

PROJECT ASSISTANCE COMPLETION REPORT

Project Title: Agricultural Research and Extension Project (AREP)
Project Number: 538-0164
Funding Period: 3/28/89 to 3/31/95
LOP Funding: \$5,000,000
Implementing Agency: Caribbean Agricultural Research and Development Institute
PACD: March 31, 1995

PURPOSE

To strengthen the institutional capability of national extension services and regional research and extension organizations to generate, adapt, and disseminate continuing streams of improved agricultural technologies for the benefit of farmers of the seven member countries of the Organization of Eastern Caribbean States (OECS). The seven countries, Grenada, St. Vincent and the Grenadines, St. Lucia, Dominica, Antigua, St. Kitts and Nevis, and Montserrat, have a total land area of 1063 square miles and a combined population of approximately 580,000 people. The implementing agency was the Caribbean Agricultural Research and Development Institute (CARDI). The Faculty of Agriculture of The University of the West Indies (UWI), St. Augustine Campus, was a sub-grantee responsible mainly for the extension activities under the project.

BACKGROUND

Improving the performance of the agricultural sector is extremely important to increasing economic growth in the OECS region. Agriculture has been one of the two leading sectors, with the other being tourism, which makes a significant indirect contribution. Excluding government, agriculture is the largest economic sector in each of the OECS countries, except for Antigua, where tourism dominates.

The traditional agricultural export commodities, largely bananas, sugar and sugar products, and spices, account for a significant part of total exports of the OECS countries. The AREP Project began at the time when the OECS countries were being faced with the threat of losing their traditional market for bananas and sugar in the United Kingdom by the Single European Union. The Project, therefore, directly supported the plans of the OECS countries to diversify their agricultural export base.

The productivity of many non-traditional crops in the OECS is low, in absolute terms, compared to commercial producers in other countries. The AREP Project was focused directly on this problem to introduce improved cropping systems, increase production, reduce unit costs and increase competitiveness of OECS products. It was also evident that a lot of improved technology, already available, was not being transferred to the farming community and was not being adopted by farmers. The AREP Project was also designed to strengthen the research/extension linkages.

The AREP strengthened activities started by earlier USAID supported projects including the Small Farm Multiple Cropping Systems Research Project and the Caribbean Agricultural Extension Project, both of which ended in 1989. AREP's research and extension program in diversified agricultural production complemented the West Indies Tropical Produce Support Project (538-0163) which came on stream later in 1989 to provide marketing support for OECS non-traditional crops.

SUMMARY OF INPUTS AND ACCOMPLISHMENTS

Inputs

The Project was authorized at US\$5 million, 99% of which was spent at the PACD. The Project financed twenty members of the technical and administrative staff of CARDI and the UWI. Research and training facilities, research and extension equipment, various supplies, and other operational costs, staff travel, training and workshops, and technical collaboration were also funded. A detailed breakdown of the USAID funded inputs are shown in Table 1. During the course of the Project CARDI and the UWI contributed approximately US\$3 million towards administrative costs, staff, and operating expenses.

Table 1. USAID Funded Inputs (Illustrative Budget)
(US\$ \$000)

Technical & Support Staff	1736
Research & Training Centers	250
Equipment & Supplies	413
Research & Extension Expenses	359
Staff Travel	581
Training/Meetings	746
Technical Collaboration	450
Overhead	165
Contingency	200
Evaluations & Audits	100
Total	5000

Accomplishments

The main achievements over the five-year span may be summarized as:

- ◆ Technologies were developed and disseminated for the improved production of eddoe, ginger, plantain, pineapple, yam, onion, hot pepper, papaya, dasheen and passion fruit. Limited work was done on breadfruit and sapodilla.
- ◆ More than 100 technological constraints have been addressed. Transfer has been initiated and/or completed across the various selected commodities . The range of technologies included new varieties, planting density, fertilizer requirements, irrigation, post-harvest handling, pest and disease management, weed control and cultural practices such as pruning, mulching, flower initiation, trellising, and land preparation.
- ◆ More than 450 validations/demonstrations of alternative technologies and production systems were conducted to adapt and transfer technology. These were done with the cooperation of participating farmers and extension officers.
- ◆ The 'task force' approach has been developed and documented as a mechanism for commercialization of commodities in OECS states. Task forces with CARDI's involvement and/or coordination include:

St. Kitts & Nevis	yams, onion, vegetables to hotels in Nevis
Montserrat	onion, white potato
Antigua	onion, hot pepper
Dominica	hot pepper
St. Vincent	ginger, eddoe
Grenada	hot pepper, papaya
St. Lucia	passion fruit

CARDI professionals served as resource persons in regional vegetable and fruit production networks. Also, CARDI's scientists have assisted in sourcing information and germplasm, and in the design and evaluation of trials to test various technologies.

- ◆ Farmers, extension officers and marketing agents, totaling 4654 people, benefitted from national-level training given as part of the process to transfer alternative technology. The training was delivered using demonstrations, lectures, field days, seminars and workshops.
- ◆ AREP supported regional training workshops either singly or in collaboration with other regional agencies. CARDI's contribution included the financing of participants, arranging the workshops and providing resource persons; 389 persons benefitted.

- ◆ Collaborative linkages have been established or strengthened with ministries of agriculture, universities and agricultural R&D organizations to improve CARDI's effectiveness in generating technology in support of agricultural diversification. The areas of collaboration included fruit horticulture, economics, soil and tissue analyses, post-harvest handling and crop protection.
- ◆ During the project, 117 publications (reports, factsheets, manuals, farmers' guides, conference papers, etc.) were produced and distributed.
- ◆ There were 58 institutional strengthening activities to improve CARDI's capacity to generate and transfer technology and 53 such activities with respect to UWI.

DEVELOPMENT IMPACT

Assessments at the end of the project showed adoption by an average of 47% of the 1918 farmers who were exposed to new technologies. Amongst these farmers it was estimated that 53% of the technologies to which they were exposed was being put to use.

As a result of the interventions there were reductions in the average of cost of production per kg of the crops assessed (except for hot pepper in Antigua). Cost reductions ranged from EC\$4.50/kg (75%) for pineapple to EC\$0.18/kg (35%) for eddoe, both in St. Vincent.

Onion productivity was increased from 8 to 24 t/ha in St. Kitts and from 5.5 to 17 t/ha in Montserrat; ginger increased from 8 to 25 t/ha in St. Vincent.

The system of transferring technologies to farmers and other interested organizations has been institutionalized in CARDI, UWI, and the national extension services in the OECS.

The national agricultural extension services in the OECS have been strengthened, demonstrating an improved organizational structure better capable of delivering effective extension programs to farmers.

LESSONS LEARNED

1. Technology generation and transfer must consider end-user requirements for profitability, marketing constraints and government support policies
2. Front line extension officers need continuing training and support in economic and business-related technical and analytical skills in order to provide practical services to farmers.

3. The joint focus planning and task force approach should be further documented in training manuals and transferred to national extension systems.
4. Farmers need help in organizing production to take advantage of growing agro-tourist and export markets.

Clearance:

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