

**Mid-Term Evaluation Report**  
of the  
**WEST INDIES TROPICAL PRODUCE SUPPORT PROJECT  
(TROPRO)**

USAID Project Number: 538-0163

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### Abstract

The TROPRO project aims to assist OECS countries to increase their capacity to produce and market non-traditional export crops. The project is implemented through a grant to OECS and CARDI. Some marketing and post-harvest activities are carried out through a sub-contract with CATCO. The mid-term evaluation 9/89 - 2/92 was conducted by Winrock International Institute for Agricultural Development. Documents were reviewed in Barbados RDO/C, visits were made to three OECS countries, and interviews were held with project clients. The purpose was to clarify concerns about the initial design, assess progress to date, and set recommendations for future priority activities and project focus. The major findings and conclusions are:

- Good progress has been made during the period 1991 to date. TROPRO is making an important contribution and has the potential to induce significant progress in the OECS agricultural diversification efforts.
- The TA component has made good progress considering the project has been fully operational for only about one year. Increased demand for post-harvest handling services require that there is a significant acceleration of this component.
- Integration of module activity has lagged. The production component needs to be more integrated with the commercial operations of the project, and linked with the trial shipment activities. The recently initiated Joint Regional Marketing Program (JRMP) has positioned the project so that integration of the project support services can be achieved.
- Priority should be given to hands-on, in-country technical assistance (TA) and training. The project is now in position to provide this kind of assistance through the trial shipment and inspection service initiatives under the Joint Regional Marketing Program.
- Because of the project advancement to-date and the expected increase in volume of work in the future, the project requires a full-time manager.
- The TROPRO project should attain its objectives by LOP (September 1994) providing CATCO continues to improve its commercial performance. It is strongly recommended that the project continue.

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## Abbreviations and Acronyms

AVT	Agricultural Venture Trust
ADCU	OECS Agricultural Diversification Coordination Unit
ADP	Agricultural Diversification Program
AREP	Agricultural Research and Extension Project
CATCO	Caribbean Agricultural Trading Company
CARDI	Caribbean Agricultural Research and Development Institute
CEPAT	Continuing Education Program in Agricultural Technology
CFC	Caribbean Food Corporation
CFDC	Caribbean Farmers Development Company
COLEACP	Comité de Liaison Europe, Afrique-Caraïbes Pacifique
EAS	Economic Affairs Secretariat
ECSEDA	Eastern Caribbean States Export Development Agency
DEXIA	Dominica Export Import Agency
FAO	Food and Agricultural Organization
FCN	Food Crop Network
FOC	Field Operational Center
IICA	Inter-American Institute for Cooperation on Agriculture
JRMP	Joint Regional Marketing Program
LOP	Life of Project
MKIS	Market Information System
MOA	Ministry of Agriculture
NTAX	Non-traditional Agricultural Exports
OECS	Organization of Eastern Caribbean States
PRONET	Produce Network
RDO/C	Regional Development Office/Caribbean (USAID)
SFAD	Small Farmers' Agricultural Development Project
SLMB	St. Lucia Marketing Board
SOW	Scope of Work
TA	Technical Assistance
TNT	TNT Produce (Import/Export) Ltd.
TROPRO	West Indies Tropical Produce Support Project
USAID	United States Agency for International Development
UWI	University of the West Indies
VDN	Vegetable Development Network
WINBAN	West Indies Banana Association

## **Executive Summary**

### **A. Purpose and Methodology of the Assignment**

The purpose of the Project is to increase regional and local capacity to produce and market non-traditional agricultural products. The Project concentrates on four areas, each of which has been identified as having one or more constraints that hinder the effective extra-regional marketing of fresh produce. The West Indies Tropical Produce Support (TROPRO) Project (538-0163) provides technical assistance, infrastructure development, selected goods and services, and support to strengthen private sector capabilities in production, post-harvest handling, transportation and marketing. The Project's goal is to increase hard currency foreign exchange and, as a secondary goal, generate higher levels of farm income in the participating countries of the Organization of Eastern Caribbean States.

From February 18 through March 13, 1992, a team of two consultants from Winrock International Institute for Agricultural Development, plus one person contracted directly by RDC/C, conducted a mid-term evaluation of the TROPRO Project. In addition, the team was facilitated by staff from the OECS/ADCU, CATCO and CARDI. The purpose of the assignment was to: (a) measure the progress to date of the activities leading towards accomplishment of the project purpose; (b) evaluate the effectiveness and utilization of the inputs; (c) identify opportunities for greater effectiveness of the agricultural diversification program in the Eastern Caribbean; and (d) determine the need for a mid-term project redesign.

### **B. Findings and Conclusion**

1. The project participants are to be commended for achieving good progress over a short time and within the constraints highlighted in Section I of this report despite become only fully operational about one year ago. It is recognized that many tangible results of the project cannot be effectively measured due to the limited baseline data available.
2. While the technical assistance has been generally effective, there is a need to clarify counterpart arrangements. This could improve effectiveness of coordination and accelerate technology transfer with the help of highly qualified personnel.
3. The project needs to direct more assistance to other private sector exporters in addition to CATCO related clients. This would facilitate project sustainability over the long-run by diversification of export marketing channels. Many of these exporters are already directly linked to producer groups.
4. The Joint Regional Marketing Program and related trial shipments and inspection activities represent a very positive initiative in integrating the project's marketing, post-harvest, transportation, and information efforts. Although this approach is on the right track, the production component is not

sufficiently linked to post harvest and marketing/information activities of the project to allow full integration of production and marketing functions.

5. The Project Management level has two roles: OECS/CU coordinator and TROPRO Manager. Given the complexity of the project, it requires a full-time manager to strengthen coordination and monitoring functions as the volume of work over the LOP is expected to increase significantly during the next two years.
6. Project monitoring needs to be strengthened. Although there are work plans, quarterly reports, on-site visits and meetings, no monitoring system is as yet in place to allow a clear and quantitative system which can be used for effectively tracking progress and impact. Additionally, analytical techniques should be implemented along with data collection, to measure effectively and continually key impact on reports, job, value-added, new investments, increase incomes and technology transfer.
7. The marketing information system is not yet in place. Adjustments are being planned based on a recent report entitled "Recommendations for a Marketing Information Service for ADCU". Immediate action should be taken on this report. Progress has been made in gathering information, establishing links with data systems, and some, market analysis such as the market survey of 13 target crops. Systematic distribution of information is not widespread.
8. One major output of the project is lagging. It has not become a successful trading company which is financially self-sustaining and may not be at the end of the project. CATCO's position as a marketing agent is still tenuous and has not reached its 1989-90 export levels. CATCO's position as sole marketing agency of the project should be reviewed within 6 months to determine if this situation should continue. The study on its privatization should be considered in this activity.
9. Progress has been made in regional TA and training activities and some application of the technology is being directed towards national commercial efforts. More country specific hands-on assistance, particularly in packing house operations, will be required given the increase in demand for such services. The present level of TA in post-harvest work associated with the new trial shipment initiatives and export inspection service in the future will be insufficient to implement the heavy load in these areas. A new area which needs to be looked at is a business advisory service which assist producer associations and export suppliers and shippers in identifying the risk, opportunities, sources of information and technical support, and promising crop opportunities.
10. Little progress has been achieved in reaching agreements on either the number, design or sites for airport storage sheds proposed in the project paper. No storage sheds or cold storage facilities have been constructed.
11. Women have been integrated into the project, but their level of participation has not been adequately reported upon.

### **C. Principal Recommendations**

The TROPRO Project plays a key role in the OECS agricultural diversification effort and has become the lead initiative of OECS/ADCU. Host governments are aware of the project and support its activities.

Because of the small average land holdings, and lack of marketing information and market knowledge, one of the most important challenges of the project lies in establishing effective mechanisms to link producers to markets. The project staff are aware of this fact, and efforts are being made to position the project support activities to achieve an integrate approach for exporting NTAX crops. A balance between marketing and production initiatives is required, and linked together through the distribution and information systems with hands-on interventions. With this in mind, the recommendations of the evaluation team are as follows:

1. It is strongly recommended that USAID should continue to provide a funding base for TROPRO for the LOP. Budget allocations should reflect priority to link the production activities to marketing and information systems.
2. Full endorsement is given to the Joint Regional Marketing Program. This initiative should not be considered a "program" but the main strategy for implementing TROPRO's plan of actions. It provides for overall project focus, coordination, and delineates a direction for integrating module activities to achieve the project purpose. The Implementation Plan should tell "what" will be done and the strategy tell "how" it will be done. As such, the new draft Implementation Plan should integrate the JRMP as a strategy for implementing the project components before final approval is given.
3. Management has recognized the deficiencies in the support system for decision making and resource allocation. The following management system tools need to be implemented immediately: (a) baseline data, monitoring and documentation systems for tracking project progress and impact; (b) develop and implement budget system which entail establishing links between plans and budget, a better procedure for simplifying reporting and analyzing project activities and ensure impact; and (c) fully implement communication/information strategy. Short-term TA could accelerate the action of point a & b above.
4. The infrastructure component of the project needs immediate review to establish priorities, based on the findings of the transportation and post-harvest specialists, in terms of number of facilities/equipment, size/type and location. We recommend that USAID provide the flexibility to allocate funds to finance improvements in existing facilities as recommended by the TA specialist so as to support the JRMP trial shipment program.
5. There is an urgent need to approve the new Project Implementation Plan which provides clearer focus and moves priority actions from regional activities to more hands-on "field-based" work which would involve more private sector exporters. It is recommended that management regroup project activities to enhance and strengthen the production and marketing modules. A suggested modification in project design is presented in Section VII of this report.

6. **Staffing**
  - a. Long-term TA should be provided until the LOP. The specific need will depend on the accomplishment of the existing TA at the termination of their present contracts. The following technical assistance areas have been identified as likely areas of continued priority: Post-Harvest specialist, market information & marketing specialist and a transport/traffic specialist. A fruit and Irrigation TA should also be provided until LOP. The need for providing entrepreneurial or business advice has been identified. Consideration should be given in assisting producer associations, and other extra and intra regional exporters in indicating what are the opportunities, risks, sources of technical and market information to such firms and associations.
  - b. Counterparts linkages need to be defined and clarified for TA support personnel and project staff in general.
  - c. Management should review present situation of multiple locations of TA with the view of determining the advantages and disadvantages for carrying out more effectively their operational and monitoring functions.
  - d. A full-time project manager needs to be assigned within the next three months, to strengthen coordination and monitoring functions and to cope with the increased volume of future work throughout the LOP. ADCU existing staff is unable to carry out the MKIS and the management reporting/communication effectively as the project activities increase. We recommend that staffing be put in place to carry out essential activities. The new report for the MIKS system should provide guidance as to the requirements for this unit.
7. Short-term technical assistance being provided to collate existing data into a baseline format should be accelerated. This effort is viewed essential to the effort of establishing a clear and quantitative monitoring system which can be used by the ADCU for tracking project progress and impact.
8. Agricultural diversification could be more effectively advanced through: (a) utilizing ADCU/TROPRO as a tool for impact; (b) donor coordination; and (c) inter-regional trade advances linked to tourism/hotel market. TROPRO should include inter-regional trading as a target market along with its present extra-regional market focus.
9. Governments of the OECS, through their MOA, should strengthen the resolve by diversion of resources specifically for agricultural diversification. A senior agricultural officer should be allocated responsibility for the coordination of in-country activities. Resources from existing budget should be used to complement in-country TROPRO activities and to accelerate the agricultural diversification effort which is pivotal to their economic development.
10. CATCO's position as the primary marketing agency for TROPRO should be reviewed within six months time if recommendations for privatization are not

accepted and the company does not show significant improvement in profitable trading operations. Diversification of export channels should be pursued, such as assistance to exporter who are not CATCO's clients.

#### **D. Other Recommendations**

1. Greater emphasis should be placed in getting business people to assist entrepreneurs (exporters/producer associations, hucksters) to do better business, especially in marketing and management activities. Small business development centers and chambers of commerce could be involved.
2. Other Crops. (a) The cocoa component, if it materializes, could be managed under the TROPRO/ADCU Project if adequate resources are made available to avoid over-extending the project management of TROPRO. This management overload issue needs to be fully reviewed before final decision is made. (b) It is recommended that comparative advantage of OECS aloe production be identified before taking any decision on the type of support to be given.
3. TROPRO monitoring and reporting system needs to report accurately on the participation of women in the project activities. Number, position and type of involvement should be reported as a minimum.
4. Data Base: It is strongly recommended that monitoring and analytical techniques be implemented along with data collection, to measure effectively and continually key impacts on exports, jobs, value-added, new investments, increase in incomes and technology transfer.

#### **E. Opportunity: Encourage Policy Improvement**

In reference to the USAID mission's policy initiation, we suggest the following: a significant opportunity exist to build the capacity of trade and business associations to conduct policy dialogue with trade and investment issues. Means of improving this capacity include preparation of policy briefing materials and setting policy research and analysis agenda. CFDC, hucksters and private exporter associations could be key actors.

A fund could be established to support the activity of these groups. The fund could pay for technical assistance to prepare briefing materials on specific policy issues and establishing research and developing policy agenda. Given that policy reform is a slow and uncertain process, USAID could help upgrade the technical capability of its target groups.

## **Section I Introduction**

### **Project background, design, and assumptions**

The West Indies Tropical Produce Support (TROPRO) Project (538-0163) was authorized and obligated in September 1989. The goal of the Project is to increase net hard currency foreign exchange earnings through increased exports of non-traditional agricultural exports (NTAX) to extra-regional markets. A secondary goal is the generation of a higher level of farm income in the beneficiary countries. The purpose of the Project is to increase regional and local capacity to produce and market non-traditional agricultural export commodities through the provision of supporting infrastructure, technical assistance, and hands-on training directed towards the alleviation of the main constraints. The Project operates in six countries of the Organization of the Eastern Caribbean States (OECS). The countries are: Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines.

The Project concentrates on four areas: 1) production - to increase the quantity and improve the quality of exportable produce; 2) post-harvest handling - to improve the sorting, grading, handling packing, and storage of produce, both to bring its presentation to international standards and to decrease losses; 3) transportation - to provide a more efficient system of intra-regional transport for export produce; and 4) market information system - to increase the market knowledge and market contacts of the region's produce exporters. These areas have been identified as having one or more constraints which directly impact on the effectiveness of extra-regional marketing of fresh produce. The initial design of the project took into consideration the previous experience of other relevant projects in the Eastern Caribbean. The assumption was that the TROPRO Project was not creating a totally new production-marketing system for non-traditional agricultural crops for export, but building on and improving on an already existing system. The Project has an authorized level of US\$6.8 million over five years.

The initial project design assumed that CATCO an organization which had shown improvement was capable of implementing the sub-modules Quality Improvement, Post-Harvest Handling and Market Information System. CATCO was also to be the marketing agent for the TROPRO project. Management changes in CATCO and resultant institutional weaknesses, necessitated implementation adjustments and re-allocation of implementation responsibilities within project. The Production Support Module responsibility was shifted to CARDI, supported by Israeli TA, and the Market Information System Module placed with the OECS/ADCU. CATCO's main responsibility, was implementation of the Post-Harvest Handling activities supported by long-term TA. Differences in management styles, variation in reporting systems and multiple locations of project personnel contributed to communication difficulties and affected performance of the project.

Further complicating the project implementation process was the fact that OECS/ADCU was a newly formed unit when it accepted TROPRO management responsibilities. It was without institutional project experience or tested implementation and management systems. The Baseline Data Base to allow for effective monitoring and evaluation of the

project did not come on stream as anticipated. The project implementation climate was further affected by delays in TA placement and absence of clarity of counterpart arrangements. The TROPRO project's present administration and working relationships between participating actors is shown in Annex E.

### **Purpose**

This evaluation is the first of two such exercises. The principal objectives of this mid-term evaluation are as follows:

- To measure the progress to date of the project activities leading to the accomplishment of the project purpose.
- To assess the effectiveness and utilization of the project inputs.
- To identify opportunities for greater effectiveness of the agricultural diversification program in the Eastern Caribbean.
- To analyze the need for a mid-term redesign to accommodate the changes in the agricultural sector since the project was designed.

The Statement of Work (SOW) for the evaluation and specific concerns to consider are found in Annex A. The evaluation took place from February 18 through March 13, 1992.

### **Conduct of Work**

The team consisted of three specialists, two under contract with Winrock International, and one hired locally by USAID/Barbados. The team assembled in Barbados the first week to obtain briefing from USAID officials and initiate the evaluation. The team then visited Dominica, Antigua and St. Lucia to conduct interviews with TROPRO manager, OECS/ADCU staff, CARDI, marketing boards, producer associations, individual producers, private exporters, OECS Secretariat, CATCO field sales managers, and the various specialist of TROPRO operating in the field. The team returned to Barbados to complete the interviewing and report-writing, and to present the final report according to SOW.

Additional information was provided to the evaluation team after the first final draft report was written and submitted. This report reflects the new information submitted to Winrock and the evaluation team.

## Section II Project Status

This section deals with the progress to date of the project module's activities. It also assesses the effectiveness and utilization of the project inputs, such as technical assistance and training, by module. Two important conditions need to be noted with respect to this evaluation. First, the baseline data and monitoring systems for tracking project progress and impact are still not in place. This resulted in difficulty in data collection and quantification of results. Second, the project only became fully operational during the first quarter of 1991. Given this fact, the mid-term evaluation in reality covers a period of little more than one year. The first constraint has been recognized by management and efforts are being made to redress this. Given this situation, the evaluation team made every attempt to pull together all available information, analyze the data and verify within the time limits of this evaluation.

### Production Support

The objectives of this module are to: "(a) increase the reliability and quality of supply through improved agronomic practices and technologies; (b) reduce post-harvest losses and product quality deterioration through improved harvesting and post-harvest packing and storage practices and technologies; (c) strengthen the development of potential "cross-over" commodities, principally mangoes at this stage; and (d) strengthen the development of minor exotics through increased marketable quantities and qualities." Three main components comprise this module: a quality improvement program to support diversified production, a mango improvement program and an irrigation and water management program. The original project design allocated the quality improvement activities to CATCO and the mango improvement and irrigation and water management program to ADCU. These production support interventions subsequently were assigned to CARDI, assisted by Israeli TA, and have continued to-date.

- **Quality Improvement.** "The objective of this component is to significantly increase producer and exporter awareness, appreciation, and understanding of the quality standards required for regional exports to maintain and increase their market share in competitive international markets". These activities were expected to assist CATCO's commercial operations through an integrated production-marketing approach.
- **Progress to Date--**Efforts of this sub-component have been mainly directed to selection and introduction of quality commercial varieties of fruit, improved agronomic and management practices, development and preparation of production packages, establishment and introduction of produce quality standards, use of harvesting tools, and disease control practices, in conjunction with post harvest activities to insure quality produce. Reporting mechanisms have not allowed progress to be quantified.
- **Training and Workshops.** Training to address problems and to develop new skills and technologies in the production and marketing chain were

conducted to benefit farmers, farmers' organizations, and extension workers. The Israeli TA in association with CARDI, conducted training sessions in various aspects of production and post-production techniques. Hands-on training activities were carried out in orchard management practices, mainly top-working, pruning, and flower induction. It is expected that such training will favorably influence quality and quantity of fruit production in the near future. Main recipients of this training have been extension officers and farmers. Training was provided to pack-house staff in St. Lucia and Dominica.

The project supported three regional workshops: one in Vegetable Production and two in Tropical Fruit Crops in which Israeli TA, CARDI, Chemonics TA, UWI and IICA participated. These workshops brought all the actors of the project to work together. Priority areas requiring attention were identified during the workshops. A Vegetable Development Network (VDN) and a Food Crop Network (FCN) have been formed as a result of follow-up activities of the workshops. TROPRO also supported UWI/CEPAT training courses in various areas meeting the module's objective to upgrade farmers' knowledge, thus quality and reliability of production have been used. A cadre of individuals have been trained. Some of those trained are now able to assist TA personnel in training others. No teaching aids or publications under this sub-module were presented.

- **Agronomic Trials**--CARDI activities under AREP and other projects were planned to complement agronomic trials under TROPRO. Specific activities undertaken included avocado rootstock resistance trials, and the introduction of mangosteen and carambola for trials under different ecological conditions. Also conducted were trials using passion fruit under varying production and management systems, high density trials of tree crop and orchard management practices. No work was reported on golden apples. Most of these trials are in the early stages and no reports of results were presented.

### **Appropriateness and Utilization of Project Inputs**

- **Training and Workshops.** Regional workshops were reported on favorably and the development of networks are allowing for collaborative efforts and exchange of information with such organizations as IICA, MOA and UWI. TROPRO sponsored participants have not all been active in network activities or work related to training. Future selection of workshop participants should address this situation. Participants to UWI/CPAT course reported benefits from attending, most are engaged in activities in which they received training. Local workshops, seminars, field visits and demonstrations allow for training of trainers as well as persons directly involved in production, harvesting and post-harvest handling. These activities have been beneficial.

Hands-on training has been the most impacting. Where follow-up support and training are being provided, the skills have been reinforced and have led to better extension results. Training has taken place with few visual aids and without manuals. Videos, manuals and fact sheets are appropriate tools of training which if developed and utilized should improve the effectiveness of the message and permit non-tutor follow-up. Production training and nursery management training undertaken as in-country courses have been appropriate but will need to be reinforced.

- **Agronomic Trials.** High density, orchard management practices and rootstock resistance trials are appropriate to provide adequate information to allow wide scale application. On-farm demonstrations of appropriate technologies have shown positive results. Production package approach to complement JRMA on selected crops appears necessary. Work on irrigation/water management should supplement agronomic trials to complete the package approach. The approach developed for ginger in Dominica should be used as a basis for further progress in this area.

Trials should be integrated with AREP and other CARDI activities. Demonstrations to validate technology have been useful and should be reinforced; adequate information should precede commercial application. Work in pesticide residues should be advanced.

It is essential that networking be continued and strengthened. Regional organizations, such as UWI and IICA, along with CARDI, should continue to make selected inputs into strategy for moving the production system forward. A more comprehensive approach to expanding production giving due consideration to credit, input equipment supply, policy and collaboration appear necessary to expand production and enhance quality.

- **Technical Support.** Two long-term Israeli TA and CARDI staff have provided the main support for the quality improvement component. TA has mainly been in orchard management of fruit trees and minor crops. Nursery management has also been assisted by this team. The technical support provided has assisted farmers in solving specific problems and has led to improvement in quality of product. Notable accomplishments in plant increase have been made. Work undertaken with medium-scale and large producers has contributed to project target. Improvement has to be made in the provision of written material to support visits by TA. Technical support should be provided in production strategy to achieve targets. Increased visits of TA in non-based countries and counterparting definition and clarification are required to allow necessary follow-up in order to optimize TA, either through CARDI or Ministries of Agriculture extension services.
- **Mango Improvement Program.** This component is expected to increase mango production for exports as a potential 'cross-over' commodity, building upon, but moving beyond, its current ethnic market niche. Target production at project end was at 9,000 tons.

- **Progress to Date.** Nursery expansion and improvement in St. Lucia and St. Vincent will result in an estimated 50,000 quality mango plants in 1992. Top working of existing mango trees has been successfully undertaken in all islands. Pruning and training of plants have been demonstrated and have been adapted. Progress has been made in anthracnose control through both hot water treatment and chemical application. Dwarf rootstock material has been introduced. Flower induction and fruit set have been successfully demonstrated. Some work has been initiated in weed control, fertilizer application and irrigation. Despite the progress, absence of baseline data and follow up information, make it difficult to quantify production and possible impact on exports resulting from this component.
- **Training and Workshops.** Workshops and demonstrations conducted under this component during 1990/91 exceeded the targets later set. The hands-on training sessions in top working and pruning were conducted in all countries. Nursery management training and orchard management demonstration and field days were conducted and mango production guide presented at a regional workshop.
- **Agronomic and Marketing Trials.** Positive results have been obtained in flower induction but the technology needs to be validated. Trials on fruit set and high density planting are on going. Work on post-harvest treatment of mango for anthracnose control (hot water treatment and fungicide) is making progress.

#### **Appropriateness and utilization of Project Inputs**

- **Training and Workshops.** The training to date on mango has been well received. Training of trainers was effective, as is evidenced by the extension officers in Antigua and St Lucia training farmers. Programs are planned to continue top working activities and follow-up training is required. Pruning will also impact positively on quality and could favorably affect yield. The skills in top-working and pruning have been acquired by extension officers and some farmers are now being taught. Training using a package approach to orchard management should be strengthened. Information on the impact of these new techniques on production costs should be generated, as well as appropriate recommendations on farming practices.
- **Agronomic and Marketing Trials.** Trials in weed control and fertilizer application should be advanced as these could affect yield and quality. Demonstrations/trials in high density planting could convince farmers that higher yields can be obtained from higher number of trees per hectare. Hot water treatment for anthracnose control seems to be in line with regional needs, but reliance of this treatment for fruit fly control should be considered in relation to mango seed weevil problem. In view of the importance attached to mango production, CARDI should give priority to research activities relevant to the needs.

- **Technical Support.** Israeli fruit specialists (2) and CARDI staff provided the technical support for this component. The TA provided the necessary technical support and transfer of skills is taking place. Technical support provided to small- and medium-scale farmers as well as extension workers has been highly commended. Nursery work and top-working activities will contribute to meeting project targets. Additional tools and material to allow preparation of teaching aids could improve the rate of progress. MOA counterparts could advance in-country work if manuals, videos and slide tape materials were available. Development of a strategy for mango expansion is an area where TA could assist farmers' associations and MOAs. In order to meet the target production, short-term TA may need to be considered.
- **Irrigation and Water Management.** The main objective of this component is to introduce improved technologies in on-farm water management practices for more efficient utilization of scarce water resources to increase production of NTAX.
- **Progress to date.** Progress to date on this module has been satisfactory. TA under this module reported work with small and medium scale farmers. Onion, tomato, papaya, pineapples, carrots, cucumbers, melons, sweet pepper, pumpkin and ornamentals are among the crops covered. Production of these commodities is mainly for local consumption, hotel, supermarket and intra-regional trade. There is growing demand for use of irrigation technology for vegetables and, to a lesser extent, fruits to meet regional market demands. The need for project modification to include regional trade should be examined.
- **Training and Workshops.** Some 150 persons (of which 35 were women) benefitted from workshop-type training in irrigation since the project started. In addition to the six workshops held in three countries, hands-on training was made available to 52 persons (5 women). Farmers and extension officers have installed and maintained irrigation systems as a result of this training. TA produced manuals on drip and sprinkler irrigation under the CARDI logo. Production guide leaflets on onion, tomato and carrot under irrigation were completed and widely distributed. Training sessions covered the areas of sprinkler, drip, micro-sprinkler, mist and fertigation technologies. Crops included vegetables, fruit, ornamental, nursery and greenhouse. Both the public and private sector benefitted from the training.
- **Demonstration Trials.** Demonstration trials were carried out on vegetables, fruits and ornamentals. Successful results on onion variety trials were reported and selected varieties that extend the production season were recommended as a result. Trials with drip irrigation in conjunction with the use of organic mulch is on-going trials to determine optimum water requirements are also being conducted. Trials to demonstrate improved weed control and fertilizer application were conducted.

### **Appropriateness and Utilization of Project Inputs**

- **Training and Workshops.** Hands-on training proved very effective. Regional workshops may be necessary to train island counterparts from MOAs. Where counterparts were available, follow-up was done. Grower group activity and school gardens may be used to popularize the irrigation technologies. Few training aids were used in the training sessions, however a manual which was available allowed reference to written material. There was little activity in soil conservation.
- **Demonstration Trials.** Trials on on-farm water usage are necessary to demonstrate the effective use of irrigation on quality and quantity of the product. Micro-sprinkler trials for nurseries and horticultural crops are essential to improve quality. Demonstration trails in the use of drip irrigation with the use of mulch is relevant to drier countries. The weed control and fertilizer application trials appear to be appropriate to developing cost effective production systems. However, the trial results should be documented to avoid repetition and to allow information dissemination.
- **Technical Support.** The Israeli irrigation specialist was assigned to the project in 1990 and has provided the technical support in this sub-component. The long-term TA had previous Caribbean experience and training in vegetable production. Technical support was provided and has been achieving positive results in seven countries inclusive of Montserrat. Additional demands for technical support were made but could not be met as only 68 days of the period under review were spent outside of base country, Antigua. Needs assessment for additional long- or short-term TA in soil conservation should be carried out and a CARDI counterpart Engineer/Irrigation specialist should be appointed. In addition, MOAs need to become more involved to allow impact on production both to meet TROPRO objectives and other investment initiatives such as Agricultural Venture Trust projects.

### **Post-Harvest Handling**

The focus of this project component is guided by technical findings that reduction in post-harvest losses comes from the correct use of agronomic practices and proper handling of produce immediately after harvest, assuming reliable down stream transportation. Given this approach, the post-harvest module was expected to give considerable emphasis to specific field-level technical support, adequate packaging, and improved infrastructure.

- **Progress to date.** Placement of the TA advisor for this module began in January 1991. However, given the managerial position of this specialist as Chief-of-Party to the technical assistance team, 75% of his time has been spent on administrative and team management tasks. Nevertheless, specific technical support and training activities were carried out, primarily at the regional level. Three specific interventions were implemented: training and information, technical support, and infrastructure improvements.

- **Training and Information Dissemination.** Numerous activities were implemented in the area of training and information dissemination. For example, a training manual "Export Marketing of Fresh Produce from the Eastern Caribbean" was prepared for a training course organized by UWI/CEPAT. Some progress has been made in hands-on training with the beginning of the new "Trial Shipments Program" (see Annex D for a listing of training activities). Most of these activities have a regional focus.
- **Technical Support.** Although the Post-Harvest advisor was required to combine technical work with team management and administration responsibilities, the use of short-term technical assistance, through task orders, has enabled the module to conduct several important activities. Detailed market surveys were completed for 13 target crops, providing detailed information on volumes, suppliers and prices on European and U.S markets for the past 5-10 years. At the request of CATCO, a European market inspection service was initiated, with technical support of the Post-Harvest Advisor. Key quality assessment of produce received in the UK from OECS members is currently available; this information will be received quarterly and fed back to interested parties.

The day-to-day post-harvest TA activities were primarily directed towards CATCO. Only limited in-country specialized post-harvest technical assistance has been provided to producers and other private exporters. In-country demand for specific hands-on assistance in packaging and packing house management continues to be identified as an area requiring intensification of TA efforts.

- **Infrastructure Development.** This component has made little progress since the first quarter of 1991. There is a lack of consensus on the type of infrastructure required by each country. The location of the planned cold storage facility needs to be re-defined based on recent findings. The priority needs for infrastructure and sites selection have to interrelate with transportation services.

Priorities appear to be clear to the TA Transportation Specialist, who has expressed the needs of infrastructure according to the expected hubs and trans-shipment requirements and the availability of existing facilities. These priorities would mean a reduced level of infrastructure expenditure, mainly to finance improvements in the use and upgrading of the existing facilities. Since the beginning of the project infrastructure for facilitating produce handling for air shipments has been built in Dominica, St. Vincent and Antigua.

### **Appropriateness and Utilization of Project Inputs**

- **Technical Assistance and Training.** The primary beneficiaries of the specific post-harvest technology TA day-to-day activities has been CATCO. Some field and packing-house training has been carried out by CATCO Field Managers with inputs from TA advisors. Also, production of two training videos to illustrate arrival problems, market requirements and competition for OECS products on the U.K. and Miami markets was perceived as an important activity. ADCU/TROPRO staff have reported that these videos have been well

received and used in training activities. The evaluation team feels that more TA, training, and market contact activities, needs to be directed towards the private sector. Furthermore, the level of effort (25% of the post-harvest specialist time) will be insufficient to implement the heavy load of post-harvest work associated with the new trial shipment initiatives and future export inspection services. This problem has been recognized by the project but immediate action is required. If the long-term TA assistance continues to require intensive management support from the COP, then the TROPRO should review the post-harvest handling/technology requirements for the project. A decision should be made regarding the level of technical input required to meet client demands (e.g. will short-term TA be sufficient, a full-time TA advisor, or a combination of both).

- **Infrastructure.** No infrastructure has been built to date as specified under the TROPRO Project. Priority has to be given to solve the problem that transshipment and the hub system will create. The project has identified the immediate need for equipment i.e. pallet jacks, forklifts, etc. This will reduce handling less mechanical damage of the exportable products. This situation implies that funds allocated for storage sheds and a pre-cooling facility should be re-allocated and flexibility be given by USAID in the use of funds for modified infrastructure and equipment needs based on the present situation.

### **Market Information System (MKIS)**

The objective of this module is to increase market knowledge through access to computerized commercial data bases, technical information and improved market contacts. The inadequacy of market and price information has been identified as a major constraint for market development, particularly of NTAX. The responsibility of this Module was originally vested under CATCO, as is stated in the Project Paper. It was transferred to ADCU in 1990, under the responsibility of ADCU's Marketing Information Officer, causing delay in the implementation of this activity.

- **Progress to Date.** Given the short-period that this module has been operating, progress to date has been good. Efforts have concentrated mainly on purchasing and installing computer hardware and software, the gathering of technical information and data, and subscription to information sources. However, this component has not attained its goal of becoming a "system", which by definition is the gathering and coordination of different information to flow continuously to end-users. MKIS needs to gain momentum to take off from its current status and seek for greater impact and acceptability among the Project's clients. A considerable amount of useful data and market information are currently available at ADCU, but need to be disseminated to users and in a "digestible" form in order to attain targeted results. A recent report prepared by a OECS/ADCU TROPRO consultant entitled "Recommendations for a Market Information Service for ADCU" provides practical cost/effective guidelines and direction for establishing an effective market information system. An immediate decision on the report's recommendations is needed.

Training activities in this module are critical at the exporter's and producer's level, in particular when it comes to the utilization of available information (i.e. blue and red books) and of the extensive data base (currently available at ADCU). The training activities carried on to date are not very relevant to this subject. There is a generalized lack of knowledge by project clients of what market information is available and how to access and use it. The limited distribution of some information encounters red tape problems for further flow (i.e. information received at MOAs and/or farmer organizations stays in the office without knowledge of the private sector NTAX producers/shippers).

- **Technical Information.** Computerized data base. Computer and communication hardware and software have been acquired and are in place at ADCU but under-used. No formal training in database systems has been given to the Marketing Coordinator or Marketing Officer of ADCU who are users of computer facilities and responsible for generating information.

Useful information on potential U.S. markets for NTAX is currently available at ADCU as well as data base on the European markets i.e. COLEACP. Subscriptions to hard copy publication and electronic information have been completed by ADCU, and the PRONET link is already available. The usefulness of this information is questioned if final users (producers and/or exporters) cannot take advantage of it. More effort is required to inform and train staff and producers on the use of the market information currently available at ADCU. Some information has been passed on to potential users during the OECS Fresh Produce Exporters Meeting in July, 1991, but greater effort is required to attain the module's objective.

**Marketing Technical Analysis.** The UK market price monitor, which is received fortnightly, has excellent acceptability among several clients, but its distribution is currently limited. Part of the problem is the channel flow of this information for distribution. When it passes through the MOAs, private sector clients indicated that they do not receive it or that major delays occur.

An analysis of NTAX from the OECS has been completed by ADCU. The lack of reliable statistical information (on production mainly) is once again evidenced in this report. A recent market study carried out for targeted markets represents a significant step forward in technical analysis. A continuation of such efforts is encouraged, since many of the producer associations and exporters do not have the capacity to carry out such activities, but need such information for market related decisions. The exporters are the most important clients for market information and their needs must be met.

**Market Contacts.** A significant number of meetings sponsored by TROPRO have taken place between exporters and importers. These meetings have resulted in many new orders. Private exporters, members of the Caribbean Farmers Development Corporation, the Dominica Hucksters Association, various marketing boards and CATCO have visited CARICOM and extra-regional markets. Also support has been provided to facilitate produce fair participation and annual conventions of U.S. trade associations. The evaluation team recommends that future contact activities should concentrate

more on the private sector and a report by participants be a condition of their participation. This would provide useful feedback as to usefulness of the contact activity.

- **Technical Assistance.** The Project has provided a long-term Agricultural Marketing Advisor as part of the TA Team. The advisor initiated work in February, 1991. This TA support has contributed positively to advance the accomplishments of this Module. The ADCU market information officer has facilitated the work of the TA and advancement of the MKIS activities to-date. The Marketing Advisor's knowledge of the US and Canadian markets is a key element to be used in order to develop exports outside of the traditional UK markets.

### **Appropriateness and Utilization of Project Inputs**

- **Technical Information.** Because of the broad sector of targeted clients, the Market Information Module is only partially complying with the Project's purpose. More emphasis has to be made at the producer and exporter level. Commercial data base systems are available at ADCU but this information needs to be reviewed to determine its usefulness based on a cost/effective criteria. In some cases, it is "too sophisticated" and not targeted to exporters needs. Further analyses on the available market information are required from the MKIS in order to have information available and formalized through a periodical publication.

Adjustments to this Module are being planned by ADCU based on the a recent report entitled "Recommendations for A Market Information Service for ADCU". It is expected that a market information system will evolve to provide information and related value-added services that make agricultural export trade from the OECS region grow in volume and value.

- **Technical Assistance.** The Technical Assistance component of the MKIS Module has proven to be in line with the Project's purpose "to increase regional and local capacity to market non-traditional products..". CATCO should provide additional support to assure technology transfer at this level. All OECS governments should also provide counterparts in each country to up-grade marketing knowledge at the field level.

Short term TA contracts have been used to assist the project in reviewing extra-region market opportunities and to assist CATCO with monitoring of trial shipments. ADCU is also facilitating private exporters' marketing activities by permitting them to use the Unit's facilities (i.e. to use its fax to take advantage of immediate communication with potential clients (importers). TA is needed to assist OECS member states to develop an information system to feed ADCU's data base. This information system should include production data on NTAX as well as market information. MKIS client knowledge in the use of and reasons for market information needs to be addressed. Training at this level could have a twofold effect: a) upgrade the producers and exporters capacity (in line with Project's

purpose); and b) create the need for reliable information, thus making these sectors aware of the need to generate reliable information to establish the database at the MKIS.

## **Transportation**

The objective of this module is to encourage improvements in dedicated freight cargo space, both air and sea, primarily oriented towards agricultural produce.

- **Progress to date.** The progress to date of the Transportation Module, in spite of a late start at post of the Transportation Specialist (Feb. 1991), is positive and in line with its objective and most likely to accomplish the expected output on the demand side, e.g. facilitate and promote establishment of dedicated air and sea cargo service.
- **Improve Air Cargo Service.** Amerijet is serving on a weekly basis between Dominica, Antigua and Miami. This is the result of the assistance provided by this module. A summary of the major activities accomplished by this module from February 1991 to December 1991 are found in Annex C. The initiation of the Joint Regional Marketing Program (JRMP) has been supported by the Transportation Module throughout its negotiations for space and freight for trial shipments. This is in line with the Project's purpose of increasing the regional capacity for NTAX. Computer and communications equipment are not operational as yet, hindering coordination with other modules. There is a question as to whether the monitoring and operational functions related to joint marketing and cargo consolidation are effectively being utilized given the location of the transportation advisor in Antigua.
- **Technical Assistance.** The Project provides funding within the TA team for a Transportation Specialist who started with the Project in February, 1991. Because of the Specialist's location (at the OECS/EAS in Antigua) he began effective field activities around May, 1991.

Short-term Technical Assistance has also been provided to answer other major questions on sea transportation problems.

## **Appropriateness and utilization of Project inputs**

The Transportation Module has made good progress, with tangible results, towards its main objective which is "...to provide a more efficient and reliable transport system to meet the needs of intra and extra regional transport for export of fresh produce". The importance of this module and the correct use of the TA were evidenced during the accomplishment of trial shipments of fresh cut flowers from Dominica to Washington DC, via Antigua. The technical support was in place when needed, keen freight rate negotiations of the transportation specialist proved to be efficient and encouraging for exporters. The rate paid from Dominica to Washington, DC was US\$ 0.45 cents/lb., which is approximately 56% of the normal shipping rate for flowers for the Dominica - Antigua stretch only.

The substantial increase in the number of reefer containers available in the banana ships for NTAX to the UK is the result of an agreement between the TROPRO Project and Geestline. Fifteen containers are currently in operation. There are standing agreements to put ten more units in operation. This activity is also demonstrating that the module's inputs are meeting its objective; TROPRO guarantees the price of the whole unit to Geestline even if the container is not fully used. Sustainability of this agreement (post-TROPRO) will only be commanded by increases in volume of exports.

Communications between the transportation module and the production, post-harvest and market information modules is an area where improvement is required. The trial shipment coordination proved to be difficult because of the above mentioned shortfall in communication. This could become a major problem when larger shipments are undertaken. When larger shipments are made, the consolidation of shipments for efficient space utilization will require a functional and efficient communication system. This module needs to focus more on the demand side, to assist producer associations, growers and exporters in planning and consolidating shipments to develop an effective demand for cargo space that will make the dedicated service profitable and sustainable.

The TA provided by the transportation specialist will end in January, 1993 when the Project is expected to be very active in NTAX. There is a continuous need for support to meet the demand of intra and extra regional transport for export of NTAX. Good progress has been made in the areas of developing policy issues on landing rights, negotiation of improved reefer container services, regional shipping strategy, data collection, and negotiations for establishment of a dedicated air cargo service. For future activities, careful consideration should be given as to the type of transportation specialist required to implement many of the activities that have been initiated. For example, a transportation traffic specialist might be more appropriate to meet the future needs of the project. The evaluation team did not have time to study this issue in detail. Negotiations for freight rates which will be of higher impact once the Project increases exportable produce output are a day-to-day activity in shipping. This matter needs to be reviewed in order to make a timely decision on finding an appropriate successor, who will have to be trained as soon as possible and/or plan and budget a contract extension with the transportation specialist.

### **Participation of Women**

The evaluation pursued the issue of women's participation in the project-funded activities of production and marketing of non-traditional crops.

Women have been involved in the project, but their level of participation has not been adequately reported upon. No data was available to assess this concern, except for several citations on women's participation in training courses. During the evaluation, the team was able to verify direct participation of women at the packaging house level, general management of an import/export enterprise, nursery management and production operations.

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## Potential for Other Crops

**Cocoa Production Activities.** Discussions were held with Ministry of Agriculture Dominica, St. Lucia Agriculturist Association, Hon. Minister of Agriculture St. Lucia, and officials of the OECS Secretariat. The findings are as follows:

- Dominica (400 acres over four years) and St. Lucia have planned cocoa expansion and rehabilitation.
- They regard the contract of World's Finest Cocoa as satisfactory to expanded production.
- Present price is considered favorable and there is belief that it will improve.
- Both the government and private sector in St. Lucia wish to see disbursement on the Cocoa Project resume earliest to optimize returns from the demonstration plots.
- The Agriculturist Association wishes to see the cocoa sub-project administered with the urgency which the situation demands and that project management will operate to minimize disbursement lag.
- OECS personnel express the view that while cocoa can earn foreign exchange in keeping with the TROPRO goal, it is a traditional export crop and does not fall within the mainstream of TROPRO.

**Aloe Production.** The team was unable to contact producers or managers of the processing plant in Dominica. Brief discussions held with Agricultural Venture Trust in Dominica and Barbados revealed that some market difficulties were experienced recently. They indicated that this matter is of no immediate concern.

### Section III

#### Effectiveness of CATCO as TROPRO'S Marketing Agent

One of the main outputs of the Project is to assist CATCO to become a profitable company which can serve the marketing needs of the OECS region. The team identified a renewed interest in using CATCO as a marketing agent since November 1991. This is when the two TROPRO initiatives were implemented: the revolving fund to assure payment to producers within 21 days and the Joint Regional Marketing Program to assist the countries to make commercial trial shipments. Without these initiatives, CATCO operations in the countries visited would have been greatly curtailed. TROPRO's support to CATCO has been of paramount importance.

The main question is whether CATCO's financial viability depends on its effective marketing/sales and financial administration. The issue of privatization is presently being reviewed. In the mid-term and long-run, the viability of CATCO will directly affect the success of the TROPRO project if this agent is to be the project's only market outlet for NTAX. CATCO's effectiveness is still seriously questioned and at the same time, TROPRO will not be sustainable if the marketing function of the project is not solidly in place. It was expected that CATCO would be a successful trading company and financially self-sustaining. The assumption was that progress made under the expatriate Fintrac Consulting management contract during 1985-89 would have been consolidated or accelerated. Trading operation in OECS produce increased at an average annual rate of 75% to peak at 730 tons in 1988/89, declined in 1989/90 and was almost restored (720 tons) in 1990/91. Trading to date for 1991/92 is below the previous year but gaining momentum (see Annex E). The trading and financial positions of CATCO have been precarious since TROPRO implementation. A series of management changes, coupled with difficulties of financial management, restricted trading; CATCO was unable to pay producers and producer organizations and experienced difficulties in collecting receivables. Its credibility with farmers waned.

CATCO received direct assistance from TROPRO. Short-term TA, in the form of financial management, business plan development and computerized accounting, have not been fully impacting because of management changes. It continues to benefit by institutional strengthening in a financial comptroller, bookkeeper and three trading managers in Antigua, Dominica and Grenada. The Joint Regional Marketing and trial shipment program has assisted in posturing the company for improved trading and is now poised to impact on quality improvement to allow improvements in its trading operations. The roll-over fund has provided working capital to improve CATCO's trading ability, allow earlier payment of farmers, and restore producers' confidence that it can be a creditable institution operating in the interest of farmers and the region.

CFC, the major shareholder (69.4%), is committed to the financial self-sustainability of CATCO. CFC injected loan funds during financial difficulties, provided \$80,000 to assist CFDC/CATCO trading in ginger out of St. Vincent, is committed to providing additional working capital and has agreed in principle to sell some CATCO shares to CFDC under an easy-payment plan which commits CFDC to sell produce to CATCO, thus assuring supplies. CFC has agreed to manage CATCO at no cost to the company, has signed a contract and installed a coordinator/manager for one year. CFC is also providing

assistance to improving the institutional memory by developing procedure manuals and systems to facilitate management continuity. The plans to launch a separate import company operating out of Europe will assist with marketing intelligence, on-site inspection, and follow-up to ensure payment to CATCO. Monitoring and review mechanisms are already in place to enable management control.

CFDC has advocated a base price from CATCO for produce, based on historical price trends, and a second payment worked out on CATCO's selling price above the projected (historical base) price. This could have significant effects on CATCO's trading margin. CATCO is moving towards providing incentives to its staff where projected trading targets are exceeded and has agreed to offer its trading managers a part salary/commission package to move the company more in line with private sector trading companies. The company underwent numerous vicissitudes which make it difficult to predict its future. The recent series of events (TROPRO's input; CFDC's willingness to invest; guarantee supplies and accept base price; CFC commitment and support; and the internal arrangement to reward employees according to effort) are positive signals which place CATCO in position to improve on its marketing operations.

Production expansion and increased trading projected out of St. Vincent, Dominica, St. Lucia and Antigua should create the volumes to increase gross sales, reduce administrative expenses and allow profits to be realized. The real constraint is market intelligence information necessary for a market led production drive, rather than the existing supply pull situation which now exists. CATCO, if managed in a cost-effective manner, could have a major role to play in the region's NTAX.

The Evaluation Team recommended that the situation in respect to CATCO be reviewed in 6-9 months to determine if it is best for TROPRO to continue with CATCO as the sole marketing agency of the project.

## **Section IV Institutional and Management Issues**

Considering the Project has been in full operation for only one year, it is too soon to measure overall impact as related to TROPRO's purpose and goals. The Project has a significant number of positive achievements in the technical support, training and information generation activities as identified in previous sections. This was achieved within the constraints mentioned in Section I of this report. This section deals with institutional relationships and project management issues.

### **Institutional and Monitoring Arrangements**

A major underlining assumption of the project was that it would build on the existing regional institutions (OECS, CATCO, and CARDI) and involve them in the implementation since they were all well established institutions. Based on the evaluation, all institutional clients stated that CATCO was not a well functioning institution nor well established when the project started. The change in management, the revolving fund and trial shipment program have brought back some measure of confidence in CATCO.

The OECS/ADCU was established about the same time as TROPRO. CARDI had no significant involvement in fruit crop development until 1989. This institutional framework was the platform on which the TROPRO project based its management functions and organizational linkages.

### **Project Management**

The organization and management functions of TROPRO require immediate attention. There is no full-time project manager. The project is complicated by design and evaluation standards. Three regional entities and two technical assistance teams are responsible for implementing four modules and one strengthening component with varying management styles. A brief overview of the key TROPRO players and their responsibilities is found in Annex E.

The TROPRO manager, who is a dynamic person, is presently spread too thin to effectively carry out all of his responsibilities. He is both the OECS/ADCU Coordinator and the TROPRO Project manager. More importantly, the demand for project support services is expected to increase significantly during the remainder of the LOP. At the same time, there is a need to establish policy related to air and sea transportation services, for promoting the support of MOAs to the diversification efforts, etc. which should be activities supported by the OECS/ADCU Coordinator. The project requires a **full-time** manager to strengthen coordination, communications, and other management functions required by expected future volume of work. At this time, from an organization perspective, the manager reports to himself, since he is the TROPRO Project Manager which comes under the OECS/ADCU, of which he is the coordinator.

## **Coordination and Communication**

The evaluation team found almost total agreement among those interviewed that the project needs to improve communications and coordination among the various support institutions, module managers and technical assistance staff. This situation has been recognized by TROPRO management and is evidenced by a new communication strategy which was developed recently to improve both internal and external project communications. This strategy is on the right track. The task ahead is to effectively implement the strategy and monitor its usefulness. One key objective of coordination and communication is to integrate TA members, clients and counterparts into one team. This has not been achieved to date from an overall project perspective. The simplified "Monthly Communications Checklist", in Annex F, of the Communication Strategy is the type of communication vehicle needed to improve communications.

## **Monitoring and Reporting**

The task of monitoring and reporting for the overall project lies with the OECS/ADCU. In the evaluation of this project, it became evident that monitoring and reporting exist, however, it is extremely labor intensive and does not establish a clear and quantitative monitoring system which can be used by the ADCU for the life of the project. The project manager agrees with this evaluation. Significant improvement has been noted in the TROPRO Quarterly Report 4 submitted by the Chemonics TA Team. There is a need to standardize and simplify the reporting system within modules and among modules, to reduce the effort in consolidating reports and finalizing project report advances by the project manager.

Although there are work plans, quarterly reports, on-site visits and meetings, no system is as yet in place which allows for easy identification of outstanding matters within the work plan. Management recognizes the short coming and is moving to correct the situation. The adjustment to the financial reporting system and the communication strategy are in the right direction. Every effort should be made to strengthen the entire reporting system without delay. A simple yet well organized reporting system will facilitate early reporting, analysis and feedback.

## **Data Base System**

The Project has in place hardware and software for database construction to provide evaluation and monitoring support. However, the "orgware" is not in place. That is the organization and establishment of a system that can operate as a management tool has not been adequately implemented to meet project needs. One main reason is the lack of a reliable database system, particularly production data for NTAX. The OECS/ADCU and the OECS/EAS fully recognize this as a limiting factor but it is not clear as to the priority of putting this system in place. Without such information, it is very difficult to quantify the impact of TROPRO as it relates to the goal of the project, i.e. trends in the production and export of non-traditional agricultural commodities.

In the draft TROPRO Implementation Plan for the second half of the project's life, it is proposed that the database will be established, with emphasis on both OECS crop supply data and trade information. It is to be collected on a quarterly basis and compiled and analyzed annually. It is strongly recommended that monitoring and analytical techniques be implemented along with debt collection, to measure effectively and continually key impacts on exports, jobs, value added, new investments, increase in incomes and technology transfer. The evaluation team strongly recommends that the Draft Implementation Plan for the project be immediately reviewed and approved. In the original project design, a revised Implementation Plan was to be prepared with a short time after project start-up. The project has been operating on annual work plans along with a very general implementation plan found in the Project Paper.

## **Section V**

### **Opportunities for Agricultural Diversification**

- TROPRO is, in itself, an opportunity to achieve more effective agricultural diversification in the OECS countries. Member countries need to provide better support to the different initiatives of TROPRO, i.e. with qualified counterpart staff in the MOA to assure sustainability of attained results, and support data baseline information gathering in order to make the results more tangible.
- Another opportunity is to involve the private sector in policy dialogue related to trade, investments, and setting agenda for research and development priorities. The new Policy Project to be funded by USAID, should closely monitor policy-related issues facing TROPRO's initiatives. The OECS/ADCU linkage should be established to develop such mechanisms.
- Inter-regional trade offers an opportunity for future expanding NTAX development. Two targeted markets should be considered: tourism and the hotel industry which require higher quality products.
- Donor coordination could improve the effectiveness of agricultural diversification. Major funding is being allocated to this sector, but improved coordination is required at both the planning end and operational level - an example is St. Kitts.
- The Agricultural Venture Trust (AVT) and TROPRO have similar aims. There is an opportunity to enhance USAID's input for more effective agricultural diversification if improved coordination were achieved at the operational and policy level. Furthermore, the project investment now has the potential for showing greater returns as TROPRO becomes more operational.

## **Section VI Findings and Conclusions**

1. The Project has made good progress, despite becoming only fully operational about one year ago. It is recognized that many tangible results of the project cannot be effectively measured due to the limited baseline data available.
2. The technical assistance has been generally effective. Its effectiveness could be improved if MOAs would clarify counterpart arrangements by assigning an agricultural officer in each country to work with TA. This would improve effectiveness of coordination and accelerate transfer of technology to producers, extension agents, and exporters.
3. The project needs to direct more assistance to other private sector exporters in addition to CATCO related clients. This would facilitate project sustainability over the long-run by diversification of export marketing channels. Many of these exporters are already directly linked to producer groups.
4. Management has recognized the deficiencies in the support system for decision making and resource allocation. The following management system tools need to be implemented immediately: (a) establish clear baseline data, monitoring and documentation systems for tracking project progress and impact; (b) develop and implement a budgeting system which establishes links between plans and budgets (this is a better procedure for simplifying reporting, analyzing project activities and ensuring impact); and (c) implement fully the existing communication strategy. Short-term TA should be utilized to accelerate implementation of these actions.
5. The Project Management level has two roles: OECS/CU coordinator and TROPRO Manager. Given the complexity of the project, it requires a full-time manager to strengthen coordination and monitoring functions as the volume of work over the LOP is expected to increase significantly during the next two years.
6. Project monitoring needs to be strengthened. Although there are work plans, quarterly reports, on-site visits and meetings, no monitoring system is as yet in place to allow clear and quantitative reporting of project activities which can be used for effectively tracking progress and impact. Additionally, analytical techniques should be implemented along with data collection, to measure effectively and continually key impact on exports, job, value-added, new investments, to increase incomes and technology transfer.
7. The marketing information system is not yet in place. Adjustments are being planned based on a recent report entitled "Recommendations for a Marketing Information Service for ADCU". Immediate action should be taken on this report. Progress has been made in gathering information, establishing links with market information data systems, and analyzing some market information such as the market survey of 13 target crops. Systematic distribution of information is not widespread.

8. A basic output of the project is lagging. CATCO's position as a successful trading company which is financially self-sustaining is still tenuous. It still has not reached its 1989-90 export levels. CATCO's position as sole marketing agency of the project should be reviewed within 6 months to determine if this situation should continue. The action taken on the recommendations of a recent evaluation study regarding the privatization of CATCO should be considered in the review process.
9. Progress has been made in regional TA and training activities and some application of the technology is being directed towards national commercial efforts. More country specific hands-on assistance, particularly in packing house operations, will be required given the increase in demand for such services. The present level of TA in post-harvest work associated with the new trial shipment initiatives and export inspection service will be insufficient in the future to implement the heavy load in these areas. A new area which needs to be looked at is a business advisory service which assists producer associations and export suppliers and shippers in identifying risks, opportunities, sources of information and technical support, and promising crop opportunities.
10. Little progress has been achieved in reaching agreements on either the number, design or sites for airport storage sheds proposed in the project paper. No storage sheds or cold storage facilities have been constructed.
11. Women have been integrated into the project, but their level of participation has not been adequately reported upon.

## **Section VII Options for Project Modification**

The evaluation team does not consider the option of terminating the project at this time. The project is just beginning to show promise and has developed a more realistic draft implementation plan based on advances to-date. The project is an important link between the various institutions involved in agricultural diversification working towards a common goal.

ADCU has clearly benefitted, since TROPRO has provided an operational base for initiating many of the agricultural diversification activities in the region. The project is also demonstrating a commercial focus through some catalytic efforts such as the trial shipments and inspection program. A renewed image of CATCO is supported by the confidence placed into this company by some producers.

A re-alignment of the project and focus as put forth in the recommendations that follow represents the position of the evaluation team. Based on the findings of this evaluation, the following changes in project design are suggested.

- **Project Goal.** Make explicit the inter-regional market as a targeted market for the project. Hard currency savings can be gained since the region has a food import bill estimated to be approximately US\$ 1 billion. Also, the tourist and hotel markets offer potential growth.
- **TROPRO Marketing Agent.** Flexibility should be given to the project to support and promote alternative export marketing channels for NTAX such as the private sector who are not presently involved.
- **Infrastructure Component.** Flexibility should be given in the use of the funds for supporting infrastructure and equipment other than storage sheds and a cooling facility, based on the dynamic changes in the region and needs of the project.
- **Module Composition.** A proposed modification is presented below:

### **Proposed Module Modification**

Production & Quality Improvement Module (ADCU/CATCO/CARDI)

- Production (CARDI with support from IICA)
- Training (ADCU)
- Post-Harvest (CATCO with support from CARDI, UWI, & IICA)

Transportation & Infrastructure Module (OECS/ADCU)

Market Information & Business Development (ADCU)

(Training could be added)

## **Section VIII Recommendations**

### **Principal recommendations**

The TROPRO Project plays a key role in the OECS agricultural diversification effort and has become the lead initiative of OECS/ADCU. Host governments are aware of the project and support its activities.

Because of the small average land holdings, and lack of marketing information and market knowledge, one of the most important challenges of the project lies in establishing effective mechanisms to link producers to markets. The project staff are aware of this fact, and efforts are being made to position the project support activities to achieve an integrate approach for exporting NTAX crops. A balance between marketing and production initiatives is required. These should be linked together through the distribution and information systems with hands-on interventions. With this in mind, the recommendations of the evaluation team are as follows:

- It is strongly recommended that USAID should continue to provide a funding base for TROPRO for the LOP. Budget allocations should reflect priority to link production activities to marketing and information systems.
- Full endorsement is given to the Joint Regional Marketing Program. This initiative should not be considered a "program" but the main strategy for implementing TROPRO's plan of actions. It provides for overall project focus and coordination, and delineates a direction for integrating module activities to achieve the project purpose. The Implementation Plan should indicate "what" will be done and the strategy define "how" it will be done. As such, the new draft Implementation Plan should integrate the JRMP as a strategy for implementing the project components before final approval is given.
- Management has recognized the deficiencies in the support system for decision making and resource allocation. The following management system tools need to be implemented immediately: (a) establish clear baseline data, monitoring and documentation systems for tracking project progress and impact; (b) develop and implement a budgeting system which establishes links between plans and budgets (this is a better procedure for simplifying reporting, analyzing project activities and ensuring impact); and (c) implement fully the existing communication strategy. Short-term TA should be utilized to accelerate implementation of these activities.
- The infrastructure component of the project needs immediate review to establish priorities, based on the findings of the transportation and post-harvest specialists, in terms of number of facilities/equipment, size/type and location. We recommend that USAID provide the flexibility to allocate funds to finance improvements in existing facilities as recommended by the TA specialist so as to support the JRMP trial shipment program.

- There is an urgent need to approve the new draft Implementation Plan which provides a clearer project focus and moves priority actions from primarily regional activities to more hands-on "field-based" work involving more private sector exporters. Along with this effort, it is recommended that management regroup project components so as to further integrate and strengthen the production and post-harvest modules. A suggested modification in project design is presented in Section VII of this report.
- It is recommended that the modules be regrouped to enhance integration of the production and marketing TA and training activities and to facilitate the monitoring of quality improvements in the commodity system. A suggested modification in project design is presented in Section VII of this report.
- **Staffing**

Long-term TA should be provided through the LOP. The specific need will depend on the accomplishment of the existing TA at the termination of their present contracts. The following technical assistance areas have been identified as priorities: post-harvest handling, marketing & information and a transport/traffic specialists, fruit & irrigation TA should also be provided until LOP. The need for providing entrepreneurial or business advice has been identified. Consideration should be given in assisting producer associations, and other producer/shippers in providing advise on opportunities, risks, and sources of technical and market information.

Counterpart linkages need to be defined and clarified for TA support personnel and project staff in general.

Management should review the present situation of multiple locations of TA with the view of determining the advantages and disadvantages for carrying out more effectively their operational and monitoring functions.

Designate a full-time project manager needs to be assigned within the next three months, to strengthen coordination and monitoring functions and to cope with the expected increased volume of future work throughout the LOP. Existing ADCU staff are unable to carry out the MKIS and management reporting/communication functions effectively as the project activities increase. We recommend that staffing be put in place to carry out essential activities. The new report for the MKIS system should provide guidance as to the requirements for MKIS.

- Agricultural diversification could be more effectively advanced through: (a) utilizing ADCU/TROPRO as a tool for impact. b) donor coordination; and (c) inter-regional trade advances linked to tourism. hotel market. TROPRO should include inter-regional trading as a target market along with its present extra-regional market focus.
- Governments of the OECS, through their MOA, should strengthen the resolve by diversion of resources specifically for agricultural diversification. A senior agricultural officer should be allocated responsibility for the coordination of in-

country activities. Resources from existing budget should be used to complement in-country TROPRO activities and to accelerate the agricultural diversification effort which is pivotal to their economic development.

- CATCO's position as the primary marketing agency for TROPRO should be reviewed within six months if recommendations for privatization are not accepted and if the company does not show significant improvement in profitable trading operations. Diversification of export channels such as assistance to exporters who are not CATCO's clients should be pursued.

### **Other recommendations**

Greater emphasis should be placed in getting business people to assist entrepreneurs (exporters/producer associations, hucksters) to improve their business efficiency, especially in marketing and management activities. Small business development centers and chambers of commerce could be involved.

**Other Crops:** (a) The cocoa component, if it materializes, could be managed under the TROPRO/ADCU Project if adequate resources are made available to avoid over-extending the project management of TROPRO. This management overload issue needs to be fully reviewed before final decision is made. (b) It is recommended that comparative advantage of OECS aloe production be identified before taking any decision on the type of support to be given.

TROPRO monitoring and reporting system needs to report accurately on the participation of women in the project activities. Number, position and type of involvement should be reported as a minimum.

**Data Base:** It is strongly recommended that monitoring and analytical techniques be implemented, along with data collection, to measure effectively and continually key impacts on exports, jobs, value-added, new investments, increase in incomes and technology transfer.

**Opportunity:** Encourage Policy Improvement. In reference to the USAID mission's policy initiation, we suggest that a significant opportunity exist to build the capacity of trade and business associations to conduct policy dialogue with trade and investment issues. Means of improving this capacity include preparation of policy briefing materials and setting policy research and analysis agenda. CFDC, hucksters and private exporter associations could be key actors.

A fund could be established to support the activity of these groups. The fund could pay for technical assistance to prepare briefing materials on specific policy issues and to establish research and developing policy agenda. Given that policy reform is a slow and uncertain process, USAID could help upgrade the technical capability of its target groups.

## **Annexes**

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**Annex A**  
**Terms of Reference**

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PIO/T 538-0163-3-10061

**TROPRO Mid-Term Evaluation**

**I. Background**

The West Indies Tropical Produce Support (TROPRO) Project (538-0163) was authorized and obligated in September 1989. TROPRO provides technical assistance, infrastructure development, various goods and services, and institutional support to strengthen private sector capabilities in the production, post-harvest handling, transport, and marketing of non-traditional agricultural export products. The Project's goal is to increase hard currency foreign exchange via exports of non-traditional agricultural products to extra-regional markets. A secondary goal is the generation of higher levels of farm income in the participating countries. The Project operates in six of the countries of the Organization of Eastern Caribbean States (OECS). These are: Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines.

The purpose of the Project is to increase regional and local capacity to produce and market non-traditional agricultural products. The Project concentrates in four areas, each of which has been identified as having one or more constraints which hinder the effective extra-regional marketing of fresh produce. The Project is comprised of four components:

1. Production - to increase the quantity and improve the quality of exportable produce.
2. Post-harvest handling - to improve the sorting, grading, handling, packing, and storage of produce, both to bring its presentation to international standards and to decrease losses.
3. Transportation - to provide a more efficient system of intra-regional transport for export produce.
4. Market Information Systems (MKIS) - to increase the market knowledge and the market contacts of the region's produce exporters.

TROPRO is implemented through a grant to the Organization of Eastern Caribbean States (OECS) and the Caribbean Agricultural Research and Development Institute (CARDI). Some marketing and post-harvest activities are carried out through a sub-grant to the Caribbean Agricultural Trading Company (CATCO). The Project has

an authorized level of \$6,800,000 over five years. Obligations to date total \$5,037,441 of which approximately \$1,526,000 have been expended.

## II. Objective

The objective of this contract is to conduct a mid-term evaluation of the TROPRO Project. This evaluation will be used to:

- Measure the progress to date of the project activities leading toward accomplishment of the project purpose.
- Evaluate the effectiveness and utilization of the project inputs.
- Identify opportunities for greater effectiveness and utilization of the project inputs.
- Analyze the need for a mid-term redesign to accommodate the changes in the agriculture sector since the project was designed with consideration of the "lessons learned" during the first years of TROPRO implementation.

## III. Statement of Work

The contractor is required to address the following particular concerns:

1. The continued viability of the Project design in the context of the regional agricultural diversification strategy and the resources available to RDO/C.
2. The degree of acceptance of the project by host country governments, marketing organizations, farmers and farmer's organizations.
3. The extent to which women have been included in the project funded activities of production and marketing of non-traditional crops.
4. Review coordination between the various implementing agencies, OECS, CARDI, CATCO, and USAID for effective management of the project.
5. The effectiveness of monitoring by the Project's management (OECS, CARDI, USAID) to identify problems and accomplishments.
6. The effectiveness of CATCO as a marketing agent for the Project.
7. The applicability of the training provided through the Project and the appropriateness of the methods used in identifying training needs.
8. The appropriate identification and use of technical assistance in achieving project purpose.
9. The extent to which planned project outputs are being achieved.

10. The extent to which grading, packing, and handling techniques have been improved and accepted by the major exporters, farmers, and farmer's organizations in the region.
11. The effect of the Project's activities on increased or improved production for export of non-traditional agricultural crops.
12. Progress towards the establishment of a non-traditional agricultural produce data base system for the OECS member states.
13. Progress towards the establishment of storage sheds and cold storage facilities in the region as well as the present need for these facilities.
14. The potential of other crops, such as cocoa, aloe, etc., as diversification crops and whether they should be incorporated in the Project.
15. Given current progress, the likelihood that end-of-project status will be achieved within the life of the project.
16. Evaluate the appropriateness of the relative emphasis on the current four modules.

Based on these findings, the team will comment on each objective stated in Section II.

To carry out this assignment two persons are required, one marketing expert who will be the Chief of Party (COP), and one crop production specialist. The crop production specialist will be recruited from within the region.

This team will be augmented with the following additional members: a) one person to address certain institutional concerns who will be contracted directly by RDO/C and b) two observers/facilitators from the implementing institutions, one each from CARDI and the OECS. These people will participate in field visits and will give inputs as required by the COP.

The COP will assign the individual responsibilities to the members of the team in relation to their abilities and experience. Within three working days, the COP will present the TROPRO Project Officer with a schedule of activities and responsibilities for AID review and approval.

#### IV. Team Member Qualifications

The desired qualifications for the team members are as follows:

##### A. Marketing Specialist and Chief of Party

A minimum of a M.Sc. (or equivalent) in agricultural marketing, agricultural economics or a related field. At least ten years experience in marketing a wide range of agricultural products in the United States and the Caribbean Basin is essential. Excellent communication skills are required. Experience in conducting AID project evaluations is required.

##### B. Production Specialist

A minimum of a M.Sc. (or equivalent) in crop production and at least five years experience in the production of a wide range of fruit and vegetable crops. The incumbent should be experienced in all aspects of production through to post-harvest handling and preparation of the product for the market. Experience in the Eastern Caribbean would be an asset. This person should be recruited from the region and should be a resident of the Eastern Caribbean.

##### C. Institutional Specialist

A minimum of a M.Sc. (or Equivalent) in agricultural economics or closely related field. At least five years experience in agricultural planning and institutional development in lesser developed countries is essential. Experience in working with AID projects would be a distinct advantage.

#### V. Period of Service

The period of service for collection and analyses of field data and for preparation of report is twenty-four working days. This includes: four days in Barbados for review of project documents and interviews with AID and other donor personnel, thirteen work days will be spent in the field collecting data, five days for preparation and review of the report and two days for international travel. The twenty-four day period of service is inclusive of 24 working days for the Chief of Party, 20 working days for production specialist and 15 working days for secretary. A detailed schedule is attached.

#### VI. Reporting

The schedule for submission of report is as follows:

- At eighteen working days a summary of the major findings (or draft executive summary of the report) must be submitted to RDO/C for discussion.

- At nineteen days the first draft of the complete report must be submitted. A verbal presentation of main findings to RDO/C staff will also be required at this stage.
- A draft final report, not to exceed 25 pages, which is acceptable to RDO/C must be submitted on or before the final working day.

The final report must be completed and accepted by RDO/C prior to the Contractor's personnel departing the region. This report will include as a minimum:

- A draft Project Evaluation Summary (PES) prepared according to the guidance contained in AID Handbook 3, Chapter 12 (attached).
- A discussion of overall project status.
- A discussion of progress made toward achievement of project objectives.
- An evaluation of the institutional capabilities of the implementing institutions as it affects project management and implementation.
- Recommendations for areas of improvement, changes in project design, emphasis, etc.

#### VII. Relationships and Responsibilities

The evaluation team will work under the supervision of and report to the USAID Project Manager. The Chief of Party will have overall responsibility for conducting the evaluation exercise, including assigning individual tasks to team members, day to day supervision of the team and preparation of the final report.

#### VIII. Logistic/Administrative Support

1. The OECS/ADCU, CARDI, and RDO/C will provide the necessary background information, make contacts and appointments for the evaluation team.
2. Limited office space, as available, will be provided in RDO/C and at the OECS and CARDI offices in the region.
3. Use of telephone, FAX and photocopies may be provided at RDO/C in Bridgetown.
4. Secretarial services will be provided by the contractor. RDO/C can assist with identification of suitable candidates if requested by the contractor.
5. The team will be required to make its own travel arrangements but assistance for regional travel may be obtained from the Mission travel agent.

# TROPRO EVALUATION SCHEDULE

February 16 - March 28, 1992

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Feb 16	Feb 17 <i>President's Day</i> US TEAM MEMBER TRAVEL TO BARBADOS	Feb 18	Feb 19	Feb 20 LOCAL HIRE TEAM MEMBER FIRST WORKING DAY C. BRAVO FIRST WORKING DAY	Feb 21	Feb 22 TRAVEL TO DOMINICA
WORK IN BARBADOS WITH RDO/C						
Feb 23	Feb 24	Feb 25	Feb 26	Feb 27 FLY TO ANTIGUA/ VISIT OEC'S EAS/ TA TEAM	Feb 28 REVIEW ACTIVITIES WITH ISRAELI/ ANTIGUA	Feb 29 FLY TO BARBADOS/ WORK ON REPORT
REVIEW ACTIVITIES WITH ACDU/COLLIN BULLY						
Mar 1	Mar 2	Mar 3	Mar 4 FLY TO ST. LUCIA. CARDI	Mar 5 ST. LUCIA. CARDI MIN. OF AG.	Mar 6 ST. LUCIA. CARDI VISIT ISRAELI TECH	Mar 7 WORK ON REPORT
VISIT WITH CATCO/TA TEAM						
Mar 8	Mar 9 WORK ON REPORT	Mar 10 WORK ON REPORT/ FIRST DRAFT TO RDO/C FOR REVIEW	Mar 11 3:00pm MEETING ON DRAFT REPORT	Mar 12 REVISE AND FINALIZE REPORT	Mar 13 10:00am PRESENT FINAL REPORT/ OUT BRIEFING LOCAL HIRE TEAM MEMBER LAST DAY C. BRAVO LAST WORK DAY	Mar 14 US CONSULTANT RETURNS TO US
Mar 15	Mar 16	Mar 17	Mar 18	Mar 19	Mar 20	Mar 21
Mar 22	Mar 23	Mar 24	Mar 25  A-6	Mar 26	Mar 27	Mar 28

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**ANNEX B  
PLACES AND PERSONS VISITED**

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**Barbados**

Alleyne, Patrick	FAO Representative
Bain, Susan	Project Administrator, TROPRO, Barbados
Batson, Howard	Agricultural Program Specialist, USAID Regional Development Office/Caribbean
Cashion, Jerry	USAID Acting Chief Program Development Officer
Chesney, Arlington	General Manager, Caribbean Food Corporation
Clark, Darwin	USAID Evaluation officer
Donawa, Chris	CATCO, Marketing Manager
Jordan, L.H.	International Agribusiness Consultants
Jordan, Mossina	USAID Mission Director
Merkel, Al	USAID TROPRO Project Manager
New, Steve	Chief of Party and Post Harvest Specialist, TROPRO Technical Assistance, Barbados
Pilgrim, Coleridge	Project Officer, Agricultural Venture Trust
Soler, John	CATCO, Coordinator - General Manager
Stryker, Ron	Agricultural and Rural Development Officer, USAID Regional Development Office/Caribbean
Winderickx, Ian	FAO Senior Program Officer

**Dominica**

Blades, Renaud	Owner of R&R Export Company
Bully, Collin	OECS/ADCU/TROPRO Project Manager

Cardon, Julius	Grand Fond Dasheen Producers Association, Dominica
Clarendon, Hannah	General Manager, Dominica Export Import Agency
Charles, Norris	Trading Manager, Caribbean Agricultural Trading Co.
Ducreay, Glen	General Manager, Caribbean Farmers Development Company Ltd.
Gadia, Cedric	Farmer
Greene, Jethro	Chairman/Managing Director, Organization for Rural Development
Grell, Oliver	Extension Officer, Ministry of Agriculture
James, Manley	CARDI
Jones, Michael	Manager, Dominica Agricultural Venture Trust
Joseph, Cecil	General Secretary, Dominica Hucksters Association
Malins, Annabelle	Post Harvest Specialist, CARDI, Dominica
McIntyre, John	Treecrops Specialist, Ministry of Agriculture
Polius, Julius	Soil Scientist, CARDI
Robin, Gregory	TAT Specialist, Ministry of Agriculture
Robinson, D.	Chief Agricultural Officer, Ministry of Agriculture
Satney, Andrew	Research Officer, Organization of Eastern Caribbean States, Agriculture Diversification Coordinating Unit
Shillingford, E.L.	Financial Manager, CFDC
Tabor, Charlesworth	Marketing and Intelligence Officer, Organization of Eastern Caribbean States, Agriculture Diversification Unit
Tindell, Walter	Marketing Specialist, TROPRO Project, Dominica
Williams, Eliud	Permanent Secretary, Ministry of Agriculture, Dominica

## **Antigua**

Ameen, Iftexhar	CARDI Representative, Antigua & Barbuda
Azenkot, Asher	Irrigation/Water Management Specialist USAID-Israel Cooperative Development Program
Edwards, Clarence	General Manager, CMC
Forde, Kathleen	CATCO Manager
George, Caudley	Farmer/Exporter
George, Rodney	Agricultural Extension Officer (Ag)
Goodwin, George	Sector Chief, OECS Secretariat, Antigua
Isaac, Clayton	Farmer, McInnon's
Joseph, Dandridge	Senior Field Officer (Tree Crop Counterpart)
Kimchi, Moshe	CARDI/Israeli Fruit Specialist
Mitchell, Carlyle	Director, Economics Affairs Secretariat Organization of Eastern Caribbean States
Samuel, Joseph	President of Small Farmer Association, Antigua & Barbuda
Waithe, Sam	Transportation Specialists, TROPRO Project, Antigua & Barbuda
Weston, Lennox	Permanent Secretary, Ministry of Agriculture, Fisheries, Lands & Housing

## **St. Lucia**

Ambrose, Thomas	Managing Director, TNT Produce Ltd., St. Lucia.
Andrews, Lennox	CARDI Fruit Specialist
Bernard, Lori	Private producer and exporter, St. Lucia
Best, Stephen	SFADP Project Coordinator, Ministry of Agriculture, St. Lucia

Browne, Wally	Wally Browne Farm
Clark, Barton	CARDI Representative, TROPRO Project (CATCO), Dominica
Colin, Paul	Agronomist
Columban, George	Operations Manager, SLMB
Cox	Private producer, St. Lucia
Demacque, David	Head of CARDI Unit, St. Lucia
Evans, Ernest	Private Exporter
Firmand, Roland	Private Producer, St. Lucia
George, Calixic	Executive Director, CARDI
Henry, Ferdinand	Minister of Agriculture, St. Lucia
Henry, Rueben	Rueben Henry Farm
Hyacinth, Cletus	Accountant, Agriculturist Association
Kosto, Itzhak	CARDI/Israeli Fruit Specialist
LaGra, Jerry	IICA, St. Lucia
Leonace, Johannes	Director, St. Lucia Agriculturist Association
Lewis, Vaughan	Director General, OECS (The Morne)
Pincenott, Antonio	IICA, St. Lucia
Raveneau, Diane	CARDI Finance & Administration Officer
Reid, M-Louise	Agronomist/Training Officer, Ministry of Agriculture
Reveneau, Rene	Manager/Secretary, Agriculturist Association
Rickards	Sun Shine Harvest Fruit and Vegetable Farmers Cooperative, St. Lucia

River Doree Holdings	Private Producers, St. Lucia
St. Clari, Albert	Extension Officer, MOA, St. Lucia
St. Ville, Olive	Marketing Specialist, MOA, St. Lucia
Valton, James	Private Exporter, St. Lucia
Willis, Michael	General Manager, St. Lucia Marketing Board
Wooding, Cecil	Asst. Manager, Agriculturist Association

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**Annex C**  
**Transportation Module**  
**Major Activities Accomplished February 1991 - December 1991**

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1. Assessment of infrastructure and facilities at airports.

- a) Runway and parking areas
- b) Ground handling equipment
- c) Cargo and cold storage sheds

2. Assessment of services.

Reviewed international and intra-regional airlines services between OECS, North America, Europe, and neighboring Caribbean islands with reference to:

- a) Aircraft types
- b) Capacity
- c) Frequency
- d) Routing

3. A status report with recommendation for the establishment of dedicated all cargo service.

4. Selection of airport hubs.

- Major hubs
- V.C. Bird - Antigua
- Grantley Adams - Barbados
- Mini hubs
- Hewanora - St. Lucia
- Point Salines - Grenada
- Martinique

5. Infrastructure - Cargo sheds and cool storage facility.

The airports identified for cargo sheds are:

- V.C. Bird - Antigua
- Hewanora - St. Kitts
- Point Salines - Grenada
- Cool storage facility
- Grantley Adams - Barbados

6. Negotiations

- a) Three LIAT cargo charters were arranged for CATCO between Dominica and Antigua and St. Vincent and Barbados.
  - b) Negotiated for space based on volume of cargo and competitive rates with regional and extra regional airlines (eg Continental, LIAT, Amerijet, British Airways, Caribbean Air Cargo).
7. Discussions were held with the consultants responsible for the LIAT Air Cargo Study, technical and operational contributions were made to support the interest of the OECS as it relates to the movement of agricultural produce. The draft report of the study has been completed and submitted to the management for their comments.

Ocean Transport

8. A study of marine transportation services in the OECS with recommendations for improving regional shipping services.
9. Reviewed the international shipping services between OECS, North America, and Europe and identified the key shipping lines to transport non-traditional agricultural produce.

A draft agreement is enforced with Geestline for the supply of 25 additional reefer containers for non-banana produce. There are 15 containers currently in use. One container per island per week for non-traditional cargo to the U.K. and Europe.

Policy

10. a) Reviewed OECS landing rights policies.  
b) Examined existing air services agreements between the OECS; other neighboring states and extra-regional countries.
11. Major activity not accomplished.

Identification and procurement of equipment.

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**Annex D**  
**ADCU Training Activities; 1990-1991 (TROPRO-Funded)**

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- June 1990      First Regional Workshop on Vegetable Production in Antigua, organized by IICA
- Topics covered production and marketing of vegetables including varietal selections, crop husbandry, harvesting and handling, storage and marketing.
- Participants were drawn from all member countries of the OECS. There were forty-eight participants, eight of which were funded by the ADCU. These persons included representatives of farmer organizations and Ministry of Agriculture staff. Three women were included in the number of persons funded in this workshop.
- August 1990    Post Harvest Handling of Mangoes and Papaya in Grenada
- Topics covered were harvesting, handling, packaging, grading and storage of the crops listed above. Crop marketing was also discussed as well as grading and selections.
- Participants were drawn from farmer organizations, fresh produce exporters, marketing boards, the farming community and Ministry of Agriculture technical staff.
- Thirty-six persons participated, including ten (10) women. The objectives of this workshop was to teach persons in the production and marketing of those crops how to produce and market a good quality product.
- Sept 1990      Workshop on the Post Harvest Technology of Mangoes and Breadfruit - St. Lucia
- Participants were drawn from St. Lucia, Dominica, and Antigua. Approximately a total of forty (40) including six (6) women.
- Topic areas were the same as above.

## **Summary of Training Funded Under the TROPRO Project of the OECS/ADCU**

### **1. First Regional Workshop on Tropical Fruits - Dominica**

The First Regional Workshop on Tropical Fruits took place in Dominica in February 1991. There were forty-two (42) participants at the workshop, ten (10) of whom were funded under the TROPRO Project (including two (2) women) and those persons were drawn from the private and public sectors including farmer organizations. All OECS countries were represented and the major subjects dealt with were: the production and marketing of avocados, passion-fruit, and citrus fruits. Specific topics included: nursery management, orchard establishment and crop management, marketing and post harvest technology and product marketing.

Other supporting agencies for this workshop were IICA, BDDC, and the Ministry of Agriculture - Dominica.

### **2. Improved Post-harvest Techniques for Tropical Fruits and Vegetables - July 1991 - Dominica**

The OECS/ADCU, through the USAID funded TROPRO project funded the participation of twelve (12) persons including two (2) women at this workshop. Participants were drawn from member countries of the OECS comprising of farmers, exporters, government officials and agricultural research organizations. This training course took place in Dominica.

The objective of this course was to instruct persons involved in the production of some selected crops with particular reference to pumpkin, hot peppers, breadfruit, soursop, watermelon, mango, and avocado on post-harvest techniques.

The TROPRO Technical Assistance personnel provided support in the form of lectures and publications/papers. The knowledge acquired by participants will be shared and passed on to other persons who are involved in the production and marketing of those crops. This should result in an improvement in the quality of fruits and vegetables exported from the OECS.

### **3. Export Market Requirements for Fruits, Vegetables, and Ornamentals - Trinidad**

Course organizer: CEPAT

Four persons from member countries of the OECS participated in a course entitled: "Export Market Requirements for Fruits, Vegetables, and Ornamentals" organized by CEPAT - Continuing Education Programme in Agricultural Technology of the University of the West Indies. Those

participants were funded by the USAID funded TROPRO Programme and came from CATCO and the marketing boards of St. Lucia, St. Kitts/Nevis and the Organization for Rural Development (ORD) of St. Vincent and the Grenadines.

The overall objective of the course was to sensitize business persons and other relevant organizations to the specific export market requirements for fruits, vegetables, and ornamental products particularly to extra-regional markets.

The major subjects dealt with included: product identification and development for export marketing, customs services and documentation requirements for export marketing, quality control systems and costing and pricing.

Participants were taken on some field trips where they were afforded the opportunity to see some practical aspects of the trade.

This course was very useful for persons involved in the production and marketing of ornamentals in the OECS agricultural diversification programme.

4. Second Regional Workshop on Tropical Fruit Crops - December 2 - 6, 1991 - Antigua

Seven persons from member countries of the OECS participated in the above workshop which took place in Antigua on 2-6 December 1991. Their participation was funded by the OECS/ADCU through the USAID TROPRO Project.

The major subjects dealt with included the production and marketing of papaya, pineapple, and mango. Various country papers were presented which dealt with the situation in each island and participants were exposed to all aspects of the production and marketing of those three crops.

Participants were drawn from the Ministries of Agriculture, farmer organizations, exporters, and the farming community in general.

The fact that the topics covered were very detailed suggests that the training will improve the ability of persons involved in the production and marketing of those crops to further enhance the sub-sector.

This training was jointly organized by the Inter-American Institute for Cooperation on Agriculture (IICA), the Caribbean Agricultural Research and Development Institute (CARDI), the Agricultural Diversification Co-ordinating Unit (ADCU) and hosted by the Ministry of Agriculture of Antigua and Barbuda.

New Approaches for the Production of Onions in the Caribbean - Barbados - March 1991

The ADCU through the TROPRO Project funded the participation of five (5) persons in this workshop. Those persons were drawn from Ministry of Agriculture and the farming community of St. Kitts, Nevis, Grenada, and St. Vincent. Four men and one woman attended this course. The main topics covered were crop production, including all husbandry, pest and disease control, harvesting, storage, and marketing. The participants were drawn from countries which had specific interest in the production of onions.

Windward Islands Farmers' Association Regional Exchange Programme - September 1991 - St. Vincent

The Winward Islands Farmers' Association (WINFA) organized a three (3) week farmer exchange programme in which fifteen (15) farmers from the four Winward Islands were involved. The ADCU through the TROPRO programme funded this activity and it is anticipated that with the knowledge acquired and skills developed, women in the agricultural sector will be more productive in managing their own enterprises.

The main objectives of this conference were: to provide selected farmers the opportunity to observe the cultivation of non-traditional crops; to motivate participants to practice crop diversification; and to develop an evaluation of the role of WINFA in the development of small farmers in the sub-region.

## **OECS Fresh Produce Exporter Profiles**

The ADCU is currently developing profiles of all fresh produce exporters in the OECS. These profiles are essential to facilitate agricultural exports since the information will assist exporters in contacting the right importers for their products as well as assisting them and the ADCU identifying and improving on their marketing facilities.

Exporters are encouraged to co-operate with the officer from the ADCU since the information provided is also essentially important for the development of the exporter and the agricultural diversification programme.

## **The ADCU Provides U.K. Market Price Monitoring Service**

Towards the ending of 1991, the ADCU, through financial assistance from the British Development Division in the Caribbean (BDDC), began a service of price and market information in the U.K. The Natural Resources Institute (NRI) in the U.K. is responsible for collecting and summarizing information and data on various wholesale markets in the U.K. where commodities from the OECS countries are marketed. These commodities include breadfruit, mango, papaya, plantain, dasheen, eddoe, soursop, hot pepper, ginger, yam and avocado.

Reports are passed to the ADCU Office in Dominica on a fortnightly basis and information contains market situations, trends in supply and demand in relation to prices and sources of supplies for the commodities identified above. This information is immediately circulated to all relevant persons and organizations involved in the agricultural sector to assist in production and marketing of those commodities.

To date, the ADCU has received complementary remarks for the source by the users of the information.

Meanwhile, NRI on behalf of the ADCU is currently developing profiles of some of the importers in the U.K., which will assist OECS exporters in the effective marketing of their products.

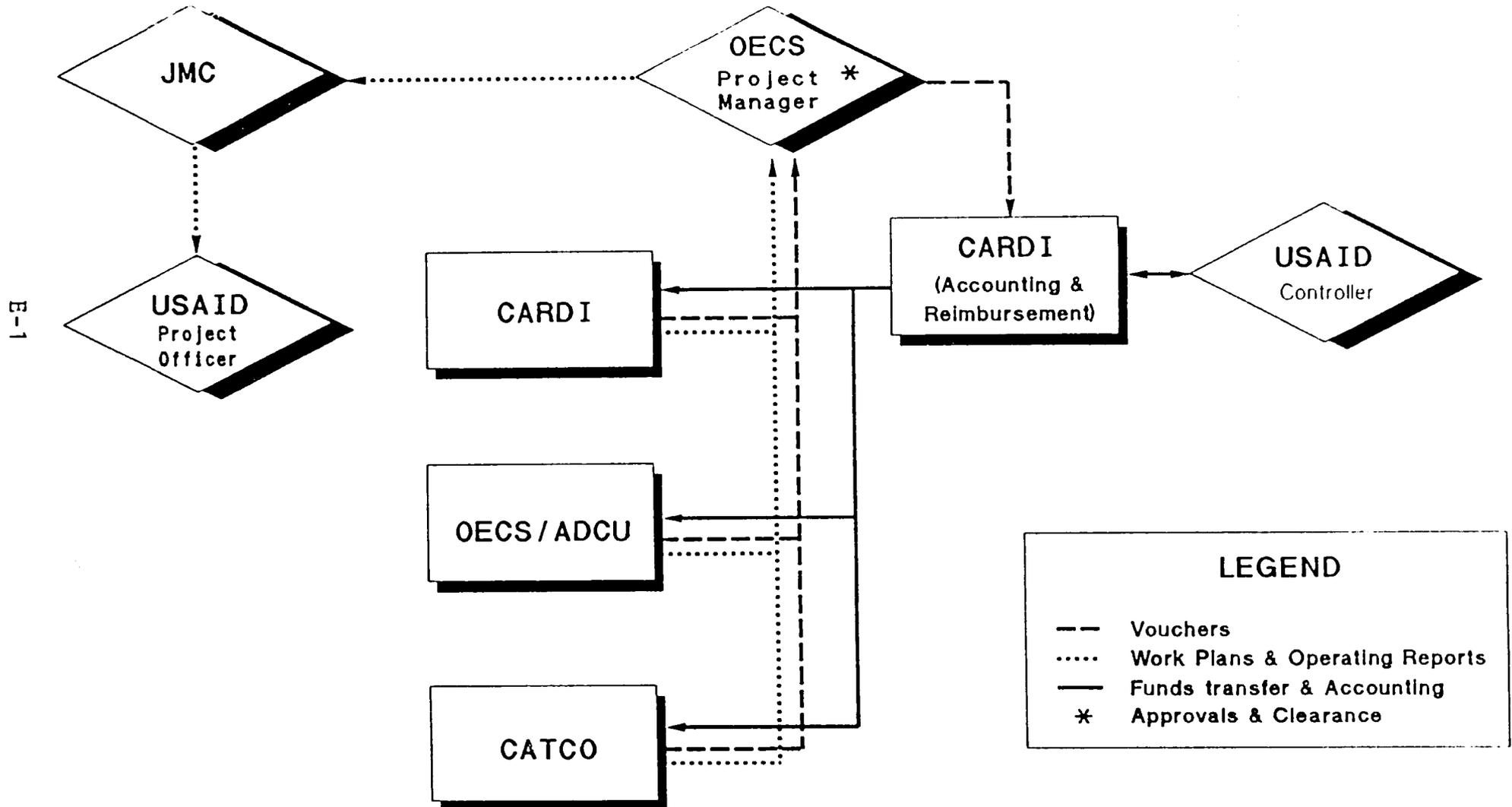
The above services should extend to include the Netherlands in the very near future. If readers need further information, please contact the ADCU office in Dominica at telephone #44-82240.

The following are reports for the period 21 December, 1991 to 17 January, 1992.

# TROPRO

## (WEST INDIES TROPICAL PRODUCE SUPPORT PROJECT)

### Project Administrative Communications



E-1

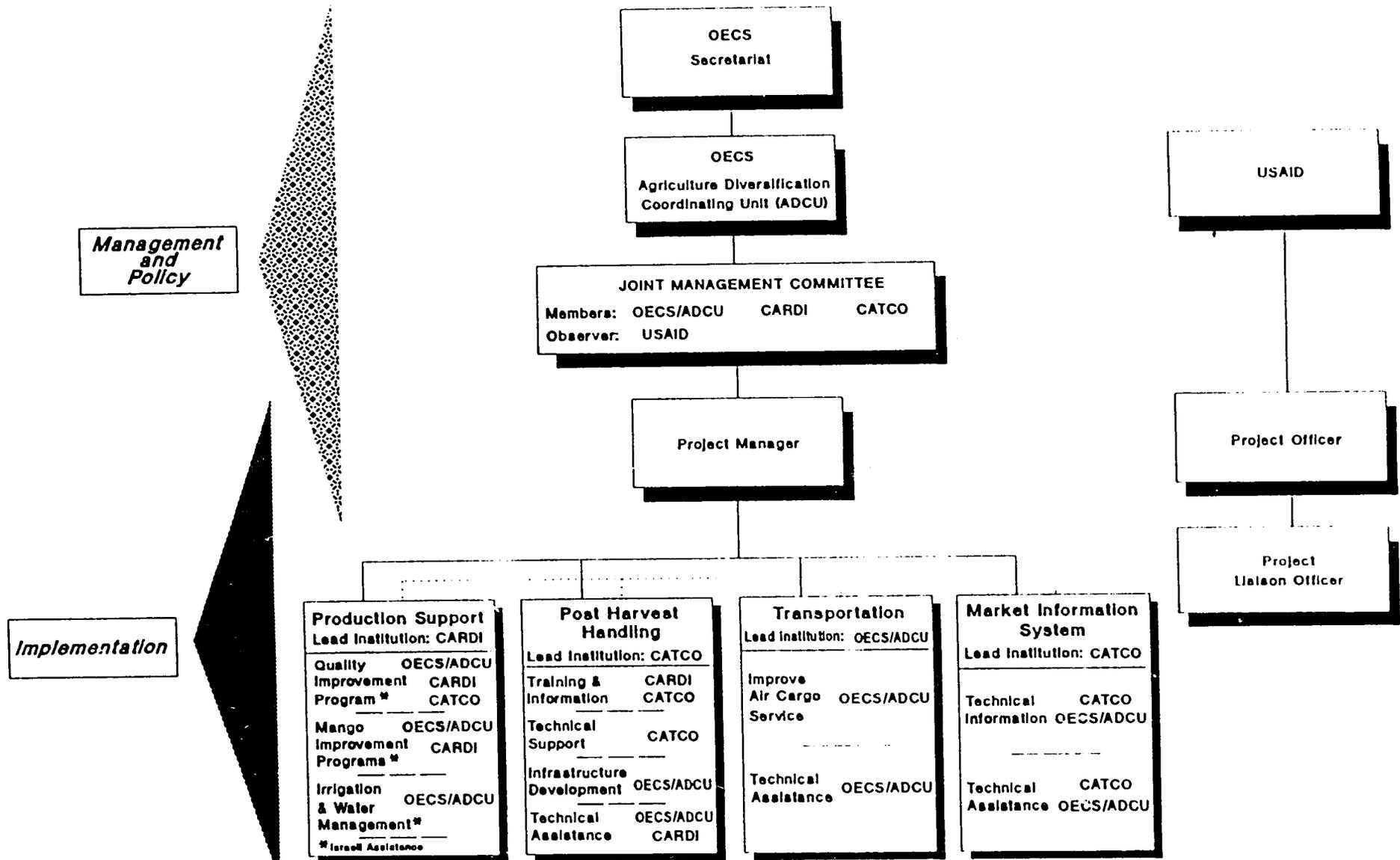
ANNEX E

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# TROPRO

## (WEST INDIES TROPICAL PRODUCE SUPPORT PROJECT)

### Working Relationships between Participants



E-2

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**Annex F**  
**Monthly Communications Checklist**

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1. Have any circulation notes been received from counterparts and TA members? How many? Related to indicators? And, most importantly, to which indicators? Note the following upon circulation note, review every month, and file accordingly:

<u>Organization</u>	<u># Notes</u>	<u>Related to Indicators (Y/N)</u>
ADCU	_____	_____
CARDI	_____	_____
CATCO	_____	_____
ISRAELI TA TEAM	_____	_____
TROPRO TA TEAM	_____	_____

TROPRO project indicators include:

Indicate originators of notes:

- |  |       |
|--|-------|
| (a) Increased exports  | _____ |
| (b) Increased farmer profits   | _____ |
| (c) Increased knowledge of N. American and European markets          | _____ |
| (d) Improved knowledge of grades and standards, packing and handling | _____ |
| (e) Availability of cooling facilities                               | _____ |
| (f) Improved inter-island airfreight service                         | _____ |
| (g) Increased sea freight space                                      | _____ |
| (h) Increased production under irrigation for export                 | _____ |
| (i) Improved quality and timeliness of production                    | _____ |
| (j) CATCO's profitability  | _____ |
| (k) Marketing Information System operational                         | _____ |

2. Did any public bulletins go out this month? How many? Regarding what products or services?

Bulletin topics:

\_\_\_\_\_

\_\_\_\_\_

3. Did CATCO furnish an export statistics list this month?

yes\_\_\_\_\_ no\_\_\_\_\_

4. Are there any news in circulation notes that would be suited to a public bulletin? If yes, call originator to prepare.

yes\_\_\_\_\_ no\_\_\_\_\_ action\_\_\_\_\_

5. Were any special management meetings called this month? If yes, for what issue-specific reason?

yes\_\_\_\_\_ no\_\_\_\_\_ topic\_\_\_\_\_

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**Annex G**  
**Analysis of Island Monthly Export Performance**  
**Through CATCO-OECS**  
**November 1989 - February 1992**

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Volume (lbs)						
Month	Antigua	Dominica	Grenada	St.Lucia	St.Vincent	Total
Nov. 89	0	8,412	8,391	0	42,143	58,946
Dec. 89	0	1,158	3,792	8,687	12,800	26,437
Jan. 90	29,739	10,941	14,184	20,979	16,135	91,978
Feb. 90	20,350	43,379	10,303	13,635	46,345	134,012
Nov. 90	0	39,562	17,912	19,098	114,850	191,422
Dec. 90	0	30,510	20,627	0	50,535	101,672
Jan. 91	5,494	21,524	8,787	0	0	35,805
Feb. 91	19,069	48,715	4,141	44,443	0	116,368
Nov. 91	0	38,980	0	0	76,860	115,840
Dec. 91	800	23,430	0	58,645	47,567	130,442
Jan. 92	2,336	35,180	0	34,062	89,030	160,608
Feb. 92	720	27,433	0	15,367	86,170	129,690

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Up to February 26, 1992.

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**ANNEX H**  
**LINKAGES AND OPPORTUNITIES FOR TROPRO/AVT COOPERATION**

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----- Policy Initiatives -----

**TROPRO PROJECT**

Market Research

Marketing

Agronomic Research

Agronomic Advice

Transportation Subsidy

Profitable

Export Earning

Agricultural  
Production  
and  
Trade

**AVT PROJECT**

Equity Finance

Monitoring

Financial Systems

Consortium Financing

Potential for increasing:

farmers' income  
foreign exchange  
increased profitability of investment  
jobs

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ANNEX I  
LIST OF DOCUMENTS

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- ADCU Annual Work Plan 1990, TROPRO.
- ADCU Workplan/Budget for Year Two of the USAID Funded TROPRO Project, October 1990-September 1991.
- ADCU Workplan and Budget for Year Three of USAID Funded TROPRO Project, October 1991-September 1992.
- ADCU Management Technical Report No.1 of TROPRO.
- ADCU Management Technical Report No. 2 of TROPRO.
- ADCU Management Technical Report No. 3 of TROPRO.
- ADCU Management Technical Report No. 4 of TROPRO.
- ADCU Management Technical Report No. 5 of TROPRO.
- ADCU Management Technical Report No. 6 of TROPRO.
- ADCU Management Technical Report No. 7 of TROPRO.
- ADCU Management Technical Report No. 8 of TROPRO.
- Azenkot, Asher. Scope of Activities, USAID-Israel Cooperative Agreement/CARDI.
- Bravo, Carlos. Review of Marketing Boards in the OECS, OECS/ADCU TROPRO, 1991.
- Burbage, M. & J. Asked. First Quarterly Quality Assessment of Horticultural Produce Received in the UK from Member Countries of OECS, Various, National Resources Institute, Overseas Development Administration. September, 1991.
- Medlicott, A.P. Product Specifications and Post-Harvest Handling for Fruits and Vegetables and Root Crops Exported from the Caribbean, Caricom Export Development Project (CEDP), Caribbean Community Secretariat, Barbados, December 1990.
- CARDI 1990-91 Report by Moshe Kimbi, CARDI St Vincent.

- Charles, Norris. CATCO Annual Report. Dominica Office, January-December, 1991.
- Chemonics TA Team. TROPRO Quarterly Report January-March, 1991.
- Chemonics TA Team. TROPRO Quarterly Report April-June, 1991.
- Chemonics TA Team. TROPRO Quarterly Report July-September, 1991.
- Chemonics TA Team. TROPRO Quarterly Report October-December 1991.
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- Demas, W.G. Agricultural Diversification in the Caribbean Community - Some Issues. CDB, Barbados.
- Dominica Ministry of Agriculture and USAID/Barbados. Commonwealth of Dominica Agricultural Sector Assessment, May 1991.
- Henry, F. & B. Cooper. Import Substitution Opportunities, 1991.
- Kimhi, M. Activity Reports: Antigua, St. Vincent, St. Lucia, Grenada, Dominica, 25/6/90-25/2/92.
- Klotzbach, Thomas. U.S. and European Market Survey for Selected Fruits and Vegetables Produced in the OECS, OECS/ADCU TROPRO, December 1991.
- Levine, W., M. Abel, G. Johnston, M. Whitaker and B. Sebastian. Eastern Caribbean Agricultural Policy Project, Project Design Studies (Draft), Prepared for AID, APAP II, November 1991.
- New, Stephen. Strategies To Improve the Effectiveness of Agricultural Research, Extension and Training in Selected Caricom Countries, A consultant's report prepared for the World Bank, December 1991
- OECS/ADCU TROPRO Post-Harvest Handling of Avocado and Passion Fruit, February 1991.
- OECS/ADCU TROPRO O.E.C.S. Product Specifications, January 1991.
- OECS/ADCU TROPRO The Market Information Service for the OECS/ADCU (MKIS), Draft, February, 1992.

Lamb, John and Satney, Andrew. Recommendations for a Market Information Service for ADCU, OECS/ADCU TROPRO, USAID, March 1992.

OECS/ADCU TROPRO Market Price Reports, Various. 1991.

OECS/ADCU TROPRO Task Order 7 - Trial Shipments Program.

OECS/ADCU Estimated Budget for the OECS/ADCU Position of the MKIS.

OECS Workplan and Budget, Dominica Agricultural Diversification Support Project.

OECS/EAS Report on the OECS Diversification Programme, Meeting of OECS Ministers of Agriculture, Antigua, April, 1991.

OECS/EAS Progress Report: OECS Agricultural Diversification Program, January 1991.

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Starkey, Claire. TROPRO Communications Strategy, OECS/ADCU TROPRO, January 1992.

Tabor, Charles. Analysis of Non-Traditional Agricultural Exports for OECS, February 1992.

Taylor, T.G., P.A. Antoine, S.A. Smith. Estimated Cost of Production for Specialty Crops Produced in OECS. 1991.

Thomas, Sherman. Report on OECS Transportation Services, ADCU, September 1991.

Thomas, Sherman. Marine Transportation Service in the OECS, OECS/ADCU TROPRO, December, 1991.

Thompson, Tad. Mangos: International Produce Journal, February 1992.

Tindell, Walt, S. Waithe, E. Harvey and S. New. Export Marketing of Fresh Produce in the Eastern Caribbean, OECS/ADCU TROPRO, June 1991.

Trade Facilitation Office Canada. Fruits and Vegetables Update 1991.

TROPRO Agreement Between TROPRO and Geest Line.

USAID West Indies Tropical Produce Support Project Paper, Project Number 538-0163, Regional Development Office/Caribbean.

USAID Project Grant Agreement between the OECS/CARDI/USAID for West Indies Tropical Produce Support, September 1989, August 1990, March 1991, March 1990, August 1991 and September 1991.

Velez, Julian. Agricultural Methods and Economics of Banana Production in the Eastern Caribbean, 1991.

Waithe, Samuel. Assessment of Airport Infrastructure, Facilities and Services-OECS, OECS/ADCU TROPRO, October 1991.

Waithe, Samuel. Review of OECS Landing Rights Policy-Air Cargo , OECS/ADCU TROPRO, October 1991.

Waithe, Samuel. Assessment of Air Port Infrastructure, Facilities and Services, OECS/ADCU TROPRO, October 1991.

Waithe, Samuel. Transportation Module: Major Activities Accomplished February 1991 - December 1991. Chemonics Team TA.

Weiss, Ken. A Review of Information Systems that Relate to Producing and Exporting Non-Traditional Agricultural Products in the Eastern Caribbean, TROPRO/RDO/C, December, 1990.

## Michael J. Moran

---

### Education:

- M.S. Michigan State University (agricultural economics with major in agricultural development and food marketing), 1968.
- B.S. University of Detroit--College of Commerce and Finance (business administration and trade), 1962.
- A.A. Port Huron Jr. College (business administration), 1956.
- Cultural and Language Center, Cuernavaca, Mexico, 1962.  
Seton Hall University Institute for Socio-Economic Studies, 1961.  
Various periodic short courses in trade, investment, and business practices.

- Languages:** English (native language)  
Spanish (fluent)  
Portuguese (fluent)

### Summary of Qualifications:

Mr. Moran has twenty-five years of successful international experience at the managerial and technical level. Areas of expertise include management, operations, analysis and training related to agribusiness, public and private sector agricultural marketing, trade and investment, and rural development. He has worked in the following countries four or more years: Bolivia, Costa Rica, Brazil, United States, and Barbados. He directed technical missions and/or undertook short-term project identification, preparation, and appraisal activities for other countries in Latin America, Europe, Near East, and Southeast Asia.

### Professional Experience:

- Oct - Nov 1991 Agribusiness/Food Marketing Analyst, Food and Feed Grains Institute, Kansas State University, Sri Lanka. Conducted study for A.I.D. on food import and distribution of wheat, rice, onions, and chilies in Sri Lanka using a market structure, conduct and performance criteria. Analyzed economic and technical efficiencies and constraints to rapid privatization. Identified public and private sector roles for opportunities and incentives to move from state-controlled to private-sector food import and distribution system. Presented options for modification of marketing structures and policy issues related to the privatization initiatives.

- May - Sept 1991      Agribusiness and Marketing Advisor, U.S. Agency for International Development, Washington, D.C. Assisted Food Systems Division prepare an agribusiness strategy and a regional support project for Eastern Europe and the Near East. Planned major conference for A.I.D. officers of European and Near East Bureau and helped organize a leadership seminar to enhance cooperation between U.S. agribusinesses and country missions. Analyzed and prepared technical materials to monitor and/or implement projects.
- March - April 1991      Agricultural Marketing and Trade Advisor, United States General Accounting Office, Washington, D.C. Provided technical input to GAO/RCED on long-range Agr. Competitiveness and Marketing Development Strategic Plan. Focused on the role of government in enhancing the competitiveness and marketing of U.S. agricultural goods and services in the international markets.
- Oct - Dec 1990      Trade and Marketing Specialist, International Resource Group, India. Helped prepare framework of U.S.A.I.D. project to improve private agribusiness activities in India with emphasis on fruits and vegetables: assessing opportunities and constraints, including postharvest handling, processing, domestic and export marketing. Conducted analysis of trade associations (Assocham/FICCI, etc.), development banks, cooperatives, investment corporations and agro-industry services, including the National Dairy Development Board's Fruit and Vegetable Project, and WIMCO.
- Sept 1990      Micro-Enterprise Development Advisor, Alliance for Communities in Action, NGO, Washington, D.C. Appraised and prepared a three year project "Food for Families Program" in Nicaragua to support the regional development and transfer of technological packages for food production and marketing, and to strengthen selected community based farmer organizations.
- July - Sept 1990      Agricultural Economist/Postharvest Specialist, International Resource Group, Washington, D.C. Conducted a comprehensive survey of four major postharvest centers of expertise funded by U.S.A.I.D. Science and Technology/Agriculture Office. It included a review of research, assistance, training and information services offered

by the centers in support of world wide local missions. Made recommendation towards improved central management and technical support options. The four centers are: Postharvest Institute for Perishables (U. of Idaho), Food and Feed Grains Institute (Kansas State U.), International Soybean Utilization Program (U. of Illinois), Seed Production/Utilization (Mississippi State U.).

- June - July 1990      Agricultural Economist/Marketing Specialist and Team Leader, ANZAC Corp., Washington, D.C. Evaluated Kansas State U.'s Postharvest Grain Marketing System Rural Development Project of the Food and Feed Grain Institute. Reviewed cooperative agreement with U.S.A.I.D, and effectiveness of research, project design, technical assistance, training, and information services.
- April - June 1990      International Marketing Consultant, Inter-American Development Bank (IDB), Washington, D.C. Responsible for preparing detailed terms of reference for a National Food Market Program feasibility study and three major wholesale markets for Venezuela. Conducted pre-investment and project preparation related activities. Provided technical support to the Ministry of Agriculture, National Planning Office and other agencies dealing with food marketing and information systems.
- Jan - March 1990      Agricultural Marketing/Trade Analyst, Development Assistance Corp. in cooperation with Chemonics, Washington, D.C. Assessed feasibility and potential benefits of joint research and education concerning common problems of small and medium producers of non-traditional export crops in Central America, the Caribbean and U.S. states bordering Gulf of Mexico. Responsible for post-harvest handling, transportation, and market penetration component. Visited five countries to identify mechanisms to ensure effective participation between public and private sector institutions and help transfer technology to producers.
- April - Nov 1989      Marketing Specialist, Inter-American Development Bank (IDB), Washington, D.C. Responsible for developing and analyzing two major investment projects in Parana, Brazil: (1) grain marketing and storage for regional and local-micro level cooperatives, (2) fruit and vegetable food systems serving small producers and high risk consumers. Components included: storage capacity, location, management

capabilities, privatization, marketing channels, credit constraints, and target financing options. Analysis of feasibility for investing in grain storage units in Rocha and Ansina, Uruguay. Technical areas included institutional and management/operational capacity of cooperatives, distribution channels, economic impact evaluation on beneficiaries, costs, and support service capabilities. Review of project "Production and Marketing of Maize-INEDESA" in Panama. Issues studied: institutional and organization matters, transfer of marketing and postharvest technology, market and prices, and a small scale agro-industry grain processing plant proposals.

1984 - 1988

Director, Inter-American Institute for Cooperation on Agriculture, (IICA), Barbados. Planned, directed and evaluated a comprehensive technical assistance program aimed at accelerating the agricultural diversification program for domestic and export markets. Developed micro-agribusiness management and advisory services involving six key support agencies and their beneficiaries. Helped prepare trade and development program of caricom's five year agricultural plan 1988-1992. Provided direct technical assistance to identify, prepare and implement projects in Barbados, Trinidad and Tobago, St. Lucia, Grenada, Guyana, and St. Vincent.

1976 - 1984

Director, International Organization Division, IICA, Washington, D.C. Identified, prepared and evaluated agricultural development projects, negotiated contracts worth more than \$7 million for technical assistance to Latin America and the Caribbean. Developed network with donor agencies, multilateral technical assistance institutions, NGOs, and bilateral organizations in U.S., Canada, Europe, and Latin America. Provided technical support to regional and country specific projects in Latin America.

1972 - 1976

Director, Marketing and Agro-Industry Program, IICA, Costa Rica. Designed, developed, and directed major programs involving more than 25 countries. Managed team of 15 senior professionals. Provided direct technical assistance to public and private sectors, including micro agribusiness management, policy and project analysis, institutional assessments, and food marketing performance at the firm, commodity system, and institutional levels.

- 1968 - 1972      Coordinator and Professor, Inter-American Marketing/Management Training Center, Organization of American States and Getulio Vargas Foundations, Brazil. Initiated and coordinated a new international training center for Latin America and the Caribbean. Headed fifteen senior staff members plus support personnel. Planned and evaluated curricula, training needs assessments, applied research activities in food marketing and agro-industry. Provided technical assistance throughout Latin America and trained over 400 middle and senior level management staff from the private, public, and education sectors. Senior resource specialist for worldwide review of technical assistance and training programs for FAO, OAS, OECD, etc. in the field of marketing and agribusiness for small/medium private- sector and public institution intervention and support services.
- 1968              Agricultural Economist/Research Associate, Latin American Market Planning Center, Michigan State University. Described and analyzed food production, distribution, and consumption systems in selected countries of Latin America. Co-authored major research publication on food marketing.
- 1962 - 1966      Technical Advisor/Teacher at Model Vocational Agricultural College, Association for International Development, Bolivia. Designed and implemented training program for beginning agricultural technicians. Educational advisor for Savings and Loan Cooperative.
- 1952 - 1959      Dairy and grain business, Michigan.

**Personal Data:**

## Carlos S. Bravo B.

---

### Education:

Degree on Superior Studies of Overseas Techniques D.E.S.T.O.M.; Le Havre, France, 1980.

Degree on Tropical Agronomy, I.S.T.O.M.; Le Havre, France, 1977.

Overseas Superior Technical Institute, I.S.T.O.M.; Le Havre, France, 1974-1979.

Preparatory year for Polytechnical College; Quito, Ecuador, 1973-1974.

**Languages:** Spanish, English, and French

### Professional Experience:

- 1991 Agricultural Marketing Consultant. Consultancy to review the current operations, facilities, policy, technical and institutional problems of the marketing boards in the Organization of Eastern Caribbean States (OECS). U.S.A.I.D. would use the study to design the Eastern Caribbean Agricultural Policy (ECAP) Project. Chemonics International, Washington, D.C.
- 1990 - 1991 Wheat Project Team Leader. Consultancy as team leader and program coordinator on the technical, commercial, economical and organizational design of a wheat program for the Chuquisaca Department in Bolivia. RONCO Consulting Company (U.S.A.I.D.-Contractor), in charge of the implementation of the P.A.O. (Private Agricultural Organizations) Project, La Paz, Bolivia.
- 1989 - 1990 Agricultural Marketing Specialist. Consultancy on marketing of tropical and sub-tropical agricultural products from the Chapare region, as part of the Alternative Development Project of Cochabamba for coca leaf substitution, U.N.I.D.O (U.N.), Vienna, Austria.
- 1989 Human Resources Specialist. Responsible for all personnel and human resources matters. Contracting and definitions of terms of reference for national and international consultants to support clients of PAO Project in Bolivia, RONCO Consulting Company, "OAP" Project, La Paz, Bolivia.

- 1985 - 1989 Agricultural Specialist. Responsible for U.S. Embassy's marketing intelligence for ag-products, marketing of U.S. agricultural products, development of new markets for U.S. products (in Ecuador), Foreign Agricultural Service (F.A.S.), American Embassy, Quito, Ecuador.
- 1983 - 1985 Head of the Seed Department. Responsible for Development, registration, production, and marketing of seed, Ciba-Geigy; Bogota, Colombia.
- 1980 - 1983 Seed Program Leader. Responsible for marketing intelligence and diversification programs of the ag-division, development, registration, and marketing of seed, Ciba-Geigy, Caracas, Venezuela.
- 1978-1979 Corn Borer Program Leader. Responsible for infrastructure design, artificial rearing, infestations, and evaluation of resistant genetic material in corn borer program, Ciba-Geigy, Lombez, France.

**Training/Courses:**

- 1990 International Food Technology Annual Meeting and Food Expo. Anaheim, California.
- 1983 Seed Production and Marketing, Funk Seed International. Lubbock, Texas.
- 1981 Sales (Ciba-Geigy's Selling Skills Training Course). Caracas, Venezuela.
- 1980 Sales and Promotion, Ciba-Geigy. Mexico, D.F.
- Seed Development and Marketing, Funk Seed International. Lubbock, Texas.
- Seed Promotion and Marketing, Funk Seed International. Bloomington, Illinois.
- Marketing, Ciba-Geigy. Basel, Switzerland.
- 1977 Commercial Shipping, Import and Export, Compagnie Generale Maritime (C.G.M.). Le Havre, France.
- Agricultural Motors, Public Technical College. Le Havre, France.

- 1976 Plant Breeding, Ciba-Geigy's Research Center. Lombez, France.  
Chemical Analysis, Unite D'Enseignement, Recherche Scientifique et Technique (U.E.R.S.T.). Le Havre, France.
- 1975 Machinery for Tropical Agriculture, Centre Experimental-Etudes du Machinisme Agricole (C.E.E.M.A.T.). Antony, France.  
Tomato Greenhouse Production, Private Farm. Brest, France.
- 1974 Agricultural Production, Chambray Agricultural College. Chambray, France.

**Personal Data:**

Address: P.O. Box 302  
Bridgetown, Barbados  
West Indies  
Telephone: (809) 429-4720  
FAX: (809) 429-5246

## Francis (Frank) A. Henry

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### Education:

Manitoba Institute of Management, (Certificate International Management Associates Programme); Winnipeg, Canada, May - June 1987.

Rupin Institute (Certificate Optimum Yield Management); Israel, March - April 1984.

The University of Reading (Diploma in Tropical Weed Control); England, May - July 1973.

The University of the West Indies (Bachelor of Science in Agriculture--Upper Class Economics Option); St. Augustine, Trinidad, 1963 - 1967.

Rapid Result College, correspondence courses (London G.C.E. Ordinary Level - English language, mathematics, biology, economics, economic history, geography, British constitution) (London G.C.E. Advanced Level - Economics, British constitution); United Kingdom, 1959 - 1963.

East Caribbean Farm Institute (Honours Diploma - Texaco Prize in animal husbandry); Trinidad and Tobago, 1957 - 1959.

St. John's Boys School (Post primary school leaving certificate); Antigua and Barbuda, 1944 - 1956.

**Languages:** English

### Professional Experience:

Government of Antigua and Barbuda, Ministry of Agriculture, Fisheries, Lands, and Housing, Nevis and Temple Streets, St. John's Antigua.

1978 - Present Director of Agriculture.

1967 - 1974 Research Officer. Responsible for agronomic investigation of vegetables, root crops, pineapples, Sea Island Cotton.

1967 Senior Field Officer - Extensions. Supervision of extension officers.

- 1963                      Agricultural Officer - Barbuda. Engaged in pasture establishment maintenance and expansion of coconut plantation, as well as vegetable and field crop production.
- Specialist extension work - Sea Island Cotton and supervision of Cotton Crop Protection Services.
- 1959 - 1963              Agricultural Assistant III. Engaged in crop extension work, service activities including loan processing, marketing of sugar and cotton, ploughing and haulage activities and soil conservation activities.
- 1956 - 1957              Agricultural cadet.
- Caribbean Development Bank, Wildey, St. Michael, Barbados.  
1974 - 1978              Farm Improvement Officer - Antigua. Duties included seeking out farms with potential for development, assisting farmers in formulating capital improvement schemes, appraising loan applications of borrowers and preparing appraisal report for the Antigua and Barbuda Development Bank, ensuring that loans utilizing the funds of the CDB were made in accordance with the conditions laid down in the Loan Agreement with ABDB. Also undertook agricultural credit assessment in the Turks and Caicos Islands.

University of the West Indies, St. Augustine, Trinidad, W.I.  
Jul - Aug 1966      Technical assistant in the Department of Crop Production

**Duties performed apart from regular job activities:**

Worked as part of a team to prepare case study reports - An Integrated Production and Marketing System for the Antigua Agricultural Sector, 1977. A Working Document for the Twelfth West Indian Agricultural Economics Conference.

Worked as part of Project Design Committee on Caribbean Agricultural Planning, a USAID Proposal Project No. 538-0033.

Participated in study markets, price and nutrition. Experiences from Antigua, Barbuda, St. Vincent, and the Grenadines.

Served as Director -

Antigua Commercial Bank, 1983-1992, Chairman 1987-1991.

CARDI, 1984-1988.

Caribbean Food Corporation, January 1986-1989.

National Development Foundation, 1985-1992.

Francis (Frank) A. Henry

Page 3

Served as Steering Committee Member -

Caribbean Agricultural Rural Development Advisory and Training Service  
(CARDATS), 1986.

Represented the Government of Antigua and Barbuda at Agricultural Marketing Protocol Meeting, Agricultural Planners Meeting, (CARICOM) Ministers of Agriculture Meeting, Research Officer Meeting and various other meetings related to agricultural development.

**Personal Data:**

**References:**

Mr. Collin Bully  
OECS/ADCU  
Roseay, Dominica

Mr. Ernest Benjamin  
Ministry of External Affairs, Planning and Trade  
Heritage Hotel  
St. John's, Antigua

Mr. Ronald Baynes  
Agricultural Advisor  
Barclays Bank PLC  
Barbados

Dr. John Elwin  
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Willey,  
St. Michael,  
Barbados