbers represented the only collective production performed in the asentamiento farms. The project has served as an attraction for unified action by the communities.

At the same time that the project has contributed to the possibility of an institutional base in the future, many opportunities to strengthen an awareness and participation in the project on the part of farmers, have been missed. Interviews brought out the following examples:

- Producers have little awareness of the economic realities of their work. From the 1980-81 harvest members of the groups knew only vaguely how they came out economically at the end of the season. Two groups said that they thought they just about broke even and one was sure that they ended up in the red; the fourth group made L. 3,000 and had proceeded to deposit half in the bank and divide the rest among members "because of personal needs". More importantly, the groups did not know why the economic results came out as they did. One group thought that they had planted too late to get the best early season price while another group was sure that their loss was mainly due to damage of fruit due to a virus disease. Virtually no feedback from the marketing chain had reached them and costs of production per marketable box were a complete mystery to the growers.

- The operation of the packing plant was understood in part only by members of the Las Cañas group, mainly because of their close proximity to the plant and family members who worked there. Very few members of other groups had even seen the plant in operation. They said that they thought the plant was the property of "the project" and run by the "technicians".** The economics of the packing operation were unknown to growers and a charge for the service, to be added to the loan budgets of each group for the first time this year, was not clear. Interestingly, the growers take more of a proprietary interest in the handling of culled fruit sold in the local market than that which is sent off for export.

- Contacts between grower groups are rare. They do not exchange visits among the farms and knowledge of the experience of different plantings is passed on mainly by technicians during their rounds.

* Frequently, during peak work periods, labor required would be more than double that which could be provided by members. Women and children were usually given the lighter jobs - and paid somewhat less.

** The plant is the property of the Ministry of Natural Resources and was constructed on public lands. No plan has been developed to transfer this property to farmers in the future.

- Although grower groups are appreciative of the credit service, they have very little understanding of how credit decisions are made. In every case the growing of cucumbers entails preparing a separate line of production credit for the group which begins with the preparation of crop budgets by the technical staff of the project. Members are aware of this process as well as periodic visits by a credit agent of BANADESA who is able to inform them of the status of their account. Members give the clear impression that credit negotiations are handled by persons acting in their behalf - either the project technicians or someone in the CARCOMAL cooperative office who is in a position to represent them in the Bank. In other words, obtaining credit requires more than anything else, influence in the Bank.

A further example of how the farmers are estranged from institutions serving them was brought out during the interviews. Rumors were going around that the interest rate for the coming season were going to be 15 percent instead of the customary rate of 13 percent normally charged by the Bank. The difference of 2 percent was supposedly being given to the CARCOMAL cooperative for its role as legal borrower and spokesman for affiliated groups applying for credit. Subsequently it was learned that instead of the 15 percent rate of interest, CARCOMAL has arranged with BANADESA to receive directly 2 percent of the total loan amount out of a line item called "contingencies" in all credit application budgets presented by the asentamientos.

- Procurement and logistics of supply have almost by necessity been handled by the project team. Farmers are little aware of the source and cost of inputs other than those commonly available in local markets. The degree or amount of direct subsidy which has been applied in the growing of cucumbers is not known by producer groups. This may have established a difficult precedent to follow but more importantly, producers have not yet begun to learn how complicated and difficult it is to support the production and handle the marketing of their crops.

Although the process of building toward a permanent institutional base to orient and serve diversified export agriculture in the Comayagua valley has hardly begun, a new cooperative organization has emerged in the area from origins other than those of this project. Starting from initiatives of the National Peasant Association - ANACH - the "Regional Agricultural Cooperative of Comayagua" - CARCOMAL - is now expecting to receive a legal charter in September 1981, to operate in support of 18 affiliated groups. According to the president, the main function of the cooperative is that of an intermediary for member asentamientos to obtain credit. Since individual asentamientos are not legal entities, the contractual credit arrangements are actually drawn up with CARCOMAL as the legal borrower although credit accounts are maintained separately for control purposes within BANADESA. CARCOMAL is affiliated to ANACH which, in turn, has 56 additional member asentamientos in the Comayagua region. The president expressed optimism that eventually all ANACH asentamientos (74) would become CARCOMAL members. The prospect of additional membership is obviously attractive if the "2% arrangement" described earlier becomes general practice for all BANADESA lending to asentamiento groups. The current portfolio alone should generate nearly \$10,000 of income to CARCOMAL this season.

The cooperative is currently operating in an improvised setting. ANACH rents a modest house which serves as the headquarters for the president, accountant, and secretary. All are paid by the parent organization. The cooperative is also the headquarters for a component of public employees assigned to serve asentamiento groups:

- The National Agrarian Institute - INA, one accountant and 2 field promoters.
- BANADESA - one credit agent
- The National Directorate of Cooperatives - DIFOCOOP - one extensionist.
- The Agricultural Extension Service - MNR - two full time agricultural extension agents and one half time.

The CARCOMAL office is also the headquarters of the "Regional Team of Integrated Operations" - EROI - a kind of committee composed of representatives of the institutions having staff based there.

In interviews with the president of CARCOMAL and two MNR fieldmen it was evident that the cooperative has real aspirations to become a powerful and important institution for agriculture in the Comayagua Valley. For example:

- Discussions have already been held to explore the possibility of marketing edible beans to South America through CARCOMAL.
- Ownership and operation of the cucumber marketing operation could conceivably be a CARCOMAL operation.
- CARCOMAL, along with 14 other established regional cooperatives could import fertilizers and distribute them to affiliates profitably and still undersell the competition (The cooperative has already begun modest sales of farm inputs).
- A machinery pool to provide farm equipment services to asentamientos is a high priority.
- Of even higher priority and immediate concern to the president is the acquisition of a car so that he and the staff may reach affiliated groups more easily - and on weekends when GOH vehicles are not allowed to circulate.

It is unfortunate that many opportunities have been missed to develop a permanent institutional base for this project activity. Although it is clear in the Project Paper that the original planners conceived of this aspect of the work mainly in terms of strengthening the organizational structure of the Ministries of Economy and Natural Resources and upgrading the technical capability of the latter, the small farmer - the object of the entire exercise - is treated principally as the source of production which should result in higher income for him. The focus of this section of the report is not directed so much at criticizing the designers of the project nor the managers of it, but rather to emphasize the imperativeness of a sound institutional framework in light of decisions pending as to what the future of this project may be.

Studies commissioned by AID in the past have pointed out clearly that the one most reliable indicator of project success is the degree of involvement of client groups in decision making and execution of work. This lesson should be applied in any contemplation of the future of the project. This principle of project management is even more appropriate in the current Honduran setting where organized farmer's groups have made considerable gains in recent years and are constantly asking for, or demanding, "a piece of the action".

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Examples of activities to be carried out in each step are presented below:

Step #1

Review crop costs (presented graphically) of recent years and discuss with farmers.... Compare with past and future crop budgets.... Note and discuss variations.... Solicit suggestions on cost control measures.

Present (graphically) market price behavior in recent years, note the traditional annual curve and compare with selling dates of grower group.... Discuss importance of planting/harvesting dates.... Solicit suggestions on land management, crop rotations and key dates for future crop (land preparation, planting).

Discuss feedback from marketing chain.... Note problems, successes, trends Elicit suggestions on improvements.... Show pictures of marketing process to the point of supermarket.... Share market intelligence with grower group.

Arrange visits to packing operations.... Observe sorting, weighing and count, particularly.... Solicit questions and answer all.

Arrange visits to neighboring farms.... Point out particularly good and bad practices.

Visit field trials and experimental plots.... Explain performance carefully Note negative as well as positive results.

Show pictures of production operations in different (competing) areas or countries.... Cite examples of production levels.

Explain all subsidies, direct or indirect, applied to grower's production and marketing.... Note amounts and effects of total costs.

Invite BANADESA official to visit crops in production and meet in open session with growers.... Promote dialogue on all subjects related to credit.

Step #2

Search for and identify individuals showing particular talent and interest in any aspect of operations.

Develop an apprentice system for people with promising attributes to accompany, assist and share jobs held by "outsiders", professional, technical, or skilled labor.

Seek out training opportunities (courses, internships, trial assignments, etc.) to encourage growth in promising candidates for higher or non-traditional level jobs.... Evaluate performance.

Devise orientation and consultation sessions for elected leaders of producer groups with project management and employee.... Discuss problems, perspectives, performance of project (enterprise).

Stimulate the organization of a permanent representative and consultative body ("Board of Producers").... Concentrate Step #1 activities with this group Ask opinions of group, solicit complaints, consult alternative managerial decisions.

Step #3

Discuss need for and desirability of forming a support and marketing organization with producer groups.... Proceed to discuss with "Board".

Note service requirements expressed by producers.... Estimate costs and ability to pay.... Estimate capital requirements and possible credit worthiness Communicate to groups and "Board".

Agree on goals and methods of capital accumulation.... Initiate capitalization and communicate results regularly to producers.

Explore alternatives for formal (legal) establishment of the firm.... In discussions with "Board" choose one and proceed to request legal status.... Formalize members' (stockholders) deposited equity, open the books and prepare for business.... Hire a manager.... Complete the component of technical and administrative staff.

Arrange with previously established project (cucumbers) for use and payment for assets in place and serving growers.... Devise interim management contracts and set schedules and conditions for phasing out external participation.

Based on the experience obtained thus far in the Comayagua setting and the degree of optimism expressed by the staff as to the future of cucumber production there, a rough estimate of the resources required to do this work is as follows:

24 person-months of a highly skilled ag. extension and farmer training specialist.

18 to 24 person-months of an experienced professional in communications, organization, business management.

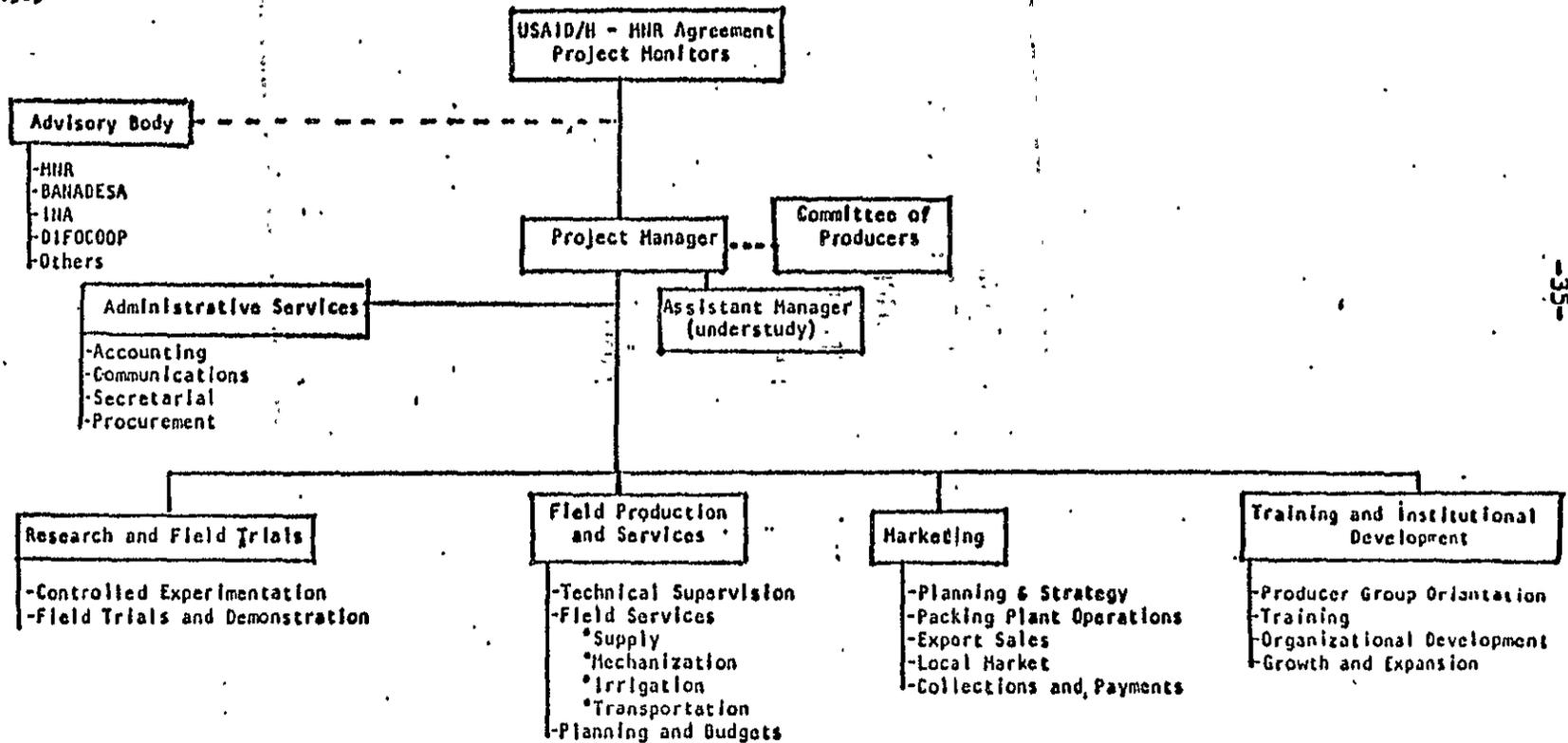
logistical support (travel, communications).

materials - graphics and other teaching aids.

training and educational travel funds.

Figure 1. Suggested Structure of Agricultural Production/Marketing Organization in Honduras

For 1982-1983
Season



NOTE: During initial phases, functions may shared or combined to be covered by available staff.