

Final Report On
"EVALUATION OF AGRICULTURE
COOPERATIVES PROGRAM"

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I. SUMMARY

The Development Associates team, consisting of two rural development specialists, was contracted to participate with the USAID evaluation officer in an evaluation of the four model cooperatives that were created and supported under the Agricultural Sector Program. The objectives of the evaluation were to: (1) determine the effectiveness of the cooperatives in providing service to members; (2) evaluate the ability of the cooperatives to attain self sufficiency by December 1986; (3) identify real or potential problems that could affect the financial viability of the organizations; (4) suggest modifications in the model which would improve member service programs; and (5) determine the need for and financial viability of the proposed central service organization. The team was also asked to comment on the need for additional technical and financial assistance to continue the development of the model cooperatives.

The team conducted the evaluation during the period March 19 to April 14, 1985, visiting and reviewing the operations of all four cooperatives. The methodology used for the evaluation is discussed in Chapter II.

The main objectives of the model cooperative are: (1) to organize and work with local agricultural groups; (2) to treat the cooperative as a business entity, utilizing sound business practices; (3) to offer reliable credit, supply, production, technical, and marketing assistance to members; (4) to use qualified professional staff to manage the cooperatives; and (5) to maintain a policy of mandatory and systematic capitalization.

Four model cooperatives are now being supported by AID. Two began in 1982 as cooperatives providing services to basic grain producers. Since then, some diversification has taken place and members are now producing and marketing through the cooperatives coffee, chile peppers, onions, cabbage and other vegetables. In June 1983, USAID began supporting the other two model cooperatives, which were export oriented organizations producing melons and cucumbers for the United States market. Since that time considerable diversification has taken place in the latter two, and tomatoes, rice, corn, onions, sorghum, tobacco and other crops are being produced and marketed.

At the present time, approximately 1,300 producers, farming approximately 6500 manzanas of land, are receiving services from the four cooperatives. Total member contributed capital was approximately L 700,000 (US\$350,000) as of December 31, 1984, and members are utilizing approximately seven million lempiras in production/investment credits for the 1984/85 crop cycle.

The principal findings of the team are summarized as follows and discussed in detail in succeeding sections of the report.

1. Present Management Capacity

The team believes that, based on its evaluation, sound effective organizational structures, policies, procedures and management systems have been installed in all four cooperatives. However, there was no systematic way to collect, record and report yield and productivity data in any of the

models. Also, in the two export oriented cooperatives, there were serious problems, which to some extent were beyond the control of management, in storing, transporting, and marketing of melons and cucumbers. We believe the systems are basically sound and reasonably well maintained in the basic grain cooperatives and in Fruta del Sol, but there is a need for improvement in the CREHSUL coop.

2. Financial Analyses

Our analyses of the model cooperatives confirm that serious financial problems exist in the two export oriented cooperatives and minor ones in the basic grain cooperatives. Based on the analyses, we conclude that it is unlikely that any of the model cooperatives will attain self-sufficiency by December 1986 as planned. Also it is doubtful that any of them will be in a position to provide significant financial support to the proposed new central service organization during the next several years. Moreover, the two export oriented cooperatives need an early infusion of capital or refinancing to continue operations.

3. Central Organization

The Agricultural Cooperative Development International (ACDI) has been providing administrative and technical assistance to the cooperatives ever since their creation or acceptance as USAID supported model cooperatives. The ACDI contract terminates in May 1985. The evaluation team agree that priority should be given to the creation of a central service organization to provide similar and perhaps expanded support to the existing and planned cooperatives and to assist in organizing new cooperatives.

4. Adequacy of Technical Services Provided

Based on the evaluation, the team feel the quantity and quality of services provided to members are generally adequate. While data on overall production and yields is not formally maintained, we were able to obtain from the extensionists and members of the cooperatives data on which to base our opinion. The records and statements of the extensionists revealed that production and yields of many farmers increased after joining the cooperative. However, we felt that in all of the cooperatives more emphasis needs to be placed on increasing yields and productivity and in providing more complete and improved marketing services to members.

5. Social Impact

In terms of an ascending socio-economic scale, the model cooperatives are benefitting the following main types of producers:

- (a) land reform beneficiaries cultivating the adjudicated land collectively or individually;
- (b) minifundista farmers cultivating basic grains who in some cases have begun to diversify their production;
- (c) small or medium-size farmers often involved in multi-cropping; and
- (d) minifundista farmers cultivating vegetables or fruit for whom agriculture is a secondary source of income.

Typical target group farmers for AID-financed projects were more common among land reform groups who were members of the export cooperatives, and among minifundista members of basic grain cooperatives.

Agricultural activities funded by the cooperatives provided the needed cash flow to allow poor land reform beneficiaries cultivating the land collectively to keep operating. In their case, earnings advanced by the cooperative for the cultivation of melons that were to be exported represented 64% of the net farm income received in the 1984-85 agricultural cycle. As a result of services provided by the cooperative, minifundista farmers producing basic grains were capable of increasing productivity by approximately 65%; however, it is likely that the numbers of farmers obtaining such yields are limited due to a lack of an intensive agricultural extension program to increase yields and productivity. This increase in productivity implied a comparable increase in farm income. Basic grain producers capable of bringing land into production, were able to double their farm income after joining the cooperative. Those basic grain producers who were able both to partially technify the area devoted to basic grains and to begin cultivating an export crop realized up to a 400% increase in income from the area devoted to annual crops. Finally, the cash received by medium-size farmers cultivating melons using the proceeds advanced by the cooperative allowed them to pay old debts and to continue operating.

Also, on the positive side, cooperatives, particularly those serving basic grain areas, were able to partially fill a vacuum in agricultural services. They provided funding for agriculture which is normally inaccessible to the typical minifundista farmers or small farmer in the regions considered. This funding, coupled with the technical assistance provided, allowed these farmers to increase productivity and to begin understanding the basic financial principles of farm management. In some areas the local groups organized by the cooperatives stimulated the development of local leadership and local participation in community development projects.

On the negative side, in some cases, despite the interest generally observed in diversification, cooperatives have supported mono-culture during certain periods of the year. This has made farmers more vulnerable to price fluctuations.

Earnings received from the agricultural activities financed by the cooperatives have permitted farmers to: (a) pay past due debts, (b) buy farm implements and partially improve their farms; and (c) purchase household goods and appliances.

Overall, the model cooperatives have had a positive socio-economic impact among the cooperative members. This impact can be sustained if the observed limitations in extension services and the deficiencies of the marketing systems set-up, particularly with respect to export crops as discussed elsewhere in this report, can be modified.

6. Need for Additional Technical and Financial Assistance

Additional requirements for assistance that we have identified include: capital infusion of approximately L3 million to permit the export cooperatives to continue operations; about L400,000 a year for the next several years to finance the proposed central organization; an undetermined amount to subsidize the existing and planned cooperatives through and beyond 1986; and funding for technical assistance that will be needed by the cooperatives and the central organization in marketing, training, and organizing new cooperatives.

II. METHODOLOGY

The evaluation team was composed of three professionals: one generalist with experience in financial management and rural development who was the team leader; one agronomist with experience in cooperative management, marketing, and supervised credit; and the USAID evaluation officer, a social scientist with experience in the Honduran cooperative movement.

The team reviewed background data on the cooperative project and interviewed USAID, ACDI, Directorate for Cooperative Development (DIFOCOOP), and Agricultural Development National Bank (BANADESA) officials as well as members, leaders, and the management and technical staff of the four model cooperatives.

As an important part of the evaluation, the team reviewed at least thirty membership and loan files in each of the cooperatives. The membership records were selected using a systematic random sampling technique. The information gathered from these files permitted the team to prepare a profile of members belonging to the different cooperatives. The variables used for this analysis were: age, sex, family size, level of education, farm area, land holding system, and land use. The analysis of this information was done by grouping farmers into three categories depending on the size of the farm. These categories were: minifundistas, small farmers and medium-sized farmers. Minifundistas are those cultivating less than seven hectares; small farmers are those cultivating from seven to 35 hectares; and medium sized farmers are those cultivating more than 35 hectares. Farm size ranges used to establish these categories are those suggested by the Interamerican Committee for Agricultural Development (CIDA) given prevailing agricultural conditions in the country.

The persons interviewed and the interview guidelines used appear in Annexes C, and M through O. Also attached as Annexes L, J, and K are Socio-Economic Impact Papers which the team felt would be invaluable to future evaluators of the model cooperatives.

The team evaluated four cooperatives, which are treated in three separate sections, that follow. They are:

- Two basic grain cooperatives, "20 de Marza" and "Maya Occidental;"
- Cooperative Fruta del Sol, an export-oriented coop; and
- Cooperative CREHSUL, another export-oriented organization.

III. OBSERVATIONS AND FINDINGS

1. Basic Grain Cooperatives

A. General

The two basic grain cooperatives are "20 de Marzo" located in Morazán, Yoro, and "Maya Occidental," located in La Entrada, Copán. Formed in mid-1982, these cooperatives provide supply, credit, marketing, and technical assistance to a total of 1,126 members. Both coops sell fertilizers, pesticides, herbicides, and fungicides at reasonable prices to members. Land preparation and cultivation services are also provided to members at reasonable cost.

Both coops are receiving technical assistance from the Honduran Agricultural Research Foundation (FHIA) in soil testing, crop diversification and more efficient methods of irrigation and land management. Maya Occidental is receiving direct assistance and weekly visits from FHIA scientists, who are advising growers on production of alternative crops such as soybeans, acorn squash, okra, and pickling cucumbers. 20 de Marzo is currently experimenting with diversification into yellow and white onions, cherry tomatoes, acorn squash, lentils, carrots and coffee.

Maya Occidental has purchased a lot on which to construct office and storage facilities, and is presently drilling a well and preparing the land for construction. 20 de Marzo also plans to construct new office facilities and warehouse to include a rice mill and a dryer for corn.

B. Present Organizational and Management Capacity

1) ACDI Assistance. Senior technical advisors of ACDI, working with Honduran professionals and support personnel, conducted preliminary investigations and feasibility studies that resulted in the selection in 1982 of La Entrada, Copan, and Morazan, Yoro, as the sites of the Maya Occidental and 20 de Marzo cooperatives. The team then recruited and organized farmers into the two cooperatives. The ACDI team assisted the model cooperatives in the development of their organizational structure and operating and administrative policies and procedures. The team designed and installed the accounting, budgeting, and administrative systems and forms, determined staffing requirements, and participated in personnel recruitment. The ACDI central office in Tegucigalpa monitors the activities of the cooperatives and provides them with technical and management assistance.

2) Organization and Management. An organization chart for the cooperatives is included as Annex D. The main characteristics of the organization include:

- The General Assembly, composed of members who are organized into local agricultural groups (GLA), which approves cooperative policy and operations;
- An elected Board of Directors and an Oversight Committee, both responsible to the membership;

- An Advisory Committee and a general manager reporting to the Board of Directors; and
- A Credit Committee and technical, administrative, financial, and operating sections reporting to the manager.

Based on a review of the records and activities of the two basic grain cooperatives, the team feels that the organizational structure, policies and procedures, administrative, accounting, and operating systems are generally well suited for the management of the cooperatives and for ensuring that operations are conducted in accordance with cooperative principles approved by the International Cooperative Alliance. There are, however, several important observations:

a) Staffing. The two basic grain cooperatives have fundamentally the same staffing pattern. Both have a manager, three extensionists, an accountant, an assistant accountant, secretary/cashier, and two custodian/security employees. In addition, 20 de Marzo has an agronomy assistant working with FHIA in experimental field trials and coordinating activities between the two organizations.

Except possibly for extensionists, the authorized staffing for both cooperatives appears adequate for the present workload. However, it was noted that in both cooperatives, the extensionists were having difficulty in serving the large number of farmers assigned to them and in finding time to recruit and organize new member groups. However, given the financial constraints facing the two cooperatives, we are not suggesting that the staff be increased at this time. In general, we found the quality of employees high in both organizations.

The manager of 20 de Marzo left the organization in February and at the time of our visit the acting manager, an agronomist from ACDI, was out of town. We were told that the accountant was resigning in late March. We were also advised by ACDI that replacements for both employees would be employed by the new Board of Directors, which was elected March 30, 1985.

b) Credit Approval. We noted that the two cooperatives were using different methods for approving credit. Maya Occidental was approving each loan separately whereas 20 de Marzo was establishing and approving a line of credit against which supplies and services could be purchased. The latter method seems to be more efficient, and ACDI representatives told us that the other model coops will be adopting the practice in the near future.

c) Members' Records. In both cooperatives, we noted that much of the information in the applications for membership was either omitted or inaccurate. For example, the section on the total number of manzanas owned or rented was seldom equal to the total number of manzanas reported in the sections on land use and crops cultivated. Similarly, the yield per manzana for crops cultivated or assets owned was infrequently entered.

We suggest that when members apply for new credits, that this baseline data in the membership application be added or corrected. At the same time, we suggest that current data with respect to land utilization and productivity be recorded in the members' files.

d) Production and Yield Data. Neither coop systematically maintained and reported on overall production data for the crops they were financing.

C. Financial Analysis

1) Discussion. Condensed Balance Sheets, Income and Expense Statements, and Progress Indicators for 1982, 1983, and 1984 for both cooperatives are presented as Annexes F and G. Based on our analyses of these data and our on-site review of the operations of the two cooperatives, we feel that both have made considerable progress in becoming financially viable organizations.

The December 31, 1984, current ratios (current assets to current liabilities) of both organizations, at about two to one, are favorable.

The capitalization policy adopted by both cooperatives is basically the same. Each new member is obligated to pay initial membership dues of L25.00; 20% (Maya Occidental) or 25% (20 de Marzo) of their first loan at the time it is received and on amounts subsequently borrowed that result in an outstanding loan balance higher than the original loan; and 10% of each loan at the time the loan is paid off. There has been steady growth in capital paid in by members, which in both cooperatives is now about 40% of net worth.

The cooperatives borrow from BANADESA at an annual rate of 8% and lend to members at 16%, a rate comparable to current commercial rates and acceptable to the membership.

Both cooperatives have experienced considerable growth in membership and in sales of products and services. However, the 20 de Marzo increase in income has been more dramatic; a 124% increase to L304,700, as compared to the Maya Occidental increase of 113% to L194,000.

Neither cooperative has substantially reduced its operating losses. The cumulative operating deficit as of December 31, 1984, was L202,877 for Maya Occidental and L164,460 for 20 de Marzo. However, when AID subsidies are taken into consideration, the surplus as of December 31, 1984, for 20 de Marzo is L42,014 and for Maya Occidental is L15,972.

As a result of decisions made in 1985, both organizations will have additional fixed expenses of L8,000 to L10,000 for payments of interest to members on their paid in capital and L10,000 for research services provided by FHIA. Overdue loan payments for Maya Occidental total L99,844 as of December 31, 1984, and L91,844 of that amount represents loans made prior to 1983, whereas the accumulated reserve for uncollectible loans and interest as of December 31, 1984, is only L70,145. Similarly, but not to as great an

extent, overdue loans in 20 de Marzo total L82,314 and the reserve for uncollectibles is L75,649. It appears that the reserves for uncollectible loans and interest in both cooperatives are inadequate. In summary, both cooperatives are faced with additional expenses for interest, research services, and possibly bad debts that they may not have budgeted.

2) Self-Sufficiency. We believe it will be difficult for either organization to attain self-sufficiency by December 1986 as planned. Also, we see little likelihood of their being able, in the near future, to provide significant financial support to the proposed new central organization. However, management in both cooperatives feels that with increased technical and some capital assistance for equipment, they will be able to attain their goal of self-sufficiency by the target date.

D. Adequacy of Services Provided

The Maya Occidental and the 20 de Marzo cooperatives are providing supply, production, technical, and marketing services to memberships of about 500 each. There are three extensionists in each coop providing these services and one technical field assistant in 20 de Marzo who works with FHIA on experimental plots. The extensionists are also involved in organizing and recruiting local agricultural groups for membership in the cooperatives.

While we feel that the general quantity and quality of services provided to members is high, we do have several observations to make. These observations are fully discussed below.

The methods used in the basic grain cooperatives for harvesting, drying, and storing grain should be updated. The lack of appropriate technology in the production and harvesting of grains has kept total yields below potential, thus contributing to the continuation of a subsistence economy. Many members are not aware of the effect on price of moisture content and impurities in basic grains. They are also often unaware of market events and prices which could affect profits. Extensionists should stress quality control of grains produced, and management should seek new markets, such as food processors, to guarantee a reliable outlet. They should also to the extent possible implement a complete system for production, harvesting, processing, and distribution of grains so that members will be able to take advantage of economies of scale.

During visits to Maya Occidental and 20 de Marzo, the team saw no evidence of washing facilities for the chile peppers before they are processed. Since some of the pulp is being exported to the U.S., it is subject to restrictions regarding pesticide residues. This potentially hazardous situation should be corrected quickly.

The recent Kansas State report noted poor quality and yields for corn. The team also noted poor stands of corn with few ears. Improved seeds must be purchased and distributed, along with guidance from the extensionists as to proper planting and cultivation.

We understand from conversations with extensionists and members that many farmers are regularly applying expensive high formulation fertilizers without soil tests or specific recommendations from the extensionists. This not only adds to the cost of production, but could result in reduced yield because the necessary elements are not available to the plants.

The team agronomist noticed that cultivation methods for basic grains should be improved. According to the extensionists, many farmers follow the traditional methods of sowing and cultivating, and are reluctant to try new improved procedures. A few successful demonstrations on members' farms would serve to convince the traditional farmers that yields and profits could be increased.

Finally, the team felt that more emphasis should be placed on increasing yields and improving marketing services.

E. Social Impact

Inadequate baseline data was collected when the cooperatives were formed and it is difficult to draw conclusions with respect to the impact of project activities on the farmers' quality of life. Interviews with cooperative members have allowed us, nevertheless, to arrive at three conclusions. These are:

- The organization of GLAs (local agricultural groups) has supported the development of local leadership and local initiative to carry out development activities. In some cases, GLAs have sponsored fund raisers to improve roads normally impassable during the rainy season, and to effect other improvements in the community.
- Cooperative membership has facilitated farmers' access to IHMA services in selling a portion of their harvest. Earnings from increased productivity achieved after joining the cooperative are used to: (a) pay delinquent debts owed to banking institutions that had provided credit for agricultural activities, (b) make improvements on the farm (e.g., new or better fences), or (c) buy oxen to plow the land.
- Female farmers are not excluded from membership. Yet, there is no deliberate policy to include them. The affiliation of women to the cooperatives seems more by chance than through active encouragement by management. When female members have shown outstanding performance in support of the cooperative, however, management has reacted promptly to publicly recognize their work.

2. Cooperative Fruta Del Sol

A. General

Fruta del Sol, which was an independent regional cooperative formed in 1978, was approved as an AID supported cooperative in June 1983. It is located in Comayagua on the main highway connecting San Pedro Sula and

Tegucigalpa. The cooperative, presently with 183 members, provides supply, credit, and technical and marketing services. The coop also has several tractors and farming equipment for rental to members, but much of it is old and in poor condition. Since this coop is involved in exporting cucumbers, it owns a fairly sophisticated packing line and a cooling shed.

Recently, Fruta del Sol entered into a 50/50 partnership with SHEMESH, an Israeli group, to produce and export cantaloupes to the U.S., using farming techniques which are successful in Israel. A melon packing line for this project was being unloaded on the day the team visited the coop.

FHIA is assisting Fruta del Sol by running test trials on nine different varieties of cucumbers, and by providing technical assistance to the cooperative.

Other crops which are grown with assistance from the coop include rice, corn, onions, sorghum, and tobacco. Recently, the coop contracted with a nearby tomato processing plant to furnish up to 4,000 tons of tomatoes, and is presently considering an increase in the number of manzanas planted in that crop.

The cooperative appears to have been operating smoothly until the 1984/85 crop cycle when, because of a number of operating, transportation, and marketing problems, a loss of approximately L1,230,000 was sustained. The impact of this loss on future operations of the coop is discussed in the financial analysis section which follows.

B. Financial Analysis

Attached as Annex H are Fruta del Sol Balance Sheets and Progress Indicators as of December 31, 1983, and 1984, and statements of Income and Expenses for the years then ended. During the first two months of 1985, the financial position of the cooperative has changed dramatically; losses on production and exportation of cucumbers and melons during the 1984/85 crop season are estimated to be L1,230,000. Financial statements for January and February 1985 have not been completed and, consequently, our analysis was limited in scope. However, based on our review of records and conversations with officials of USAID, ACDI, and Fruta del Sol, our comments on the loss and its effect on the financial position of the cooperative are given below:

Sales - average price 100,000 boxes at L10.00		L1,000,000
Less: Direct Costs:		
Production	L800,000	
Packing	<u>426,000</u>	1,226,000
		<u>L (226,000)</u>
Less: Freight	L840,000	
Broker's commission	100,000	
Repacking	<u>69,000</u>	1,004,000
		<u>L (1,230,000)</u>

The accumulated operating deficit of Fruta del Sol on December 31, 1984, was L334,545. However, the subsidy provided by AID reduces that deficit to L73,830. Thus when the loss on the 84/85 crop is taken into account the estimated operating deficit as of March 31 will be L1.3 million, and the net deficit will be over L800,000.

The reserve for uncollectible loans on December 31 of L85,909 appears inadequate when compared to overdue loans of L147,466 of which L108,471 represents loans made prior to 1984. Consequently, due to possible write off of bad debts, the operating deficit is probably greater than the amount estimated.

It is obvious from the foregoing that without a substantial and early infusion of capital, the cooperative cannot continue to operate.

C. Present Organization and Management Capacity

ACDI Activities

ACDI conducted preliminary investigations and feasibility studies that resulted in the selection in June 1983 of Fruta del Sol as an AID supported model cooperative. The ACDI team assisted the coop in developing its organizational structure, policies and procedures, and designed and installed its accounting, budgeting, and administrative systems. Except for modifications to accommodate the substantial processing, packing, and shipping operations of Fruta del Sol, the systems and the extent of ACDI/USAID backstopping is essentially the same as that in the basic grain cooperatives.

Based on our review of the records and activities, and despite the substantial loss discussed in the preceding section, we feel that in general the organizational and management systems are sound. We were favorably impressed with the quality of the management and technical staff we interviewed.

The reasons for the 84/85 crop loss as explained to us were to some extent, events and occurrences beyond the control of management. We understand that USAID is employing marketing specialists to review the production and marketing procedures of the 1984/85 crop in both export oriented cooperatives for the purpose of identifying and resolving the problems that did occur.

D. Adequacy of Services Provided

Fruta del Sol provides essentially the same production, credit, technical and marketing assistance to its members as those provided by the other model coops. Based on our evaluation, we feel that except for marketing and transportation services, the quantity and quality was generally adequate. The losses that resulted from the shipping and marketing of the 1984/85 cucumber and melon crops are discussed elsewhere in this report.

E. Social Impact

As in the case of other cooperatives, in the absence of adequate baseline data, it is difficult to determine the impact of services provided on the quality of life of farmers. Field observations, nevertheless, permitted the team to arrive at the following conclusions.

- (1) The experience and higher education level of most members has facilitated the technology transfer process. Farmers have learned to produce cucumbers and to obtain high yields. Both from the extensionists' and the farmers' point of view, inadequate agricultural practices and low productivity do not constitute an obstacle in Comayagua. Furthermore, farmers have also learned basic financial and farm management principles and are utilizing such principles not only in the cultivation of cucumbers, but also in the production of other crops planted throughout the agricultural cycle.
- (2) Cooperative members producing tomatoes have been able to obtain guaranteed prices from the main buyer in the area.
- (3) Depending on the area cultivated and profits consequently made, farmers have used their earnings from cucumber cultivation for: (a) improving the farm, (b) buying farming implements, and (c) buying household goods and appliances.
- (4) In some cases, farmers have become specialized cucumber growers during the dry season of the agricultural cycle. This has increased their risks because of market fluctuations.

3. Cooperative CREHSUL

A. General

CREHSUL, the other export oriented cooperative, was also an independent regional cooperative that was approved as an AID supported model in June 1983. The coop, presently with 102 active members, provides the same basic services as Fruta del Sol, i.e. supply, credit, technical and marketing services.

Over 45,000 boxes of melons were grown and exported during the 1984/85 crop season. In addition, with assistance from the coop, members grow sugar cane, watermelon, sorghum, and sesame. Crops under consideration for diversification include chile peppers, pickling cucumbers, and acorn squash.

This cooperative, as did Fruta del Sol, experienced substantial losses on the 1984/85 crop. The same problems involving operations, transportation, and marketing were cited as the reasons for the loss. The impact of this estimated loss of L1.3 million on the financial position of the coop is discussed in the financial analyses section which follows.

B. Financial Analyses

Attached as Annex I are CREHSUL Balance Sheets as of April 30, 1984, and February 28, 1985, and Income and Expense Statements and Progress Indicators for the periods then ending.

Losses on production and exportation of melons during the September 1984 - March 1985 season were estimated by management as follows:

Sales - 45,000 boxes @ L 14.75		L 661,500
Production	L 976,700	
Packing	475,000	1,451,700
		<u>L (790,200)</u>
Less: Freight	L 433,315	
Brokers Fee	53,000	486,315
		<u>L (1,276,515)</u>
		=====

We were told these losses occurred for the same reasons as those of Fruta del Sol, i.e., dramatic decrease in prices, transportation problems, poor brokerage services, weather, etc.

It is important to note that the operating loss of L 993,274 for the ten months ended February 28, 1985, does not include losses of L 156,841 incurred because of spoilage in February 1985. This amount was incorrectly charged to the surplus/deficit account. Also, fruit valued at approximately L 743,761, according to the records, was either on hand or in transit as of February 28, 1985, and was probably sold at a loss subsequent to February. Consequently, the operating deficit of L 1,126,758 and the net deficit of L 843,572 are both understated.

In view of the foregoing and with current liabilities exceeding current assets by over L 500,000, it is clear that without early infusion of new capital, the coop will be unable to continue operations.

C. Present Organizational and Management Capacity

1) ACDI Activities. Cooperative CREHSUL was approved as an AID model cooperative in June 1983. ACDI conducted the feasibility studies that led to this approval and provided the same organizational, management and technical assistance that it provided to the other three model cooperatives.

2) Staffing. The present staffing plan, which consists of positions for a manager, four extensionists, an accountant and assistant, warehouseman, two secretarial employees, and six custodial and security personnel, seems more than adequate to manage and operate the coop.

The manager was on vacation and was not present on the days we visited the coop and an acting manager had not been designated. The technical personnel we interviewed were unable to give us an overall view of the operations of the coop. The accountant was very helpful in answering our questions and in providing us financial records from which we extracted data for analysis.

The members that we interviewed were unenthusiastic and not well informed with respect to CREHSUL operations. One stated that GLA meetings were often cancelled because of poor turnouts. Another said he joined the cooperative only for dividends.

3) Membership and Loan Files. In reviewing membership files, we found that many files did not include membership applications and those that were in the files omitted important baseline data and contained inaccurate information.

4) Self-Sufficiency. Of the four cooperatives, we believe CREHSUL will have the most difficulty in attaining self-sufficiency for the following reasons:

- a) Smaller membership (66 credits in 1984/85 season) and greater deficit to overcome;
- b) Less productive lands and difficulty in producing more than one crop per year;
- c) Many members are not full time farmers and derive the major portion of their income from employment in local industry or from self operated small businesses;
- d) Apathy and indifference of membership;
- e) High transportation costs on exports because of distance from port (about 800 kilometers);
- f) Formidable competition from PATSA, the United Brands affiliate active in the area; and
- g) High administrative overhead of about L166,000 per year and an inadequate capitalization policy.

D. Adequacy of Services Provided

Cooperative CREHSUL provides basically the same production, credit, technical and marketing assistance as provided by the other cooperatives. Based on our evaluation, we feel that except for serious marketing and transportation problems, the services offered were generally adequate.

E. Social Impact

As mentioned earlier in the report, it is difficult, in the absence of accurate baseline data, to determine how the project has changed the quality of life for cooperative members. However, based on observations in the field and discussions with cooperative members, staff of the cooperative, and private citizens in the area we were able to arrive at certain conclusions.

Farmers in Choluteca live in an area where agriculture, an already risky business, is even riskier. Here we found a larger number of farmers having more than one source of income. Not only does there seem to be more agricultural diversification, but also more involvement in other economic activities to earn a living. CREHSUL is an institutional mechanism to assist in one of the several undertakings in which breadwinners are involved. It is precisely because of the dependency on many income sources that commitment and

involvement in cooperative activities seems lower. Despite the cash flow that melon cultivation provides to members, it is an operation that lasts only for a short period of time. For most of the year farmers are occupied with growing other crops or working in their own business or for someone else. Thus services provided by the cooperative are used only during part of the agricultural cycle.

This situation is totally different from that observed in the basic grain cooperatives where, as we pointed out, the needier the farmer the more he relies on services provided by the cooperative. The apathy we observe with respect to cooperative activities in Choluteca has precluded the development of local leadership that cooperatives so badly need to be successful.

As indicated earlier, the cash income that CREHSUL provides to farmers cultivating melons seems significant enough to keep these producers in business, even though its impact on improving the family's living standards is limited.

The team noted that in CREHSUL, unlike the other three model cooperatives, a significant part of the required labor in the production of melons was performed by women.

IV. NEED FOR CENTRAL SERVICE ORGANIZATION

ACDI has been providing administrative and technical assistance to the four model cooperatives ever since they were created or approved for USAID support. ACDI personnel have also monitored and reported on the operations of the models from the beginning. Thus, when the contract under which this work is performed terminates in May 1985, there will be no central organization to assist the geographically separated models.

USAID is considering a proposal to support a central service organization that would provide assistance to the existing models and would help organize new cooperatives. (Two additional coops are planned for 1985).

The functions of the central service organization would include:

- Providing central purchasing and contracting service for supplies, fertilizers, herbicides, insecticides, seeds, equipment, marketing services, transportation, etc.
- Serving as a communications center for all coops and an exchange for marketing, technical, and other information.
- Conducting or arranging for periodic audits of the financial records of the cooperatives.
- Facilitating actions required for obtaining import/export permits, and, conducting or arranging for other required licenses and documentation.
- Serving as liaison on administrative matters between the cooperatives and USAID, DIFOCOOP, and BANADESA, other GOH agencies.
- Providing or arranging for training and technical assistance programs.

Management and technical staff in each of the cooperatives strongly encouraged the creation of the central association, and expressed a willingness to financially support such an organization. However, as stated earlier, we feel that none of the models will be able to attain self-sufficiency as planned or provide significant financial support to a central organization in the near future.

We recognize that a well managed central organization with qualified and dedicated staff could effect substantial savings through centralized procurement, by serving as a conduit for vital marketing and technical information, and by representing the coops in Tegucigalpa on administrative matters, thus saving valuable time and travel costs for the management and technical staff.

We are told that there is no existing organization that could perform the functions of a central service organization, and we agree that such an organization is vital to the success of the cooperatives.

V. NEED FOR ADDITIONAL TECHNICAL AND FINANCIAL ASSISTANCE

Additional requirements for assistance that we have identified include: capital infusion of approximately L3 million to permit the export cooperatives to continue operations; about L400,000 a year for the next several years to finance the proposed central organization; an undetermined amount to subsidize the existing and planned cooperatives through and beyond 1986; and funding for technical assistance that will be needed by the cooperative and the central organization in marketing, training, organizing new cooperatives, etc.

VI. RECOMMENDATIONS

Our recommendations follow:

1. In order to evaluate better the performance of members, extensionists, and the coop itself, we suggest that records of production and productivity for all crops financed by the cooperatives be systematically collected, recorded, and periodically reported to management.
2. In view of the substantial losses sustained by the two export oriented coops and because they have not been audited since becoming USAID supported models, we recommend that AID or a local CPA firm audit the financial records of both institutions.
3. With respect to the export oriented models, we strongly recommend that the planned export marketing study be accomplished as soon as possible.
4. We recommend that a study of CREHSUL's operations be made to determine what actions can be taken to increase membership, overcome PATSA competition, increase crop production, productivity, and diversification in the area, and to determine whether CREHSUL can overcome the obstacles it faces in attaining self sufficiency.
5. The capitalization policies of the four model cooperatives are basically the same except for the percentages applied in determining the amount of members' capital contributions. The percentage currently applied to the members' initial loans and to the amounts of subsequent loans that exceed the initial loan are: 20% in cooperative Maya Occidental; 25% in Fruta del Sol and 20 de Marzo; and 10% in CREHSUL. We recommend that CREHSUL increase its member capital contribution policy to conform with that of the other models.
6. The membership and loan files in all of the models should be updated. We recommend that membership applications be obtained for members who do not have one on file; that missing and inaccurate information in existing applications be added or corrected; and that current information with respect to production, manzanas farmed, yields, assets, etc. be obtained from the active members. We believe these improvements can be made at the time members apply for new credits.

7. In only one cooperative did the team find any evidence of efforts to promote soil conservation and composting. In the interest of long-range improvement of the soil, an appropriate technologies program would be beneficial in all of the models.

8. Cooperative 20 de Marzo follows the practice of approving a line of credit for each member against which supplies and services can be purchased, whereas the other three models approve each loan separately. We suggest that the planned changeover to the line of credit system be expedited.

9. During visits to the basic grain cooperatives, the team saw no evidence of washing facilities for the chile peppers before they are processed. Since some of the pulp is being exported to the U.S., it is subject to restrictions regarding pesticide residues. We recommend that this potentially hazardous situation be corrected quickly.

10. The team noticed poor stands of corn, with apparently uneven rates of germination. We recommend that improved seeds and improved methods of cultivation be introduced by the extensionists. Although the extensionists reported a resistance to change on the part of many traditional farmers, we believe that several successful demonstrations on members' farms would convince the traditional farmers that yields and profits can be increased.

11. Income increases observed in the case of basic grain farmers are significant in relative terms, but are meager in absolute terms. Cultivation of basic grains alone, regardless of the increases in productivity, are not likely to have a significant impact in the overall living conditions of such farmers, particularly if they have limited access to land, that is, if they do not have areas that could still be incorporated into production. In the case of such farmers, crop diversification should continue to be emphasized.

12. Extensionists must insure that the introduction of new crops does not gradually change farmers into mono-producers as a result of the perceived profitability of the new crop. To the extent possible, we suggest that viable multi-cropping systems should be supported to prevent farmers from becoming more vulnerable to market fluctuations that may be observed in the newly introduced crop.

13. We noted that the model cooperatives were working extensively with collective farmers in Comayagua and Choluteca, but assistance provided collective groups in the Copan and Yoro areas was very limited. In the case of most land reform groups, the farm income obtained from the farm area cultivated collectively complements that which is obtained from the parcels cultivated individually. We recommend that the basic grain cooperatives expand their membership to include more collective farmers.

14. In the area of training we suggest that a short course for extensionists be developed to update their knowledge and skills on irrigation methods, pest control, fertilization, soil conservation, mechanization and appropriate technologies and that managers be trained in long term technical and financial planning.

15. We recommend that the basic grain cooperative managers and extensionists educate their members in modern techniques of planting, harvesting, and drying grain. The cooperative should also offer basic grain producers the possibility of drying production to meet IHMA requirements so that the farmers can receive a higher price for the crop.

16. We also noted that all of the cooperative were in the need of additional equipment. For example, the manager of Maya Occidental, citing high transportation cost incurred by members, told us of the need for a truck to transport produce from the field to the coop or market. Similar needs for equipment were mentioned by staff in the other cooperatives. We recommend that consideration be given to arranging long term financing for the cooperatives' capital requirements.

17. Many farmers regularly apply expensive high formulation fertilizers (such as 12-24-12) without soil tests or advice from the extensionists. We recommend that this costly practice be avoided by emphasizing the value of soil analysis by FHIA and the use of specific formulations, depending on the crop being cultivated.

18. In all of the cooperatives we visited, we were told that members needed mid and long term credit to technify their farms and improve their households. Farmers cited the need for plows, implements, small silos, irrigation pumps, oxen, carts and in one case a pick-up truck. We suggest that consideration be given to providing long or mid term credit services to cooperative members.

19. We recommend that in all of the cooperatives, more emphasis be placed on increasing yields and productivity and on improving marketing services to members. We suggest that training of managers and extensionists be intensified and that priority be given to these areas when considering technical assistance for the new control organization.

* * *

This concludes the team's overall findings and conclusions related to the four model cooperatives. In the following pages supporting documentation is presented in a series of annexes. Of particular interest to future evaluators are the socio-economic papers (see Annexes J, K and L), and the interview guidelines (Annexes M, N, and O).

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ANNEXES

ANNEX A: Map of Honduras Showing Location of Cooperatives
ANNEX B: Acronyms Used and Conversion Chart
ANNEX C: Persons Contacted
ANNEX D: Organizational Chart - Basic Grain Cooperatives
ANNEX E: Organizational Chart - Export Oriented Cooperatives

FINANCIAL STATEMENTS AND PROGRESS INDICATORS:

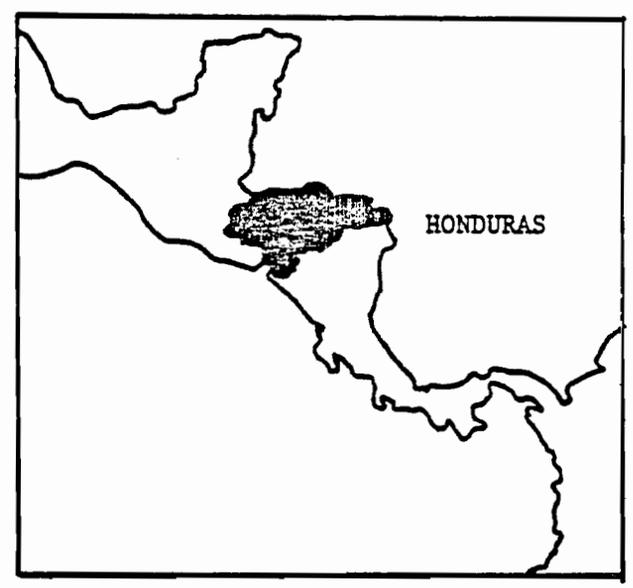
ANNEX F: Maya Occidental
ANNEX G: 20 de Marzo
ANNEX H: Fruta del Sol
ANNEX I: CREHSUL

SOCIAL-ECONOMIC IMPACT:

ANNEX J: Basic Grains Cooperatives
ANNEX K: Fruta del Sol
ANNEX L: CREHSUL

INTERVIEW GUIDE FOR:

ANNEX M: Managers
ANNEX N: Extensionists
ANNEX O: Members



▲ Location of Model Cooperatives

ACRONYMS USED

ACDI/H	Agricultural Cooperative Development International/Honduras
ACDI/W	Agricultural Cooperative Development International/Washington
AESA	Asociación de Empresas de Servicios Agropecuarios (Association of Agri-Service Enterprises)
AID/W	Agency for International Development/Washington
BANADESA	Banco Nacional de Desarrollo Agrícola (National Agricultural Development Bank)
CREHSUL	Cooperative Regional de Horticultores Sureños Limitada (Cooperative of Southern Region Horticulturalists, Ltd.)
DIFOCOOP	Dirección de Fomento Cooperativo - GOH (Directorate for Cooperative Development)
FHIA	Fundación Hondureña de Investigación Agrícola (Honduran Agricultural Research Foundation)
GOH	Government of Honduras
IHMA	Instituto Hondureño de Mercadeo Agrícola (Honduran Agricultural Marketing Institute)
PATSA	Productos Acuáticos y Terrestres, S.A. (Terrestrial and Aquatic Products, Inc.)
USAID	United States Agency for International Development
USAID/H	USAID Mission to Honduras

Conversion Chart

1 Lempira	=	U.S.\$.50
1 Manzana	=	0.7 Hectare
1 Manzana	=	1.73 Acres
1.43 Manzanas	=	1 Hectare
1 Quintal	=	100 pounds

List of Persons ContactedTegucigalpaUSAID/H

Stephen Wingert, Director of Rural Development Office
 Barry Lennon, Project Officer
 Jaime A. Mendoza, Project Liaison Officer
 Orlando Hernández, Social Analyst

ACDI/H

Richard Clark, Cooperative Management/Service Technician
 Juan Alvarez, Cooperative Operation Adviser (Chief of Party)
 Office Staff

DIFOCOOP

Lic. Mario Efraín Figueroa Flores, Director
 Lic. Alcides Andrade, Cooperative Development Division Chief
 Lic. German Mejía Gallardo, DIFOCOOP official, in charge of the Model Cooperatives

BANADESA

Lic. Carolina Mens

BID

Lic. Raul López Robleda, Coordinator

FHIA

G.C. Millinstead, Acting Director

La Entrada, Copan: Cooperative Maya Occidental

Luis Orlando Valle, Manager
 José Eduardo Melgar, Extensionist
 José Antonio Posas, "
 Héctor A. Díaz, "
 Hernán Roberto Chichilla, Accountant
 C. Ondina Orellana Lara, Secretary/Cashier
 María Bernarda Martínez, Assistant Accountant
 Enrique Sanabria, Messenger
 Agr. Arnulfo Madrid Zeron, Administrative Board President
 Luis Alfonso Sanabria, Administrative Board Secretary

Morazán, Yoro: Cooperative 20 de Marzo

Ramón Adalberto Obando, Accountant
 Hugo Jesús Rodríguez, Assistant Accountant
 Rosa A. Sarmiento, Secretary/Cashier
 Feliz A. Flores, Extensionist
 Hector Reyes, "
 Alex A. Suarez, "
 Omar Perez, Assistant Agronomist

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Comayagua, Comayagua: Cooperative Fruta del Sol

Mauro R. Suazo Avila, Manager

Francisco Alvarenga, Extensionist

Juan José Alberto Sabio, "

Ana Ruth de Torres, Accountant

Janet Zelaya, Secretary/Cashier

Magda Leticia Madrid, Secretary

Enrique Michelem, President Administrative Board

Oscar Fonseca, President GLA

Emil S. Saada, President SHEMESH International, Inc. (Group from Israel)

Choluteca, Choluteca: Cooperative CREHSUL

Victor Samuel Vazquez, Extensionist

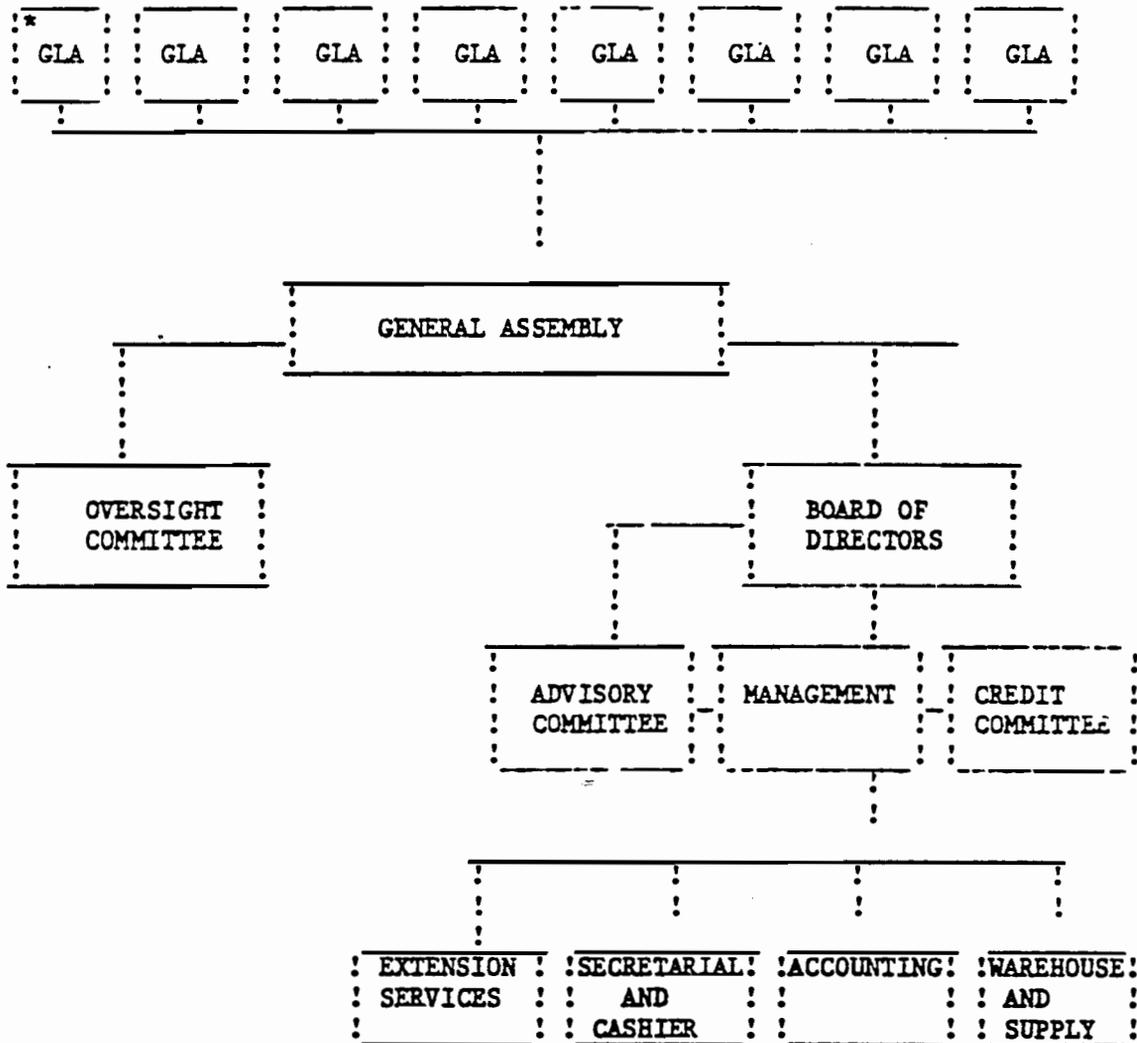
Reina Ivonne Castillo de Araujo, Accountant

Cupertino Morales, Extensionist

Edilberto Rodriguez, Extensionist

ORGANIZATIONAL CHART

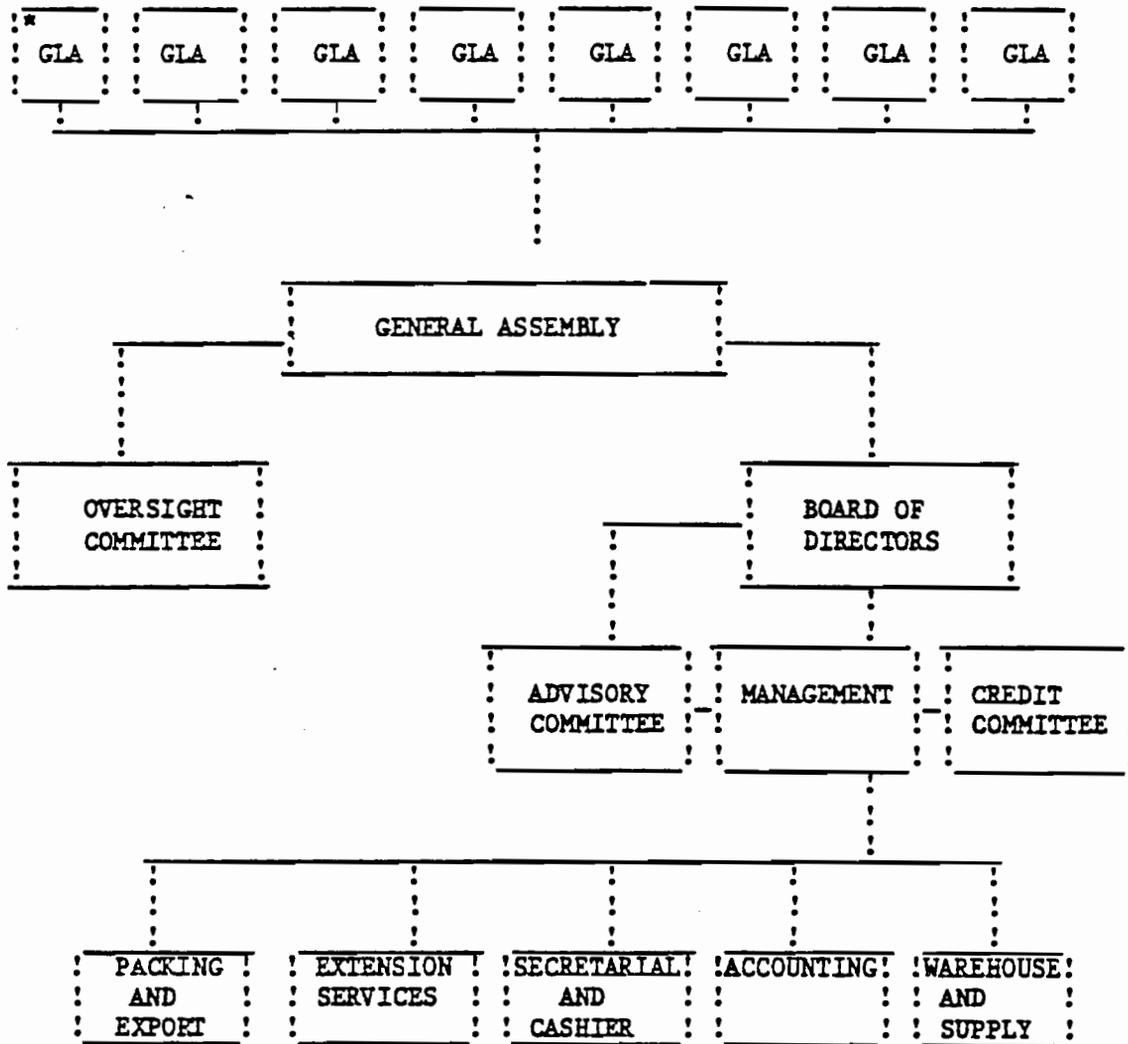
MAYA OCCIDENTAL
20 DE MARZO



* GLA - Local Agricultural Groups

ORGANIZATIONAL CHART

FRUTA DEL SOL
CREHSUL



* GLA - Local Agricultural Groups

EVALUATION OF MODEL REGIONAL
AGRICULTURAL COOPERATIVES

ANNEX F

BALANCE SHEETS
"MAYA OCCIDENTAL" Cooperative
La Entrada, Copán

	<u>12/31/84</u>	<u>12/31/83</u>	<u>12/31/82</u>
<u>Current Assets</u>			
Cash and Imprest Funds	L 173,914	L 25,790	L 31,157
Loans Receivable	414,634	243,871	178,051
Subsidy Receivable	21,833	42,756	15,084
Interest and Other Receivables	43,273	17,268	22,604
Inventories	<u>56,722</u>	<u>15,755</u>	<u>5,177</u>
TOTAL CURRENT ASSETS	<u>L 710,376</u>	<u>L 345,460</u>	<u>L 252,083</u>
<u>Fixed Assets</u>			
Lands, Vehicles, Buildings, and Equipment less reserve for depreciation	L 84,695	L 78,905	L 14,586
Loans Receivable	<u>13,579</u>	<u>-0-</u>	<u>-0-</u>
	<u>L 98,274</u>	<u>L 78,905</u>	<u>L 14,586</u>
TOTAL ASSETS	<u>L 808,650</u>	<u>L 424,365</u>	<u>L 266,669</u>
<u>Current Liabilities</u>			
Accounts Payable	L 13,474	L 7,295	L 6,854
Loans and Advances Payable	321,124	163,171	160,732
Interest and Other Payables	<u>2,274</u>	<u>59</u>	<u>1,031</u>
TOTAL CURRENT LIABILITIES	<u>L 336,872</u>	<u>L 170,525</u>	<u>L 168,617</u>
<u>Reserve for Uncollectible Loans and Interest</u>	L 70,145	L 37,128	L 2,177
<u>Other Reserves</u>	<u>5,176</u>	<u>5,003</u>	<u>1,089</u>
TOTAL RESERVES	L 75,321	L 42,131	L 3,267
<u>Capital and Surplus</u>			
Accumulated Surplus	L 15,972	L 14,987	L 18,506
Paid in by Members	161,636	114,509	65,225
Donated (A.I.D.)	<u>218,849</u>	<u>82,213</u>	<u>11,025</u>
TOTAL CAPITAL AND SURPLUS	<u>L 396,457</u>	<u>L 211,709</u>	<u>L 94,786</u>
<u>TOTAL CAPITAL AND LIABILITIES</u>	<u>L 808,650</u>	<u>L 424,365</u>	<u>L 266,669</u>

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EVALUATION OF MODEL REGIONAL
AGRICULTURAL COOPERATIVES

ANNEX F

INCOME AND EXPENSE STATEMENTS
"Maya Occidental" Cooperative
La Entrada, Copan

	<u>PROJECTED</u> <u>1985</u>	<u>PERIOD ENDING</u>		
		<u>12/31/84</u>	<u>12/31/83</u>	<u>12/31/82</u>
<u>Sales</u>				
Fertilizers, Insecticides, etc.		L 149,488	L 108,069	L 91,005
Coffee, Grains, Fruits, etc.		34,914	-0-	-0-
Services		<u>9,583</u>	<u>5,924</u>	<u>-0-</u>
<u>Cost of Sales</u>				
Fertilizers, Insecticides, etc.		L 124,519	L 91,226	L 80,102
Coffee, Grains, Fruits, etc.		33,813	-0-	-0-
Services		906	284	-0-
		<u>L 159,238</u>	<u>L 91,510</u>	<u>L 80,102</u>
<u>Gross Profit on Sales</u>	L 112,000	L 34,747	L 22,483	L 10,903
<u>Interest and Miscellaneous Income</u>	<u>87,750</u>	<u>60,686</u>	<u>41,260</u>	<u>18,617</u>
<u>Total Gross Income</u>	L 199,750	L 95,433	L 63,743	L 29,520
<u>Operating and Administrative Expenses</u>	<u>288,800</u>	<u>164,274</u>	<u>134,830</u>	<u>66,962</u>
<u>Net Operating Income or (Loss)</u>	L (89,050)	L (68,841)	L (71,087)	L (37,442)
<u>A.I.D. Subsidy</u>	<u>L 112,000</u>	<u>L 70,000</u>	<u>L 82,665</u>	<u>L 59,214</u>
	<u>L 22,950</u>	<u>L 1,159</u>	<u>L 11,578</u>	<u>L 21,772</u>

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EVALUATION OF MODEL REGIONAL
AGRICULTURAL COOPERATIVES

ANNEX F

PROGRESS INDICATORS
"Maya Occidental" Cooperative, Ltda.
La Entrada, Copán

I. <u>Membership - Capitalization</u>	<u>As of</u>			
	<u>12/31/84</u>	<u>12/31/83</u>	<u>12/31/82</u>	
Number of Members	543	442	373	
Paid in Capital	L 161,636	L 114,509	L 65,255	
II. <u>Credit Provided Members</u>	<u>Amount</u>	<u>Current</u>	<u>Overdue</u>	<u>Delinquency Rate</u>
1984-1985	L 156,110	L 32,334	-0-	-0-
1983-1984	268,435	154,804	7,869	7.00%
Prior Years	<u>674,946</u>	<u>141,361</u>	<u>91,844</u>	14.00%
TOTAL	<u>L1,099,491</u>	<u>L 328,499</u>	<u>L 99,713</u>	<u>13.00%</u>
III. <u>Credit Received</u>	<u>Amount</u>	<u>Current</u>		
1984-1985	L 463,257	L 291,124		
Prior Years	<u>732,508</u>	<u>-0-</u>		
TOTAL	<u>L1,195,765</u>	<u>L 291,124</u>		
IV. <u>Results of Operations</u>	<u>Period Ending</u>			
	<u>12/31/84</u>	<u>12/31/83</u>	<u>12/31/82</u>	
Net Gain (Loss) from Operations	L (68,841)	L (71,087)	L (37,442)	
AID Subsidy	<u>70,000</u>	<u>82,665</u>	<u>59,214</u>	
NET	<u>L 1,159</u>	<u>L 11,578</u>	<u>L 21,772</u>	

EVALUATION OF MODEL REGIONAL
AGRICULTURAL COOPERATIVES

ANNEX G

BALANCE SHEETS
"20 de Marzo" Cooperative
Morazán, Yoro

	<u>12/31/84</u>	<u>12/31/83</u>	<u>12/31/82</u>
<u>Current Assets</u>			
Cash and Imprest Funds	L 211,617	L 33,283	L 8,830
Loans Receivable	449,185	221,144	132,973
Subsidy Receivable	17,715	39,752	13,466
Interest and Other Receivables	154,245	191,509	8,408
Inventories	<u>48,579</u>	<u>15,840</u>	<u>8,656</u>
TOTAL CURRENT ASSETS	<u>L 881,341</u>	<u>L 501,528</u>	<u>L 172,333</u>
<u>Fixed Assets</u>			
Lands, Vehicles, Buildings, and Equipment less reserve for depreciation	<u>L 95,155</u>	<u>L 73,705</u>	<u>L 12,363</u>
TOTAL ASSETS	<u>L 976,496</u>	<u>L 575,233</u>	<u>L 184,696</u>
<u>Current Liabilities</u>			
Accounts Payable	L 35,478	L 18,712	L 19,648
Loans and Advances Payable	446,826	263,891	87,152
Interest and Other Payables	<u>7,744</u>	<u>25,609</u>	<u>942</u>
TOTAL CURRENT LIABILITIES	<u>L 490,048</u>	<u>L 308,212</u>	<u>L 107,742</u>
<u>Reserve for Uncollectible Loans and Interest</u>	<u>L 75,649</u>	<u>L 47,157</u>	<u>-0-</u>
<u>Other Reserves</u>	<u>L 9,655</u>	<u>L 7,595</u>	<u>L 3,720</u>
<u>Capital and Surplus</u>			
Accumulated Surplus	L 42,014	L 30,499	L 21,078
Paid in by Members	152,656	101,376	43,315
Donated (A.I.D.)	<u>206,474</u>	<u>80,394</u>	<u>8,841</u>
NET WORTH	<u>L 401,144</u>	<u>L 212,269</u>	<u>L 73,234</u>
<u>TOTAL LIABILITIES AND CAPITAL</u>	<u>L 976,496</u>	<u>L 575,233</u>	<u>L 184,696</u>

INCOME AND EXPENSE STATEMENTS
"20 de Marzo" Cooperative
Morazán, Yoro

	<u>PERIOD ENDING</u>		
	<u>12/31/84</u>	<u>12/31/83</u>	<u>12/31/82</u>
<u>Sales</u>			
Fertilizers, Insecticides			
Coffee, Grains, Fruits			
Services, etc.	L 304,732	L 239,978	L 135,807
<u>Cost of Sales</u>	<u>248,976</u>	<u>192,787</u>	<u>117,392</u>
<u>Gross Profit on Sales</u>	L 55,756	L 47,191	L 18,415
Interest and Miscellaneous Income	<u>66,143</u>	<u>45,627</u>	<u>11,371</u>
<u>Total Gross Income</u>	L 121,899	L 92,818	L 29,786
Operating and Administrative Expenses	<u>172,245</u>	<u>152,825</u>	<u>60,052</u>
<u>Net Operating Income or (Loss)</u>	L (50,344)	L (60,007)	L (30,266)
A.I.D. Subsidy	<u>64,078</u>	<u>81,965</u>	<u>55,063</u>
<u>NET INCOME</u>	<u>L 13,734</u>	<u>L 21,958</u>	<u>L 24,797</u>

EVALUATION OF MODEL REGIONAL
AGRICULTURAL COOPERATIVES

ANNEX G

PROGRESS INDICATORS
"20 de Marzo", Ltda. Cooperative
Morazán, Yoro

I. <u>Membership - Capitalization</u>	<u>As of</u>			
	<u>12/31/84</u>	<u>12/31/83</u>	<u>12/31/82</u>	
Number of Members	583	501	305	
Paid in Capital	L 152,600	L 101,376	L 43,315	
II. <u>Credit Provided Members</u>	<u>Amount</u>	<u>Current</u>	<u>Overdue</u>	<u>Delinquency Rate</u>
1984-1985	L 657,400	L 349,787	L 34,034	11.00%
1983-1984	188,800	-0-	16,300	8.00%
Prior Years	<u>565,600</u>	<u> </u>	<u>11,980</u>	<u>2.00%</u>
TOTAL	<u>L1,411,800</u>	<u>L 349,787</u>	<u>L 62,314</u>	<u>5.86%</u>
III. <u>Credit Received</u>	<u>Amount</u>	<u>Current</u>		
1984-1985	L 646,000	L 465,347		
1983-1984	460,000	-0-		
Prior Years	<u>261,545</u>	<u>-0-</u>		
TOTAL	<u>L1,367,545</u>	<u>L 465,347</u>		
IV. <u>Results of Operations</u>	<u>Period Ending</u>			
	<u>12/31/84</u>	<u>12/31/83</u>	<u>12/31/82</u>	
Net (Loss) from Operations	L (50,344)	L (60,007)	L (30,266)	
AID/DIFOCOOP Subsidy	<u>64,078</u>	<u>81,965</u>	<u>55,063</u>	
NET	<u>L 13,734</u>	<u>L 21,958</u>	<u>L 24,797</u>	

EVALUATION OF MODEL REGIONAL
AGRICULTURAL COOPERATIVES

ANNEX H

BALANCE SHEETS
Cooperative "FRUTA DEL SOL"
Comayagua, Comayagua

	<u>12/31/84</u>	<u>12/31/83</u>
<u>Current Assets</u>		
Cash and Imprest Funds	L 654,455	L 37,397
Loans Receivable	790,768	214,052
Subsidy Receivable	29,893	88,913
Interest and Other Receivables	252,920	27,376
Inventories on Hand and in Transit	<u>415,917</u>	<u>46,772</u>
<u>TOTAL CURRENT ASSETS</u>	<u>L 2,143,958</u>	<u>L 414,510</u>
<u>Fixed Assets</u>		
Vehicles and Equipment less reserve for depreciation	L 274,834	L 84,246
Advances to Producers	-0-	51,408
	<u>274,834</u>	<u>135,654</u>
<u>TOTAL ASSETS</u>	<u>L 2,418,787</u>	<u>L 550,164</u>
<u>Current Liabilities</u>		
Accounts Payable	L 377,056	L 11,184
Loans and Advances Payable	1,433,726	371,716
Interest and Other Payables	<u>19,317</u>	<u>2,974</u>
<u>TOTAL CURRENT LIABILITIES</u>	<u>L 1,830,099</u>	<u>L 385,874</u>
<u>Reserve for Uncollectible Loans and Interest</u>		
	L 85,909	L 24,830
<u>Other Reserves</u>		
	<u>46,588</u>	<u>3,425</u>
<u>TOTAL RESERVES</u>	<u>L 132,497</u>	<u>L 28,255</u>
<u>Capital and Surplus</u>		
Accumulated Surplus (Deficit)	L (73,830)	L (6,931)
Paid in by Members	269,306	78,201
Donated (A.I.D.)	<u>260,715</u>	<u>64,765</u>
<u>NET WORTH</u>	<u>L 456,191</u>	<u>L 136,035</u>
<u>TOTAL CAPITAL AND LIABILITIES</u>	<u>L 2,418,787</u>	<u>L 550,164</u>

EVALUATION OF MODEL REGIONAL
AGRICULTURAL COOPERATIVES

ANNEX H

INCOME AND EXPENSE STATEMENTS
Cooperative "FRUTA DEL SOL"
Comayagua, Comayagua

	<u>PROJECTED</u> <u>1985</u>	<u>12 MONTHS</u> <u>ENDING</u> <u>12/31/84</u>	<u>6 MONTHS</u> <u>ENDING</u> <u>12/31/83</u>
<u>Sales</u>			
Fertilizers, Insecticides, etc.		L 534,356	L 139,388
Packing Materials		19,128	-0-
Services - Packing, marketing and cultivation		<u>1,268,282</u>	<u>24,848</u>
<u>TOTAL SALES</u>		<u>L 1,821,766</u>	<u>L 164,236</u>
<u>Cost of Sales</u>			
Fertilizers, insecticides, etc.		L 434,051	L 126,212
Packing materials		12,748	-0-
Services - Packing, marketing and cultivation.		<u>1,254,516</u>	<u>14,294</u>
<u>TOTAL COST OF SALES</u>		<u>L 1,701,315</u>	<u>L 140,506</u>
<u>Gross Profit on Sales and Services</u>		L 120,451	L 23,730
<u>Interest and Miscellaneous Income</u>		<u>79,232</u>	<u>7,625</u>
<u>Total Gross Income</u>	L 594,791	L 199,683	L 31,355
<u>Operating and Administrative Expenses (Note 1)</u>	<u>L 678,748</u>	<u>L 386,594</u>	<u>L 132,235</u>
<u>Net Operating Income or (Loss)</u>	L (83,957)	L (186,911)	L(100,880)
<u>A.I.D. Subsidy</u>	<u>100,000</u>	<u>119,924</u>	<u>93,949</u>
	<u>L 16,043</u>	<u>L (66,987)</u>	<u>L (6,931)</u>

NOTE 1: 1985 Budget includes Capital Expenditures of L 50,000.

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EVALUATION OF MODEL REGIONAL
AGRICULTURAL COOPERATIVES

ANNEX H

PROGRESS INDICATORS
Cooperative "FRUTA DEL SOL, LTDA."
Comayagua, Comayagua

	<u>As of</u>			
	<u>12/31/84</u>	<u>12/31/83</u>		
I. <u>Membership - Capitalization</u>				
Number of Members	183	82		
Paid in Capital	L 296,306	L 78,201		
II. <u>Credit Provided Members</u>	<u>Amount</u>	<u>Current</u>	<u>Overdue</u>	<u>Delinquency Rate</u>
1984-1985	L 603,679	L 619,564	L 37,995	13.00%
Prior Years	846,113	24,738	108,471	86.00%
TOTAL	<u>L 1,509,792</u>	<u>L 644,302</u>	<u>L 147,466</u>	<u>17.00%</u>
III. <u>Credit Received</u>	<u>Amount</u>	<u>Current</u>		
1984-1985	L 403,726	L 1,403,726		
Prior Years	929,715	-0-		
TOTAL	<u>L 2,333,441</u>	<u>L 1,403,726</u>		
IV. <u>Results of Operations</u>	<u>Period Ending</u>			
	<u>12/31/84</u>	<u>12/31/83</u>		
Net Gain (Loss) from Operations	L (186,911)	L (100,880)		
AID/DIFOCOOP Subsidy	<u>119,924</u>	<u>93,949</u>		
NET	<u>L (66,987)</u>	<u>L (6,931)</u>		

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EVALUATION OF MODEL REGIONAL
AGRICULTURAL COOPERATIVES

ANNEX I

BALANCE SHEETS
Cooperative "CREHSUL"
Cholulteca, Cholulteca

	<u>12/31/84</u>	<u>12/31/83</u>
<u>Current Assets</u>		
Cash and Imprest Funds	L 330,495	L 132,737
Loans and Interest Receivable	376,509	114,249
Accounts Receivable	109,172	44,996
Subsidies Receivable	44,071	19,851
Inventories on Hand and in Transit (Note 1)	1,194,136	12,202
Deposits	<u>5,651</u>	
Total Current Assets	<u>L 2,060,034</u>	<u>L 324,035</u>
<u>Fixed Assets</u>		
Buildings, Equipment, and Vehicles Less Reserve for Depreciation	L 517,985	L 209,624
Advances to Producers		<u>1,262</u>
Total Fixed Assets	<u>L 517,985</u>	<u>L 210,886</u>
Total Assets	<u>L 2,578,019</u>	<u>L 534,921</u>
<u>Current Liabilities</u>		
Short Term Loans Payable	L 2,230,726	L 133,287
Interest Payable	45,263	5,033
Advance Payable	30,000	15,000
Accounts Payable	<u>647,258</u>	<u>210</u>
Total Current Liabilities	<u>L 2,953,247</u>	<u>L 153,530</u>
<u>Fixed Liabilities</u>		
Long Term Loans Payable	<u>L 167,585</u>	<u>L 167,585</u>
<u>Reserve for Construction and Equipment</u>	L 200,000	
<u>Reserve for Uncollectible Loans and Interest</u>	50,153	L 11,796
<u>Other Reserves</u>	<u>50,606</u>	<u>33,976</u>
Total Reserves	<u>L 300,759</u>	<u>L 45,772</u>

Note 1 Inventories on hand and in transit on February 28, 1985, includes products valued at L 743,761 which were disposed of in March 1985 at a loss.

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Capital and Services (Deficit)

Paid in by Members	L 194,000	L 143,183
Donated	85,186	80,922
Surplus (Deficit)	<u>(1,122,758)</u>	<u>(56,072)</u>
Total Capital and Surplus (Deficit)	<u>L (893,572)</u>	<u>L 168,033</u>
	<u>L 2,578,019</u>	<u>L 534,921</u>

INCOME AND EXPENSES
 Cooperative "CREHSUL"
 Choluloteca, Choluloteca

ANNEX I

	10 Months Ended <u>02/28/85</u>	12 Months Ended <u>04/30/84</u>
Sales	L 770,062	L 794,750
Less Cost of Sales	<u>1,501,034</u>	<u>737,038</u>
Gross Profit (Loss)	L (730,972)	L 57,712
Interest and Miscellaneous Income	<u>60,599</u>	<u>53,296</u>
	L (670,373)	L 111,008
Administrative and Operating Expenses	<u>322,901</u>	<u>164,086</u>
Net Operating Loss (Note 1)	L (993,274)	L (53,078)
Subsidy AID	<u>82,305</u>	<u>100,093</u>
	<u>L (910,969)</u>	<u>L 47,015</u>

Note 1 In February 1985 the amount of L 156,844 representing the value of spoiled melons was directly charged to the surplus/deficit account. Thus the losses shown above are understated by that amount.

EVALUATION OF MODEL REGIONAL
AGRICULTURAL COOPERATIVES

ANNEX I

PROGRESS INDICATORS
Cooperative "CREHSUL, LTDA."
Choluteca, Choluteca

I. <u>Membership - Capitalization</u>	<u>As of</u>			
	<u>2/28/85</u>	<u>4/30/84</u>		
Number of Members	140	152		
Paid in Capital	L 194,000	L 143,183		

II. <u>Credit Provided Members</u>	<u>Amount</u>	<u>Current</u>	<u>Overdue</u>	<u>Delinquency</u>
				<u>Rate</u>
1984-1985	L 787,701	L 702,558	-0-	-0-
1983-1984	320,812	74,244	-0-	-0-
Other Cooperative	20,714	-0-	13,994	67.00%
TOTAL	L 1,129,227	L 776,802	L 13,994	4.00%

III. <u>Credit Received</u>	<u>Amount</u>	<u>Current</u>	<u>Overdue</u>	
1984-1985	L 1,700,000	L 1,632,694	-0-	
1983-1984	343,358	-0-	-0-	
Prior Years	106,176	88,480	-0-	
TOTAL	L 2,149,534	L 1,721,174	-0-	

IV. <u>Results of Operations</u>	<u>Period Ending</u>	
	<u>2/28/85</u>	<u>4/30/84</u>
Net Gain (Loss) from Operations	L (993,274)	L (53,078)
AID/DIFOCOOP Subsidy	82,305	100,093
	L (910,969)	L 47,015

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Socio-Economic Impact

Basic Grain Cooperatives

1. Beneficiaries

A sample of the membership and loan files was reviewed to define the profile of farmers affiliated with the Maya Occidental and 20 de Marzo cooperatives. Our findings are summarized as follows.

A. Minifundistas

The typical sample cooperative member is a minifundista. Over 60% of the sample farmers were cultivating less than seven has. when they joined the cooperative. The average size of the minifundio varies, however, depending on the region. It is 6.3 has. in Copán and 3.9 has. in Yoro.

The majority of the sample minifundista farmers are independent farmers, with a few being land reform beneficiaries. The proportion of land reform beneficiaries is higher in Yoro than in Copán. Even in their case, however, the tendency is to cultivate the land on an individual rather than a collective basis.

Cross-tabulations between area cultivated and the land tenancy system indicate that independent minifundista farmers in both areas resort to different land holding arrangements to increase their access to land. A typical independent minifundista farmer in the basic grain cooperatives claims ownership or legal use rights of over 57% to 67% of the land he cultivates. The rest is either rented or belongs to relatives and close friends who let him use it at no charge. The incidence of land rental is higher in Copan, whereas access to land owned by relatives or friends at no cost to the producer is more common in Yoro.

When they joined the cooperative, sample independent minifundista farmers and land reform beneficiaries in Copán and Yoro cultivated most of the farmland available, and they were mainly basic grain growers. The tendency among these farmers was to use most of the land farmed for the cultivation of corn. There was normally only one cropping season per year. The available data seem to indicate, however, that as access to land increased and climatic conditions were more favorable, crop diversification became possible. In those cases where diversification was possible, the list of crops cultivated was extended to include beans, vegetables and coffee. Crop diversification was more common in Copan than in Yoro.

The mean age of minifundistas in the sample is 37 years. The member tends to have an average of five dependents, and an average of three years of schooling. The size of families seems larger in Copan than in Yoro.

B. Small Farmers

Over 20% of sample cooperative members are small farmers. Farm size variations within this category also exist depending on the region. Small farms in Copán have an average of 21 has., whereas in Yoro they have an average of 16 has.

Small farmers in the sample claim to own or to have legal use rights over the land they cultivate. Only in one case was there a farmer renting all the land that he was cultivating. This, however, seems to be the exception rather than the rule.

None of the small farmers in the sample area was a land reform beneficiary. They were all independent farmers.

Farmers within this category tend to use approximately 45% of their farmland for agricultural purposes. The additional 55% is either pasture or forest land. Land devoted to agricultural pursuits is mainly cultivated with basic grains. Nevertheless, small farmers in Yoro have tended to specialize in corn cultivation, whereas those in Copán have tended to plant corn, rice and beans. The cultivation of vegetables also takes place in the Copán area among small farmers. There was even one farmer within the sample who specialized in vegetable cultivation. In the case of available pasture land, two tendencies are observed. There are either those small farmers who have 2 head of cattle per hectare or those who have no cattle at all.

The mean age of small farmers in the sample is 47 years. They have an average of six dependents, and they average 2.5 years of schooling.

C. Medium-Size Farmers

Only 10% or less of the sample cooperative members are medium-sized farmers. A medium-size farm has an average of 42 has. in Copán, but 87 has. in Yoro.

Medium-sized farmers in the sample said that they either own or have legal use rights over the land they work. They are all independent farmers.

In their case, 22% of the land is devoted to agricultural activities, 45% to pasture and 33% is forest land. Within this size category, the proportion of land in pasture is higher in Yoro, and the proportion of forest land is higher in Copán. Medium-size farmers have grown corn and rice in the area devoted to agriculture. The land in pasture is not always utilized. In those cases where it is, 0.8 head of cattle per hectare were observed.

Information on the age and education of medium-sized farmers was not always reported. They had an average of six dependents.

2. Reasons for Joining the Cooperative and Importance of Services Being Provided

The farmers interviewed indicated that they joined the cooperative mainly to have access to credit. These farmers have argued that private banks normally require guarantees that they cannot provide, and that development programs implemented by the public sector which include a credit component (e.g., PRODERO) have limited coverage. Furthermore, technical assistance programs in the areas visited, implemented either by PVOs or the public sector, are also limited or non-existent. The cooperatives created seem to partially fill a previous vacuum in agricultural services. Extensionists working for these new organizations have pointed out that promotion activities to interest farmers in joining the cooperatives are hardly needed. Farmers continuously visit the cooperatives manifesting their interest in joining. The demand comes from farmers belonging to both the non-reformed and reformed sector.

Among farmers interviewed, in no case was the required contribution an obstacle to joining the cooperative. In most cases, these contributions are part of the profit made in the previous harvest and which farmers normally used as working capital. Farmers see these contributions as advantageous for two reasons. First, they serve as a partial guarantee to get access to funding that allows them to technify their farms. Second, they constitute forced savings which they would not have made. Being savings, nonetheless, the feeling among cooperative members interviewed is that they should be able to use them, partially or totally, in case of emergencies. Positive attitudes were also expressed with respect to the 10% capitalization requirement. Farmers interviewed see this requirement as a healthy measure for the same reasons that they approve the contributions mentioned.

Our file sample is too small to perform statistical analysis of the data. Nevertheless, an interesting tendency was observed. The incidence of continuous credit use seems to be higher among minifundista farmers and among those minifundista farmers with the larger families. Subsequent evaluations of this project should further study this question to test its validity.

3. Economic Impact

A. Expected Incomes per Hectare by Type of Crop

The following table shows the profit and net (cash and in-kind) income farmers can expect to earn per hectare by cultivating each one of the three main crops being financed by the cooperatives being evaluated. In order to better understand the data being presented, the following explanatory remarks are in order.

- (1) The sources of information for these calculations are both office records and investment plans prepared by the cooperatives' technical staff as well as data collected through the field interviews with farmers.

- (2) The expected profit was calculated by subtracting the estimates of (a) the direct costs of production and (b) the interest paid for loans received from the gross value of production.
- (3) The net (cash and in-kind) income to the farmer was calculated by subtracting the 10% capitalization requirement from the expected profit.
- (4) The gross value of production was determined by multiplying the real or anticipated average yields per crop by the sales price. In the case of corn, this price is that received by farmers at the end of the first harvest of the 1984-85 agricultural cycle, excluding transportation costs. In the case of both types of peppers cultivated, the price is that which is currently being paid by the cooperative to producers.
- (5) The reference to both net and in-kind income is important only in the case of corn since not all of the production is marketed.

Table No. 1

Estimated Earnings Farmers May Obtain per Hectare
by Type of Crop Cultivated

	Corn	Cayenne Pepper	Tabasco Pepper
Real/Anticipated Yields (qq)	71	397	142
Price of Production per qq	L. 12	19	70
Gross Value of Production	L. 852	7543	9940
Costs			
Direct Production Costs	540	4260	4260
Cost of Capital	43	341	341
Total	L. <u>583</u>	<u>4601</u>	<u>4601</u>
Profit	L. 269	2942	5339
10% Capitalization Requirement	L. 54	426	426
Net (Cash and In-Kind) Income to Farmer	L. 215	2516	4913

Net income reported in this table for both cayenne and tabasco peppers is applicable only when growers currently have access to irrigation. When an investment is needed for irrigation, net income would obviously be lower. In Yoro, for example, farmers needing irrigation have invested L2000 to build a well and to purchase a diesel pump and pipes. The cooperative has provided the needed financing at a 16% annual interest rate and a 2-year repayment period. If only one hectare of peppers was cultivated annually and farmers were paying 50% of that investment per year, during the first two years of operation their net income per hectare would be L1406 in the case of cayenne pepper and L3703 in the case of tabasco pepper. These earnings include the estimated costs to operate the pump purchased.

B. Observed Income Increases per Type of Farmer

1) Farmer Classification

The field visits revealed three main types of farmers benefiting by their affiliation to the cooperative.

First, there is the minifundista corn producer who was able to technify his farm with the credits and technical assistance provided by the cooperative. In some cases, he was able to cultivate the land during two cropping seasons per agricultural cycle, instead of only one which is the general practice. The more intensive use of the land has occurred as a result of two variables: access to better quality soils and permanent access to credit. For farmers within this category, the use of agricultural inputs has had a significant impact on production. In the Yoro area, for example, corn yields increased from 43 to 71qq/ha. This represents a 65% increase.

Second, there is the minifundista or small farmer, defined by the criterion established above, who is a basic grain grower and essentially a corn producer. His affiliation with the cooperative has allowed him both to improve his agricultural practices and to increase the area cultivated. As was the case with the farmer in the previous category, this cooperative member may have also used the land during two cropping seasons of the agricultural cycle, instead of only one. When this happens, not all of the area put into production is cultivated using inputs. Since this second planting period takes place during the dry season, the risks of losing production are greater and the farmer tries to reduce his debts to a manageable minimum. In the case of these farmers, similar yields as those mentioned above have been obtained. Yields are 43qq/ha when rudimentary technology is used, and 71qq/ha. when inputs are utilized.

Third, there is the small farmer who cultivated both corn and a cash crop. In his case, land was normally cultivated twice a year. The farm area affected after joining the cooperative is that devoted to corn. Changes have occurred depending on the cropping season. During the first planting period, this area continues to be used for cultivating

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corn. Agricultural inputs are being used, and production yields have increased in the same proportion pointed out above for the two other types of farmers. During the second planting period, crop diversification has occurred. The area used for cultivating corn has been reduced for growing two kinds of peppers: tabasco and cayenne. Because of the loan amount required to cultivate the new crops, however, this type of farmer has generally decided to plant the corn with his own resources. This has resulted in no agricultural inputs and a return to previous yields.

The following two tables are illustrative of increased income realized by three different farmers who joined the cooperative, and whose characteristics correspond to the three categories of producers described above. These tables are the result of field visits and were constructed based on the total farm areas and land uses reported by the farmers interviewed.

Data related to farmers cultivating two cropping seasons, however, may be hypothetical. Not all of the farmers interviewed within the three different categories of producers were necessarily using the land intensively.

The production costs shown in the tables come from the investment plans prepared by the technicians in the cooperatives visited. These are the same production costs used for the preparation of Table No. 1 above. The costs in question are financial costs. Consequently, they exclude the cost of using the land since none of the farmers interviewed was paying rent or buying the land cultivated. Furthermore, capital costs are reported only in those cases where farmers have received loans. In the following tables, the yields reported assume no production losses as a result of either drought or disease. They are yields obtainable under favorable conditions. In addition, as was previously done, the price of corn shown in these tables is that which was normally received by farmers at the end of the first cropping season in the 1984-85 agricultural cycle. The price of peppers is that which is being currently paid to producers by the cooperative. For the calculation of the loan interest we assumed a six-month repayment period. Profits and net cash and in-kind incomes reported were calculated using the same procedures for the data presented in Table No. 1.

2) Example of a Farmer with Limited Access to Land Cultivating Corn

Table No. 2 is an example of a minifundista farmer with 2.1 has. of land who cultivates only corn. The data shows that this particular farmer doubled his profits by joining the cooperative. Before and after joining the cooperative, this farmer was cultivating only one crop per year. As a result of increase in productivity, despite higher production costs his income from corn cultivation increased from L282 to L564. Had he cultivated the land twice a year, his income from the production of corn would have also doubled, since profits would have increased from L563 to L1129. Had he changed his land use pattern and gone from one to two cropping seasons per agricultural cycle, his income from the production of corn would have tripled. In this particular case, his profits would have increased from L282 to L1129.

Table No. 2

Reported and Estimated Income Variations As a Result of
Joining the Cooperative in the Case of a Minifundista Farmer
Cultivating Only Corn

	<u>Before Joining the Cooperative</u>		<u>After Joining the Cooperative</u>	
	<u>Cultivating One Cropping Season</u>	<u>Cultivating Two Cropping Seasons</u>	<u>Cultivating One Cropping Season</u>	<u>Cultivating Two Cropping Seasons</u>
Area Cropped	2.1	4.2	2.1	4.2
Yield per Ha.	43	43	71	71
Production in qq.	90.3	180.6	149.1	298.2
Price per qq.	L 12	12	12	12
Gross Value of Production	L 1084	2167	1789	3578
Costs				
Direct Production Costs	L 802	1604	1134	2268
Cost of Capital	L None	None	91	181
Total	L 802	1604	1225	2449
Profit	L 282	563	564	1129
10% Capitalization Requirement	None	None	113	227
Net Cash and In-Kind Income to the Farmer	L 282	563	451	902

3) Example of a Small Farmer Cultivating Corn and Capable of
Increasing the Area Cultivated

The cooperative member shown in Table No. 3 had 9.8 has. of land. Before joining the cooperative, he was able to cultivate 5.6 has. Pasture of 1.4 has. was used as grazing fields for the oxen he owns and uses to plow. Of the farmland available, 2.8 has. was left fallow because of lack of financial resources. Eventhough his farmland could be irrigated in the dry season, this farmer was not able to cultivate the land twice a year. After joining with the cooperative, however, he was able to bring the fallow land into

production, to use agricultural inputs and increase productivity, and to cultivate two crops per year on a regular basis. Because of these changes, the profit from the cultivation of corn, which previously ranged from L753 to L1506, depending on land use intensity, increased to L4320 in the 1984-85 agricultural cycle. In the least profitable cycle, as a result of affiliating to the cooperative, his profits almost tripled.

Table No. 3

Reported Income Variations by Land Use Intensity
as a Result of Joining the Cooperative for a
Small Farmer Cultivating Corn

	<u>Before Joining</u> <u>the Cooperative</u>		<u>After Joining</u> <u>the Cooperative</u>	
	<u>Cultivating</u> <u>One Cropping</u> <u>Season</u>	<u>Cultivating</u> <u>Two Cropping</u> <u>Seasons</u>	<u>Cultivating</u> <u>One Cropping</u> <u>Season</u>	<u>Cultivating</u> <u>Two Cropping</u> <u>Seasons</u>
Area Cropped	5.6	11.2	8.4	16.8
Yield per Ha.	43	43	71	67
Production in qq.	241	482	589	1153
Price per qq.	L 12	12	12	12
Gross Value of Production	L 2892	5784	7157	13836
Costs				
Direct Production Costs	L 2139	4278	4536	8851
Cost of Capital	L None	None	363	665
Total	L 2139	4278	4899	9516
Profit L 753	1506	2258	4320	
10% Capitalization Requirement	None	None	453	885
Net Cash and In-Kind Income to the Farmer	L 753	1506	1805	3435
Net Cash and In-Kind Income to the Farmer per Ha. Cultivated	L. 134	134	269	257

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4) Example of a Small Farmer Diversifying Production

The cooperative member who illustrates the impact of crop diversification is a small farmer with access to approximately 7.7 has. of land. Two thirds of this area has been devoted to coffee and one third to annual crops. Given the amount of land devoted to coffee cultivation and the price of coffee on the market, most of this farmer's income results from that activity.

His affiliation with the cooperative has affected mostly the area devoted to annual crops. The information presented in Table No. 4 shows what changes in land use have occurred and what impact they have had on the member's farm income.

This farmer normally cultivated corn during both cropping seasons of the agricultural cycle in the farm area devoted to annual crops. After joining the cooperative, he started cultivating both tabasco and cayenne pepper. This increased the overall amount of land in production, and reduced the proportion of land dedicated to the cultivation of corn. That is, overall land used for annual crop increased from 2.8 to 3.2 has. However, the area utilized for growing corn decreased from 2.8 to 2.4 has. In addition, given the amount of funding required to cultivate peppers no inputs were utilized to grow corn during the second cropping season.

In order to cultivate peppers, this farmer had to install an irrigation system requiring a significant investment.

The data show that in the case of this cooperative member, the net annual farm income from annual crop cultivation previous to satisfying the capitalization requirement increased from L375 to L1530.

Despite this increase, the data reveals loan repayment problems for the farmer who must purchase equipment, particularly when the area cultivated with newly introduced crops is small. An important conclusion from the data presented in Table No. 4 is that cooperatives must carefully analyze their loan policy in this respect.

Table No. 4

Reported Income Variations as a Result of
Joining the Cooperative for a Small Farmer
Diversifying his Production

	Before Joining	After Joining		
	the Cooperative	Corn	Tabasco	Cayenne
Area Cropped in Has.	2.8	2.45	0.35	0.35
Yield per Ha.	43	59	142	341
Production in qq.	120	145	50	119
Price per qq.	L 12	12	70	19
Gross Value of Production	L 1445	1740	3500	2261
Costs				
Direct Production Costs	L 1070	1157	1490	1490
Estimated Amortization for Equipment Purchased	None	None	500	500
Cost of Capital	L None	116	359	359
Total	L 1070	1273	2349	2349
Profit	L 375	467	1151	(-88)
10% Capitalization Requirement	None	116	199	(-199)
Net Cash and In-Kind Income to the Farmer	L 375	351	952	(-287)
Total Farm Income	L 375			1016

4. Social Impact

Inadequate baseline data was collected when the cooperatives were formed and it is difficult to draw conclusions with respect to the impact of project activities on the farmers' quality of life. Interviews with cooperative members have allowed us, nevertheless, to arrive at three conclusions.

The organization of GLAs has supported the development of local leadership and local initiative to carry out development activities. In some cases, GLAs have fund raisers to improve roads normally impassable during the rainy season, and to effect other improvements in the community.

Cooperative membership has facilitated farmers' access to IHMA services in selling a portion of their harvest.

Earnings from increased productivity achieved after joining the cooperative are used to: (a) pay delinquent debts owed to banking institutions that had provided credit for agricultural activities, (b) make improvements on the farm (e.g., new or better fences), or (c) buy oxen to plow the land.

Female farmers are not excluded from membership. Yet, there is no deliberate policy to include them. The affiliation of women to the cooperatives seems more by chance than through active encouragement by management. When female members have shown outstanding performance in support of the cooperative, however, management has reacted promptly to publicly recognize their work.

Fruta del Sol1. Socio-Economic Characteristics of Members

Most of the files analyzed in Comayagua belonged to independent farmers. Consequently, the following discussion will be limited to a profile of that type of producer.

These land reform beneficiaries affiliated to Fruta del Sol cultivate basic grains or vegetables on an individual basis during the first cropping season and cultivate the land collectively during the second cropping season of that cycle with funding provided by the cooperative. For some of these farmers, collective cultivation has facilitated credit from Fruta del Sol. Thus, in their case, collective farming is a result of existing credit policies. The application of this policy has allowed these producers to obtain either working capital or part of the farming implements needed to work the land which is to be cultivated individually.

In analyzing the data obtained from the files we find that members of Fruta del Sol are either minifundista farmers or small farmers. The number of middle-size farmers is limited, therefore, our discussion will deal only with the first two categories.

A. Minifundista Farmers

Minifundista farmers in our sample cultivate an average of 5 manzanas. Most of them own this land, although in a few cases they are working land that is either rented or farmed rent-free. Of this land, 80% is cultivated and the rest is pasture or fallow. Half of the land cultivated is in basic grains and half in vegetables, mainly tomatoes, cucumbers and onions. Most of these farmers have no cattle, but own beasts of burden. Given the small amount of land such farmers have in pasture, we must assume that part of the basic grain production is used to feed these animals.

Sample farmers in this category have an average of eight years of education, with half of them having a high school diploma or more. Such high level of education is rare among Honduran minifundistas. Consequently, we assume that some of them are micro-farmers who, having other sources of income, are attracted by the lucrative nature of tomato and cucumber cultivation, particularly with a tomato processing plant and a cucumber export cooperative in the area.

Their average age is 31, and they have an average of three dependents.

B. Small Farmers

Small farmers in our sample own an average of 26 manzanas of land with 60% in pasture, 30% cultivated with annual crops, and 10% forest or left fallow. These farmers own cattle and have an average of one head of cattle per manzana. Almost 60% of the land cultivated is used for growing tomatoes, soy beans, onions or peppers. The rest is used for cultivating basic grains, essentially corn.

The level of education for these farmers is high by Honduran standards with an average of six years of schooling. Half of them have high school diplomas or more. The hypothesis that the latter are also technicians or professionals attracted by the lucrative nature of vegetable cultivation cannot be discarded. This sub-category of small farmers should be distinguished from the other which is composed of producers who live essentially from farming.

Small farmers in our sample average 40 years of age with four dependents.

2. Reasons for Joining the Cooperative

Farmers interviewed revealed that they joined the cooperative for two main reasons: to have access to credit normally unaccessible otherwise, and to export part of their production in order to increase income. By the nature of crops cultivated and the infrastructure available in the area (e.g., irrigation facilities and both main and secondary roads available), these are farmers who have been integrated into the market economy long before joining the cooperative. The production of cucumbers for export is seen as a means to produce not only for the national but also for the international market. As some of the farmers visited said, the local market is easily glutted and prices tend to be low.

Farmers in the area did not always have the money to pay the required contributions in order to obtain loans through the cooperative. All of the farmers interviewed had to obtain an additional loan from local private banks to pay these contributions. The guarantees offered to the cooperative to insure repayment of the loan are mortgages or other types of collateral. The guarantees offered to private banks are normally personal guarantees. Either the cooperative or creditworthy relatives are co-signers for the loans received from private banks.

The profitability of cucumber cultivation in the past has been so attractive to farmers in Comayagua that the cooperative needs to do little promotion to increase membership. Applicants for credit are normally pre-selected. The pre-selection process involves an evaluation of productivity. Farmers have also become specialized in cucumber cultivation during the dry season.

This has occurred to the detriment of multicropping which was normally used by farmers to insure against price fluctuations had a single crop been cultivated. The abandonment of multicropping could be particularly dangerous for the minifundista farmer making a living from agriculture. Monoculture in his case has made him more vulnerable than before to market variations.

C. Economic Impact

1) Expected Income per Type of Crop

The following table shows the incomes farmers belonging to Fruta del Sol expected to earn during the 1984-85 agricultural cycle from the cultivation of both cucumbers and tomatoes. In the case of cucumbers, the production prices used in our calculations are those paid during the 1983-84 agricultural cycle. In the case of tomatoes, they are the guaranteed prices being currently paid by Mejores Alimentos.

In the case of cucumbers, the cost of capital includes the interest a farmer would normally pay to the private bank for the loan received to pay for the needed contribution.

Table No. 1
Estimated Earnings Farmers May Obtain per Manzana
by Type of Crop Cultivated

	Cucumbers	Tomatoes
Average Yield per Manzana	830 boxes	20 ton
Unit Prices	L 26	L 190
Gross Value of Production	L21567	L 3800
Production Costs		
Direct Costs	L 5896	L 2900
Packing Costs	L 2800	None
Local Transportation Costs	L 70	L 100
Intern'l Transportation Costs	L 7445	None
Commission to Broker	L 2157	None
Cost of Capital	L 612	L 160
Total	<u>L18980</u>	<u>L 3160</u>
Profit	L 2587	L 640
10% Capitalization Requirement	L 590	L 200
Net Income to Farmer	L 1997	L 440

2) Observed Income Variations per Type of Farmer

Since no information on the prices received for cucumbers exported in the 1984-85 agricultural cycle is available, the data to be presented in this section is illustrative of the implications that income losses would represent for farmers that grew this crop this year.

3) Example of a Minifundista Farmer

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Table No. 2
Income Losses in Which a Minifundista Farmer
Could Incur If He Did Not Make Profits from Cultivating Cucumbers

	Off-Farm Income	Farm Income		
		Corn	Cucumber	Tomatoes
Area Cropped in Manzanas		2	1.4	2
Yield per Manzana		45	576 boxes	20 ton
Production		90	818 boxes	40 ton
Price		L18.5 qq	L12	L 190
Gross Value of Production		L1165	L9816	L7600
Costs				
Direct Production Costs		L 900	L5896	L5800
Packing Costs		None	L2800	None
Local Transportation Costs		None	L 70	L 200
Intern'l Transportation Costs		None	L7445	None
Commision to Broker		None	L 982	Noone
Cost of Capital		None	L 612	L 320
Total		L 900	L17805	L6320
Profit		L 765	(-L 7989)	L1280
10% Capitalization Requirement		None	(None)	L 600
Net (Cash and In-Kind) Income to the Farmer	L10400	L 765	(-L 7889)	L 680
Total Net Income if All Debts Would be Paid				L 3956

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4. Social Impact

As in the case of other cooperatives, in the absence of adequate baseline data it is difficult to determine the impact of services provided on the quality of life of farmers. Field observations, nevertheless, permitted us to arrive at the following conclusions.

- (1) The experience and higher educational level of most members has facilitated the technology transfer process. Farmers have learned to produce cucumbers and to obtain high yields. Both from the extensionists' and the farmers' point of view, inadequate agricultural practices and low

productivity are not a problem in Comayagua. Furthermore, farmers have learned basic financial farm management principles. Some are utilizing such principles not only in the cultivation of cucumbers, but also in the production of other crops planted throughout the agricultural cycle.

- (2) Cooperative members producing tomatoes have been able to obtain guarantee prices from the main buyer in the area.
- (3) Depending on the area cultivated and profits made, farmers have used their earnings from cucumber cultivation for: (a) improving the farm, (b) buying farming implements, and (c) buying household goods and appliances.
- (4) In some cases, farmers have become specialized cucumber growers during the dry season of the agricultural cycle. This has increased their risks because of market fluctuations.

1. Socio-Economic Characteristics of Members

The profile of the cooperative member from an analysis of the files was harder to produce in the case of CREHSUL when compared to the other three cooperatives visited. Since the information per member was not always complete we were forced to disregard files for which little or no information was available.

A total number of 26 files were studied. Files included in the final sample showed that over a quarter of the affiliated members are land reform beneficiaries. These farmers have constituted production cooperatives where land is normally cultivated collectively. Their affiliation with CREHSUL is done as a group, and the group as a whole is considered as a cooperative member.

Given the importance of land reform beneficiaries in CREHSUL, in the following discussion dealing with the members' socio-economic characteristics, the distinction between independent and collective farmers is maintained.

A. Independent Farmers

Data gathered on independent farmers was divided into three categories: minifundistas, small farmers and medium-size farmers.

1) Minifundista Farmers

In our sample, minifundistas own an average of seven manzanas of land. None were renting land or using land owned by relatives. Of this land 60% is cultivated and 40% is pasture. Of the area cultivated, 25% is used for corn and 75% for a cash crop, usually sugar cane or melons. These farmers have an average of 1.4 head of cattle per manzana of pasture. Part of the production of sugar cane is being used to feed the cattle. In most cases, minifundista farmers in the sample received credit for cultivating melons. In only one instance did a farmer receive two consecutive loans: one for melons and the other for sugar cane. The loan for sugar cane was for the maintenance of an existing plantation.

The cultivation of melons takes place during the second cropping season of the agricultural cycle, which permits producers to use the land more intensively.

Minifundista farmers described here have an average age of 41 years, an average of six dependents, and four years of schooling.

2) Small Farmers

Small farmers in the sample have an average of 19 manzanas. Most of them claim ownership to this land, and only in one case is the total amount of land cultivated being rented. Nearly 80% of the farm area available is cultivated. The rest (10%) is either in pasture or fallow. Half of the area cultivated is used for planting sugar cane; the remainder is used for cultivating basic grains, i.e., corn, sorghum, and rice. Most of the farmers do not have any cattle. Those that do, however, must use basic grains and sugar cane as supplemental feeding since the area used for grazing is small.

Most of the farmers in this category have received funding from CREHSUL to cultivate cantaloupes. Loans authorized for cultivating watermelons or for maintaining a sugar cane plantation in production are the exception rather than the rule. Melon cultivation has permitted these farmers to use the land more intensively.

Small farmers in the sample have an average age of 41 years, an average of six dependents and five years of schooling.

3) Medium Size Farmers

The medium size farmer in the sample has an average of 132 manzanas of land, with 20% cultivated, 67% as grazing, and 13% forested. The medium size farmer tends to be a cattle rancher. He has, on the average, over 100 head of cattle or 1.5 head per manzana of pasture. The area cultivated is used for growing sugar cane, melons and corn, in that order of importance. In our sample, all medium size farmers received loans only for cultivating melons. Once again, melon cultivation allowed a more intensive use of the land.

This farmer has an average age of 39 years, an average of four dependents, and five years of schooling.

B. Collective Farmers

The size of land reform groups in our sample varies from 9 to 40 members with an average of 16. The area of land adjudicated ranges from 67 to 435 manzanas, with an average of 216 manzanas per group or 12 manzanas per member.

In an average collective undertaking, 37% of the land is used for agriculture, 52% is pasture and 11% is forested. Despite the proportion of the farm in pasture, only half of the land reform groups in the sample have cattle. Among them, there is an average of 0.7 head of cattle per manzana of pasture. In order of importance, the crops cultivated by these groups are corn, melons, sugar cane and cashew. Only one of the land reform groups in the sample cultivated an extensive area of cotton.

Most of the loans obtained by these groups from CREHSUL were for melon cultivation, thus allowing them to use the land during the dry season.

Personal data on the members of these groups was not always available. However, for those cases where it was, collective farmers are on the average 37 years old and have four dependents.

2. Reasons for Joining the Cooperative

Extensionists interviewed in Choluteca have argued that farmers exporting fruit through CREHSUL are very different from those that continue to sell their production to PATSA. While the former are poorer and may be land reform beneficiaries, the latter are wealthier and are mainly independent farmers who are professionals employed by government institutions.

Cooperative members visited in Choluteca stated that they joined the cooperative for three reasons: to have access to credit, to obtain better prices for their production, and to have access to any dividends the cooperative may pay. As in the case of the basic grain producers, members of CREHSUL argue that they do not have the necessary guarantees for agricultural credit. In addition, they expected that CREHSUL would be able to export different grades of fruit. Before CREHSUL was organized, production was sold to PATSA, a United Brands affiliate that packages and exports melons. PATSA has a reputation for having strict quality requirements. It was expected that CREHSUL would be able to export some of the fruit that PATSA would normally reject. The president of a land reform cooperative visited said one of the motives for joining CREHSUL was to receive any dividends the cooperative might distribute now or in the future.

Despite the difficulty of generalizing from the limited number of observations made, it seems plausible to argue that CREHSUL members, particularly land reform beneficiaries, are poorer than farmers who sell their production to PATSA. Land reform beneficiaries tended to live in one-room "bahareque" (wattle and daub) houses with no ceiling and dirt floors. Independent farmers tend to have better living conditions. However, in no way were their living conditions comparable to the farmer/hotel owner we visited in Choluteca.

3. Economic Impact

A. Expected Incomes per Hectare

The following table shows the net income that could have been expected by a member of the cooperative who cultivated one manzana of melons. The prices reported are the guaranteed prices offered by CREHSUL and not the prices actually obtained abroad. Furthermore, the net income reported in this table excludes transportation costs from the farm to the packing plant. This could represent a substantial amount of money particularly for those that live 20 or 30 kms. from Choluteca.

Table No.1

Estimated Net Income Expected
from Cultivating One Manzana of Melons
in the 1984-85 Agricultural Cycle

	Export Quality Production	Non-Export Quality Production	Total
Anticipated Yields	143 boxes	3400 units	
Price of Production	L. 20 per box	0.20 c per unit	
Gross Value of Production	L. 2860	686	3546
Costs			
-Direct Production Costs			2000
-Cost of Capital			160
Total			2160
Profit			1386
10% Capitalization Requirement			200
Net Cash Income to Farmer			1186

In the sections that follow three different case studies will be presented.

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Observed Income Increases per Type of Farmer

B. Example of a Minifundista Farmer Cultivating Melons

Table No.2 shows the importance of melon cultivation in the 1984-85 cycle for the minifundista farmer visited. This producer worked as a farm manager for an absentee landholding family that cultivated cotton. For the past three years, he has lived from earnings from a small store that he now owns. He wanted, nevertheless, to increase his annual income and recently joined the cooperative, rented land and grew melons. As a result of the money advanced by CREHSUL for his melon production, his annual revenue increased from Lps. 6,500 to Lps. 16,000, an increase of 146%.

Table No.2

Estimated Contribution of Melon Cultivation to the Income
of a Minifundista Farmer Also Owning a Little Store

	Estimated Income from Melons	Estimated Income from Commercial Activities
Area Utilized in Manzanas	10-	-
Average Yield per Manzana	-170 boxes of export quality production -1500 melons of non- exportable quality	-
Unit Prices	-L20 per box of exportable quality production -L0.20c per melon of non-exportable quality production	
Gross Income/ Value of Production	L 37000	L 24000
Estimated Production Costs/Requirement Investment		
-Direct Costs	L 23900	L 17000
-Cost of Capital	1600	500
Total	L 25500	L 17500
Estimated Profit	L 11500	L 6500
10% Capitalization	L 2000	-
Estimated Net Income Received by Cooperative Member	L 9500	L 6500
Estimated Total Income		L 16000

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1. Example of a Medium-Size Farmer Cultivating Melons

Table No.3 shows how the cultivation of melons contributed to the farm income received in the same agricultural cycle by a medium-size farmer. This is a producer with an advanced degree in agronomy who worked in a large agricultural firm. He had received an initial credit to continue cultivating sugar cane that was already planted on the land he now owns. The losses he faced in sugar cane cultivation either because of a previous drought or the difficulty in harvesting all of the area cultivated with cane made him resign to become a full-time farmer. He believed that the cultivation of melons would allow him to earn income to: (a) partially pay the debt he had sustained to cultivate sugar cane, and (b) supplement the revenues received from other crops. This farmer joined CREHSUL because he was not able to obtain funding from public or private banks because of his debt.

In his case, the money advanced by CREHSUL for his production of melons was a substantial part of his net farm income during the 1984-85 agricultural cycle, and it compensated for the losses that he had cultivating cane. He believes that his earnings from melon cultivation have kept him in business.

Table No.3

Estimated Contribution of Melon Cultivation to
the Formation of Farm Income for a Middle Size Farmer
During the 1984-85 Agricultural Cycle

	Land Rental	Pasture for Milk Cattle	Sugar Cane	Melons
Area Utilized (Manzanas)	35	25	15	15
Average Yield	-	6 milk bottles per cow per day ⁽¹⁾	33 ton per manzana	170 boxes export quality per manzana
Unit Prices	L50 per manzana	- L0.40 per bottle -L350 per head of cattle sold	L27 per ton	L20 per box export quality L0.20 per unit of non-export quality
Gross Income/Value of Production	L1,750	L10,000	L13,365	L61,200
Estimated Production Costs				
Direct Costs	None	L 5,300	L16,955	L30,000
Capital Costs	none	none	3,230	2,400
TOTAL		<u>L 5,300</u>	<u>L46,756</u>	<u>L32,400</u>
Estimated Profit	L1,750	L 4,700	(-L20,224)	L28,800
10% Capitalization	None	None	None	L 3,000
Estimated Net Farm Income during 1984-85 per Activity	L1,750	L 4,700	(-L20,224)	L25,800
Total Estimated Net Farm Income				L12,034

(1) 1 bottle = 0.75 liters

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2) Example of a Land Reform Group Cultivating Melons

Table No.4 shows the importance of melon cultivation during the 1984-85 agricultural cycle for a land reform group.

This group was adjudicated 227 manzanas and has 26 members. Of the land adjudicated, only 208 manzanas can be utilized, with 48% for raising cattle, 29% for annual crops, and 23% rented.

The person renting the land uses it for growing rice. The rent consists of (a) 10% of the profits made from rice cultivation, and (b) construction of the necessary drainage so that this area can be used by the land reform group all year round. During the agricultural cycle being considered, no rent in cash was apparently paid to this group as the renter claimed losses. Furthermore, it has been argued that the anticipated drainage system is not being installed. The president of this land reform group has said that the rental agreement will be rescinded in the near future. Since we did not have the opportunity to confirm this information and because any investment made in the area rented would not represent a cash inflow to the land reform group, our table shows no income for this activity.

The money advanced by CREHSUL to this group of farmers for their melon production represents 74% of the farm income received in the 1984-85 agricultural cycle. These earnings have compensated for the losses shown in the cultivation of sorghum and corn. As in the case of the medium-sized farmer, these earnings have kept this group in operation.

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Table No.4

**Estimated Contribution of Melon Cultivation to the Formation of Farm Income for a Production
Cooperative During the 1984-85 Agricultural Cycle**

	Land Rental	Pasture for Milk Cattle	Sorgum	Corn	Sesame	Melons
Area Utilized per activity in manzanas	47	100	23	13	5	20
Average Yield		-3 milk bottles per cow per day - Heads of cattle sold	8qq per manzana	10qq per manzana	9qq per manzana	-150 boxes of export quality per manzana -3400 melons of non-export quality
Unit Prices	N/A	-L0.40 per bottle -L350 per head of cattle sold	L9 per qq	L12 per qq	L41 per qq	-L20 per export quality box -L0.20c per unit of non-export quality fruit
Gross Income/Value of Production	N/A	-L22500	L1656	L1560	L1845	L73600
Estimated Production Costs						
Direct Costs	)	L10000	L 4740	L 2990	L1500	L47000
Capital Costs	)None	None	None	None	None	L 3200
TOTAL	)	<u>L10000</u>	<u>L 4740</u>	<u>L 2990</u>	<u>L1500</u>	<u>L50200</u>
Estimated Profit	N/A	L12550	(-L 3084)	(-L 1430)	L 345	L23400
10% Capitalization	None	None	None	None	None	L 4000
Estimated Net Farm Income per Activity	N/A	L12550	(-L 3084)	(-L 1430)	L 345	L19400
Total Estimated Net Farm Income				L27,781		
Estimated Net Income per Cooperative Member				L 1068		

4. Social Impact

As mentioned earlier, in the absence of accurate baseline data it was difficult to determine how the project has changed the quality of life for cooperative members. However, based on observations in the field and discussions with coop members, staff, and residents of the area, we were able to arrive at certain conclusions.

Farmers in Choluteca live in an area where agriculture, an already risky business, is even riskier. Here we found a larger number of farmers having more than one source of income. Not only was there more agricultural diversification, but also more involvement in other economic activities to earn a living. CREHSUL is an institutional mechanism to assist in one of the several undertakings in which breadwinners are involved. It is precisely because of the dependency on many income sources that commitment and involvement in cooperative activities seems lower. Despite the cash flow that melon cultivation provides to members, it is an operation that lasts only for a short period of time. For most of the year farmers are occupied with growing other crops or working in their own business or for someone else. Thus services provided by the cooperative are used only during part of the agricultural cycle.

This situation is totally different from that observed in the basic grain cooperatives where, as we pointed out, the needier the farmer the more he relied on services provided by the cooperative. The apathy observed with respect to cooperative activities in Choluteca has precluded the development of local leadership that service cooperatives so badly need to be successful.

As indicated earlier, the cash income that CREHSUL provides farmers cultivating melons seems significant enough to keep these producers in business, even though its impact on improving the family's living standards is limited.

Interview Guide for Managers

1. Name
2. Professional background - months in present job.
3. Relations with ACDI, USAID, GOH
4. Adequacy of credit and supplies
5. Relations with project staff - meetings, in-service training.
6. Relations with GLAs, president of coop, and functioning of administrative board.
7. Training and technical assistance received - amount, appropriateness, results.
8. Marketing procedures and problem areas.
9. Plans for crop diversification.
10. Relations with FHIA - services provided, value of technical assistance.
11. Need for a central organization - what services the central organization should provide - ability and willingness to contribute to such organization.
12. Adequacy of plant and equipment - need for additional farming machinery, trucks, facilities, etc.
13. Reasons for financial problems - crop losses, problems with marketing, loan delinquency.
14. Projections for self-sufficiency.

Interview Guide for Extensionists

1. Name
2. Professional background
3. Type and timeliness of in-service training received.
4. Responsibilities within the cooperative.
5. Criteria utilized to determine amount of credit needed.
6. Organization of extension system:
 - a. If established routes, how many covered?
 - b. How often?
 - c. Number of farmers visited per route.
 - d. Activities to assist farmers.
 - e. Assessment of farmers' needs (training and technical assistance)
7. Main problems faced by farmers serviced.
8. Response to extensionist's advice.
9. Frequency of use of services.
10. Membership and recruitment activities.
11. Problems with credit, supplies, repayment of loans.
12. Type of support received from ACDI and coop management.
13. Revision of Duties
 - a. Aspects to be consolidated or modified.
 - b. New activities to be initiated.
14. Extent assistance is directed toward reducing farmers' needs for extension service. Number of farmers who have improved operations so that little or no assistance is needed.

Interview Guide for Members

1. Name
2. Cooperative
3. Civil Status
4. Number of Dependents
5. Educational Level
6. Occupation - Other sources of income besides agriculture?
7. Membership in other cooperatives. Benefits received.
8. Year of affiliation with this coop.
9. Reason for joining.
10. Benefits received.
11. Amount of land cultivated before joining and amount cultivated now.
12. Crops cultivated before joining. Crops cultivated now.
13. Access to credit before joining the cooperative. Importance of access to credit.
14. Impact of training and technical assistance.
15. Family assistance utilized to farm.
16. Yields before joining the cooperative. Yields now.
17. Amount of crop sold-used. Prices received.
18. Involvement on coop boards or committees.
19. Problems with credit or supplies.
20. Opinion on requirement to capitalize coop.
21. Opinion on adequacy of technical and marketing assistance.