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 2. USE LETTER QUALITY TYPE, NOT DOT MATRIX TYPE.

90600

IDENTIFICATION DATA

A. Reporting A.I.D. Unit: Mission or AID/W Office <u>Kingston, Ja.</u> (ES# _____)	B. Was Evaluation Scheduled in Current FY Annual Evaluation Plan? Yes <input checked="" type="checkbox"/> Slipped <input type="checkbox"/> Ad Hoc <input type="checkbox"/> Evaluation Plan Submission Date: FY <u>  </u> Q <u>  </u>	C. Evaluation Timing Interim <input type="checkbox"/> Final <input checked="" type="checkbox"/> Ex Post <input type="checkbox"/> Other <input type="checkbox"/>
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D. Activity or Activities Evaluated (List the following information for project(s) or program(s) evaluated; if not applicable, list title and date of the evaluation report.)

Project No.	Project / Program	First PROAG or Equivalent (FY)	Most Recent PACD (Mo/Yr)	Planned LOP Cost (000)	Amount Obligated to Date (000)
532-0165	Agricultural Export Services Project	89	9/96	10,000	6,639

ACTIONS

E. Action Decisions Approved By Mission or AID/W Office Director	Name of Officer Responsible for Action	Date Action to be Completed
Action(s) Required		
-One year extension of Technical Advisor	USAID	11/19/95
- A PACD extension to September 30, 1997 should be considered	USAID/AESP	6/7/96
- Improved communication within PMU & delegation of duties to Deputy Project Manager	AESP PMU	
- Monitoring system to be implemented	AESP PMU	3/96
- Proper EIA and environmental monitoring of subprojects to be implemented and linked to continued support of subprojects. PMU should be responsible for managing this after RONCO contracts ends in December 1995.	AESP PMU	12/95
- To ensure USDA Preclearance Program Sustainability the following actions are required by June 1996.	JEA/MOA/AESP	
(a) the exporters' per box cess to be increased to US\$0.17		4/22/96
(b) One one-stop facility for Kingston to be completed by 9/96.		9/96
(c) MOA to provide required support services for the program such as additional PPQ officers, supplies, pest identifiers, IPM support, refurbishing of MoBay facility.		8/96

APPROVALS

F. Date of Mission Or AID/W Office Review Of Evaluation: (Month) 07 (Day) 28 (Year) 95

G. Approvals of Evaluation Summary And Action Decisions:

Name (Typed)	Project/Program Officer	Representative of Borrower/Grantee	Evaluation Officer	Mission of AID/W Office Director
Signature	Jennifer Rousseau	Aaron Parke	J. Feldman-Lawrence	Carole Tyson
Date	24 May 1996	24/5/96	5/24/96	5/24/96

**ABSTRACT**

**H. Evaluation Abstract (Do not exceed the space provided)**

This mid-term evaluation was conducted in May and June 1995, 15 months before the PACD. Its purpose was to assess and analyze project impact and progress to date; identify any policy or implementation issues affecting implementation of the project, and propose corrective actions as appropriate and, examine the project's validity in view of USAID's new strategic policy priorities. Research methods included a review of necessary documentation, interviews with key informants, and field visits to past and proposed sub-project sites.

The purpose of the project is to increase the exports of selected non-traditional and traditional agricultural products, accomplished by focussing project resources on enhancing productivity through improving/expanding export related services. The Project Agreement was signed and funds obligated in September 1989. Its total value was estimated to be US\$18,850,000 with US\$10,000,000 coming from USAID and US\$8,850,000 from the GOJ and local private sources. Subsequent budgetary cuts mandated from AID/Washington have reduced the Mission's contribution which is now not likely to exceed US\$7.5 million.

In many ways, this is the evaluation of two projects both stemming from the same original design. The first phase of the Project, from late 1989 to early 1993, concentrated on traditional Jamaican agricultural exports such as coffee, cocoa and bananas and relying on para-statal commodity boards as implementing organizations. During this first phase the PMU was composed of only two local hire personnel. The second phase (1994 - present) supported small and medium farmers who are growing non-traditional crops. Three new employees have been added to the PMU including a US production and marketing expert. Major findings, conclusion and lessons learned follows:

- \* During the first phase of the Project, the PMU was understaffed which impacted on its ability to efficiently and effectively manage the project. This flaw in the Project design was corrected in the Project's second phase.
- \* The PMU often does not work as a team utilizing sufficiently the skills of the staff. Two areas require examination: communication between members of the PMU, and the level of authority currently granted to the Deputy Project Manager.
- \* There has been very little monitoring of the effectiveness or efficiency of sub-project operations, the operations of the environmental sub-contractor, or other sub-contractors.
- \* The sub-projects currently under review are sound with excellent production and marketing potential.
- \* Sub-project managers should not be hired by the MOA rather by the PMU and the beneficiary organizations.
- \* Environmental Assessments of sub-projects are superficial and do not meet the requirements of the project.
- \* The continuation of the USDA Pre-clearance Program will depend on the ability of the GOJ and the JEA to come up with the necessary resources. At present, the situation is in doubt.

**Important lessons learned included:**

- \* If external evaluators are to measure project progress, a project information system must be in place and functioning.
- \* Host Government support, especially in the area of policy directives and budgetary allocations, is a prerequisite to developing the necessary long term strategies to address the self-sufficiency of government services.

**COSTS**

**I. Evaluation Costs**

1. Evaluation Team		Contract Number OR TDY Person Days	Contract Cost OR TDY Cost (U.S. \$)	Source of Funds
Name	Affiliation			
Donald Jackson	Cargill Tech Services	48	\$77,787	Project funded
Daniel Jaysingh	" " "	30		
Jack Hennessey	" " "	30		

2. Mission/Office Professional Staff  
Person-Days (Estimate) 5

3. Borrower/Grantee Professional  
Staff Person-Days (Estimate) 30

2

# A.I.D. EVALUATION SUMMARY - PART II

## SUMMARY

Summary of Evaluation Findings - Conclusions and Recommendations (Try not to exceed the three (3) pages provided)

As the following items:

Purpose of evaluation and methodology used	• Principal recommendations
Purpose of activity(ies) evaluated	• Lessons learned
Findings and conclusions (relate to questions)	

Office Kingston

Date This Summary Prepared:  
November 16, 1995

Title And Date Of Full Evaluation Report: Evaluation of the Agricultural Export Services Project (AESP), Jamaica

This mid-term evaluation of the Agricultural Export Services Project (AESP) in Jamaica was conducted in May and June 1995, approximately 15 months before the Project Activity Completion Date (PACD). The purpose of this mid-term evaluation was to (1) assess and analyze project impact and progress to date toward achieving project goals, strategies, and objectives; (2) identify any policy or implementation issues affecting implementation of the project, and propose corrective actions as appropriate; and (3) examine the project's validity in view of USAID's new strategic policy priorities.

The goal of the Project is to foster economic growth and equity. According to the Project Paper (PP), this will be done by increasing the production and productivity of selected non-traditional and traditional agricultural exports, particularly those produced by small and medium farmers by improving their access to quality services and other resources." The purpose of the Project "is to increase the exports of selected non-traditional and traditional agricultural products. This will be accomplished by focusing project resources on enhancing productivity through improving/expanding export related services."

The Project was designed 'in-house' by Mission staff with assistance from local consultants who were responsible for the preparation of the six analyses required for all PP documents. The Project Agreement was signed and the funds obligated in September 1989. Originally designed as a seven year project to end in September 1996, the MOA has requested a 'no-cost increase' extension of one year. The total cost of the Project was estimated to be US\$18,850,000 with US\$10,000,000 coming from USAID and US\$8,850,000 coming from the GOJ and local private sources. Subsequent budgetary cuts mandated from AID/Washington have reduced the Mission's contribution which is now not likely to exceed US\$7.5 million.

As designed, the Project had six components/elements, three action and three support. The first element, Export Production sub-projects, was to assist, "producer groups and associations to expand the production and marketing export crops." The second, Production and Post-Harvest Export Services, "support key public sector agencies in improving/expanding essential services to the producers and exporters of agricultural products'. The third, Export Project Design and Management Services, was to have used local financial institutions with agricultural export borrowers, "to identify and solve problems related to increased outputs of commercial farms." The remaining three elements include a Project Management Unit (PMU), and Audit and Evaluation component, and a Contingency and Inflation component.

In many ways, this is the evaluation of two projects, both stemming from the same original design. The first phase of the Project, from late 1989 to early 1993, concentrated on dealing with traditional Jamaican agricultural exports such as coffee, cocoa, and bananas and relying on para-statal commodity boards as implementing organizations. Additionally, during this first phase the PMU was composed of only two local hire personnel a Project Manager and an Accounts Clerk. In contrast, the second phase, dating from late 1994 to the present has dealt primarily with non-traditional export crops (tubers, fruits and vegetables) using small and medium farmer organizations such as cooperatives as the implementing agencies.

Furthermore, the two original members of the PMU were replaced, a local hire Deputy Project Manager and a second administrative person were added, and a U.S. Technical Advisor was hired to assist the PMU. Major issues and recommendations follow:

**Project Management Unit**

**Issue:** During the first phase of the Project, the PMU was understaffed which impacted on its ability to efficiently and effectively manage the Project. The lack of an experienced Technical Advisor in the production and marketing of agricultural products was particularly troublesome. This flaw in the Project design was corrected as part of the Mission's mid-term internal review. The contract for the current Technical Advisor expired in October 1995. The Deputy Project Manager has requested that the Mission extend the Technical Advisor's contract for an additional year.

**Recommendation:** The team recommends that the current Technical Advisor be extended for one year from the date of the original contract.

**Project Management Team**

**Issue:** The PMU often does not work as a team utilizing the skills and attributes of the staff to its highest potential. Two areas require examination: communications within the PMU itself, and the level of authority currently granted to the Deputy Project Manager.

**Recommendation:** The Project Manager needs to delegate more authority to the Deputy Manager. Communication within the PMU needs to be improved. Regular staff meetings, regular planning meetings (probably the same), and the use of E-mail should be considered.

**Sub-Project Monitoring**

**Issue:** There has been very little monitoring of the effectiveness or efficiency of sub-project operations, the operations of the environmental sub-contractor, or other sub-contractors. There have already been two consultancies which have partially designed a computerized information system to track sub-projects. It remains incompleting and unused.

**Recommendations:** The monitoring system designed by the consultants should be analyzed and updated, completed, and implemented as soon as possible. Sub-project monitoring criteria should be developed and should be used to check periodically on the success or failure of the sub-projects.

**Sub-Project Funding**

**Issue:** The PMU approved two sub-projects in January but has not disbursed any funds as yet, and currently has seven additional sub-projects under consideration. Five of these sub-projects were rated within several points of one another during a recent selection process exercise. These five sub-projects all surround a group of small to medium farmers who are highly motivated and who have already demonstrated their sincerity by going through the registration process to be a legal entity, broken ground, and repaired roads. Their sub-projects are also sound with excellent production and marketing potential.

**Recommendation:** The Mission should seek ways to fully fund the seven sub-projects as soon as possible.

**Sub-Project Managers**

**Issue:** Two sub-projects which have been approved since January have yet to receive any Project resources and are about to lose their market windows. The principal reason is that they require managers which are to be hired as MOA employees through arcane procedures that no one is quite sure of. Additionally, as many as five additional sub-projects could potentially be funded under the Project all of which will need MOA managers, and all of which need to be selected through this arduous procedure.

**Recommendation:** Managers should be directly accountable to the members of the farmer organizations for whom they are working. If the managers are required to be MOA employees, then the members, or their boards of directors, should ratify the selection of the person, and should be able to request their removal as well. The PMU should hire the managers directly to avoid the lengthy GOJ hiring procedures.

**Environmental Assessments of Sub-Projects**

**Issue:** Sub-projects that are considered for approval contain an environmental section that purports to be an assessment of possible impacts.

**Recommendation:** A real environmental assessment, carried out by the sub-contractor responsible for environmental issues, should be made for each sub-Project that is approved for funding, prior to any final approval or funding of such a sub-project.

**Environmental Monitoring of Sub-Projects**

**Issue:** Environmental monitoring of ongoing sub-projects is to be carried out under the RONCO sub-contract. The contract expires in October 1995.

**Recommendation:** A contract for environmental monitoring beyond October 1995 should be let. Environmental monitoring under such a contract should comply with the Project EIA and include monitoring soil erosion and run-off, chemical pollution of soils and water, impacts on natural vegetation (such as vegetation clearing or burning) and wildlife, impacts on selected fauna (perhaps birds and fish), and downstream impacts on coastal water (where appropriate and applicable).

**Agro-chemical Sampling**

**Issue:** Agro-chemicals are to be sampled in soils and water as part of the monitoring program. Analysis of samples is currently incomplete.

**Recommendation:** The agro-chemicals sampling and analysis should be totally overhauled. Samples for pesticide residues should be collected from soils, from water, stream beds and aquatic fauna. Sampling methods should be determined by pesticide residue experts and sample analysis should be done in a laboratory outside Jamaica until it is firmly established that a Jamaica laboratory has the capacity to accurately analyze the sample in a timely fashion.

**USDA Pre-clearance Program Sustainability**

**Issues:** The present US\$0.08 per unit cess that the JEA is charging for using the program is inadequate at current levels of throughput to cover the cost of the USDA/APHIS Preclearance Program.

**Recommendation:** The present cess of US\$0.08 should be continued until the end of December 1995 and at that time reviewed as to its ability to cover the costs of the program. The JEA also needs to mobilize its exporter/members to increase the throughput. When the 'one-stop' facility begins efficient operation, the cess may be increased to US\$0.12 per box, or higher depending on throughput.

**Support Service For Field Pest Management**

**Issue:** The Preclearance program is not merely an inspection of boxes but also the development of a system of preventing and monitoring the spread and multiplication of pests in the country. In order to achieve this, sufficient information must be generated regarding the status and identification of pests. One must also have a reference collection of pests and the PQ inspectors must be able to recognize the important ones. Such a support system would enhance the efficiency of the pre-clearance program.

**Recommendations:** The Ministry of Agriculture needs to appoint a consultant to prepare a list of all the field pests affecting important export crops. The consultant should also collect specimen samples of pests, and identify and label them to create a reference collection. The PQ inspectors require training on basic entomology to aid them in recognizing pests. PQ inspectors should also collect and preserve the insects that they encounter on a day to day basis. The assistance of the USDA/APHIS Officer is also vital for this.

**Important Lessons Learned included:**

If external evaluators are to measure project progress, a project information system must be in place and functioning. The Logical Framework Matrix should be effectively employed in both the project design and evaluation phases.

Host Government support, especially in the area of policy directives and budgetary allocations, is a prerequisite to developing the necessary long term strategies to address self-sufficiency of government services.

ATTACHMENTS

Attachments (List attachments submitted with this Evaluation summary: always attach copy of full evaluation report, even if one was submitted  
prior studies, surveys, etc., from "on-going" evaluation, if relevant to the evaluation report.)

Evaluation Report of Agricultural Export Services Project, Jamaica  
Country Technical Services, June 1995

COMMENTS

L. Comments By Mission, AID/W Office and Borrower/Grantee On Full Report

XD-ABM-927-A  
90601

**EVALUATION  
OF THE  
AGRICULTURAL EXPORT  
SERVICES PROJECT (AESP)**

**USAID Number: 532-0165  
JAMAICA  
USAID**

**Food and Agricultural Systems  
IQC Contract Number:  
LAG-4200-I-00-3057-00**

**Prepared by:**

**Donald R. Jackson  
Daniel B. Jayasingh  
Jack Hennessy**

**Cargill Technical Services, Inc.  
1101 Fifteenth Street NW  
Suite 1000  
Washington DC 20005**

-7'

PROJECT IDENTIFICATION DATA SHEET

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

Advisory or Assistance Services:  
 YES [X] NO [ ]

1. Country of Performance: JAMAICA  
 2. Requirements Contract: LAG-4200-I-00-3057-00 Delivery Order No. 11

NEGOTIATED PURSUANT TO THE FOREIGN ASSISTANCE ACT OF 1961  
 AS AMENDED, AND EXECUTIVE ORDER 11223

<p>3. CONTRACTOR (Name and Address):</p> <p>Cargill Technical Services Limited                  1101 Fifteenth Street, N.W.                  Suite 1000                  Washington, D.C. 20005</p>	<p>4a. ISSUING OFFICE:</p> <p>Executive Office/Acquisitions                  Management Unit                  USAID/Kingston                  6b Oxford Road, Kingston 5, Jamaica</p> <hr/> <p>4b. ADMINISTRATION OFFICE:</p> <p>Executive Office/Contract Management Unit                  USAID/Kingston                  6b Oxford Road,                  Kingston 5, Jamaica</p>															
<p>5. PROJECT OFFICE:</p> <p>Office of Natural Resources &amp;                  Agricultural Development                  USAID/Jamaica</p>	<p>6. SUBMIT VOUCHERS TO:</p> <p>Controller, USAID/Kingston                  6b Oxford Road,                  Kingston 5, Jamaica</p>															
<p>7. EFFECTIVE DATE:</p> <p>May 14, 1995</p>	<p>8. ESTIMATED COMPLETION DATE:</p> <p>July 15, 1995</p>															
<p>9. ACCOUNTING AND APPROPRIATION DATA:</p> <table border="0"> <tr> <td>Project No.: 532-0165</td> <td>PIO/T No.: 532-0165-3-30135</td> <td>PIO/T No.: 532-0165-3-20214</td> </tr> <tr> <td>Appropriation No.: 72-1131021</td> <td>Appropriation No.: 72-112/31021</td> <td>Appropriation No.: 72-112/31021</td> </tr> <tr> <td>Budget Plan Code: LDVA-93-25532-EG13</td> <td>Budget Plan Code: LDN2-92-25532-KG13</td> <td>Budget Plan Code: LDN2-92-25532-KG13</td> </tr> <tr> <td>Total Amount: US\$42,763 (G930208)</td> <td>Total Amount: US\$36,000 (G920345)</td> <td>Total Amount: US\$36,000 (G920345)</td> </tr> <tr> <td colspan="3">Total Obligated &amp; Estimated Cost: US\$78,763</td> </tr> </table>		Project No.: 532-0165	PIO/T No.: 532-0165-3-30135	PIO/T No.: 532-0165-3-20214	Appropriation No.: 72-1131021	Appropriation No.: 72-112/31021	Appropriation No.: 72-112/31021	Budget Plan Code: LDVA-93-25532-EG13	Budget Plan Code: LDN2-92-25532-KG13	Budget Plan Code: LDN2-92-25532-KG13	Total Amount: US\$42,763 (G930208)	Total Amount: US\$36,000 (G920345)	Total Amount: US\$36,000 (G920345)	Total Obligated & Estimated Cost: US\$78,763		
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Total Obligated & Estimated Cost: US\$78,763																

10. The United States of America, represented by the Contracting Officer signing this Order, and the Contractor agree that: (a) this Order is issued pursuant to the Contract specified in Block 2 above and (b) the entire Contract between the parties hereto consist of this Delivery Order and the Contract specified in Block 2 above.

<p>11a. NAME OF CONTRACTOR:</p> <p>Cargill Technical Services Inc.</p> <p>BY: (Signature of authorized individual)</p> <p><i>M. Stephanie Patrick</i></p> <p>TYPED OR PRINTED NAME:</p> <p>M. STEPHANIE PATRICK</p> <p>TITLE: PRESIDENT</p> <p>DATE: <u>May-12 1995</u></p>	<p>11b. UNITED STATES OF AMERICA                  AGENCY FOR INTERNATIONAL DEVELOPMENT</p> <p>BY: (Contracting Officer)</p> <p><i>Raymond J. Dunbar</i></p> <p>TYPED OR PRINTED NAME:</p> <p>RAYMOND J. DUNBAR</p> <p>TITLE: CONTRACTING OFFICER</p> <p>DATE: <u>5/18/95</u></p>
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## **ACKNOWLEDGMENTS**

The Evaluation Team would like to thank the AESP Staff for their tireless and good-natured efforts in providing us with large amounts of technical information and especially in their assistance with logistical and other support.

To the USAID Mission to Jamaica we are grateful for the help they gave us to perform our tasks thoughtfully and efficiently, in particular Mr. Michael Kaiser, Acting Head, Office of Natural Resources and Rural Development and Ms. Jennifer Rousseau, Project Officer for the AESP.

Lastly, we wish to express our gratitude to the countless other people of Jamaica, both men and women, who assisted us in our search for information, attitudes, and impressions that guided our evaluation of the AESP.

**ACRONYMS AND ABBREVIATIONS**

AESP	Agricultural Export Services Project
AIBGA	All Island Banana Growers' Association
ADC	Agricultural Development Corporation
AEC	Agricultural Export Complex
AMC	Agricultural Marketing Corporation
APHIS	Animal and Plant Health Inspection Service (USDA)
CIB	Coffee Industry Board
CTS	Cargill Technical Services
EOPS	End of Project Status
EU	European Union
GOJ	Government of Jamaica
HAP	Hillside Agricultural Project
HRP	Hurricane Reconstruction Project
IFI	Intermediary Financial Institutions
IICA	Inter-american Institute for Cooperation in Agriculture
IPM	Integrated Pest Management
IQC	Indefinite Quantity Contract
JADF	Jamaica Agricultural Development Foundation
JAMPRO	Jamaica Promotions Corporation
JEA	Jamaica Exporters' Association
JEDA	Jamaica Economic Development Agency
LOE	Level of Effort
LTTA	Long Term Technical Assistance
MOA	Ministry of Agriculture
ONRAD	Office of Natural Resources and Agricultural Development/USAID
NRCA	Natural Resource Conservation Authority
PACD	Project Activity Completion Date
PASA	Participating Agency Service Agreement
PCA	Pesticide Control Authority
PCC	Project Coordinating Committee
PMU	Project Management Unit
PP	Project Paper
PS	Permanent Secretary
PSC	Personal Services Contractor
RADA	Rural and Agricultural Development Authority
SAR	Semi-Annual Review
SOW	Scope of Work
STTA	Short Term Technical Assistance
TCC	Technical Coordinating Committee
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
VOCA	Volunteers in Overseas Cooperative Assistance
WESBAN	Western Banana Development Company

## **EXECUTIVE SUMMARY**

## EXECUTIVE SUMMARY

*This midterm evaluation of the Agricultural Export Services Project (AESP) in Jamaica was conducted in May and June 1995, approximately 15 months before the Project Activity Completion Date (PACD). A contract team of three members conducted the evaluation and included a development/evaluation specialist, an agricultural production/agribusiness specialist, and an environmental assessment specialist.*

*"The purpose of this midterm evaluation is to (1) assess and analyze project impact and progress to date toward achieving project goals, strategies, and objectives; (2) identify any policy or implementation issues affecting implementation of the project, and propose corrective actions as appropriate; and (3) examine the project's validity in view of USAID's new strategic policy priorities."*

*The goal of the Project is to foster economic growth and equity. According to the Project Paper (PP), "This will be done by increasing the production and productivity of selected non traditional and traditional agricultural exports, particularly those produced by small and medium farmers by improving their access to quality services and other resources." The purpose of the Project, "is to increase the exports of selected non traditional and traditional agricultural products. This will be accomplished by focusing project resources on enhancing productivity through improving/expanding export related services."*

*The Project was designed 'inhouse' by Mission staff with assistance from local consultants who were responsible for the preparation of the six analyses required for all PP documents. The Project Agreement was signed and the funds obligated in September 1989. Originally designed as a seven year project to end in September 1996, it is most likely that a 'no cost increase' extension of one year will be granted. The total cost of the Project was estimated to be US\$18,850,000 with US\$10,000,000 coming from USAID and US\$8,850,000 coming from the GOJ and local private sources. Subsequent budgetary cuts mandated from AID/Washington have reduced the Mission's contribution which is now not likely to exceed US\$7.5 million.*

*As designed, the Project had six components/elements, three action and three support. The first element, Export Production Subprojects, was to assist, "producer groups and associations to expand the production and marketing of export crops." The second, Production and Post Harvest Export Services, "supports key public sector agencies in improving/expanding essential services to the producers and exporters of agricultural products". The third, Export Project Design and Management Services, was to have used local financial institutions with agricultural export borrowers, "to identify and solve problems related to increased output of commercial farms." The remaining three elements include a Project Management Unit (PMU), an Audit and Evaluation component, and a Contingency and Inflation component.*

*In many ways, this is the evaluation of two projects; both stemming from the same original design. The first phase of the Project, from late 1989 to early 1993, concentrated on dealing with traditional Jamaican agricultural exports such as coffee, cocoa, and bananas and relying on parastatal commodity boards as implementing organizations. Additionally, during this first phase the PMU was composed of only two local hire personnel, a Project Manager and an Accounts Clerk. In contrast, the second phase, dating from late 1994 to the present, has dealt primarily with non traditional export crops (tubers, fruits and vegetables) using small and medium farmer organizations such as cooperatives as the implementing agencies. The second phase of the Project also produced the first Project budget, the first annual work plan, and the first audit. The first steps towards making the Preclearance Program of the USDA/APHIS economically selfsustaining were also initiated.*

*Furthermore, the two original members of the PMU were replaced, a local hire Deputy Project Manager and a second administrative person were added, and a U.S. PSC Technical Advisor was hired to assist the PMU. While this restructuring of the Project was taking place (early 1993 to mid 1994) the Project came to a virtual standstill in terms of implementing new subprojects with little being accomplished aside from the monitoring and closing of some of the subprojects begun during the first phase.*

*Additionally, the Project was implemented just after a devastating hurricane and during a period of rapid devaluation and rampant inflation. These factors impacted on the direction and overall progress of the Project, especially in its first phase.*

*Major issues and recommendations follow:*

## **PROJECT MANAGEMENT**

### **THE PROJECT MANAGEMENT UNIT**

***Issue:** During the first phase of the Project the PMU was understaffed which impacted on its ability to efficiently and effectively manage the Project. The lack of an experienced technical advisor in the production and marketing of tropical agricultural products was particularly troublesome. This flaw in the Project design was corrected as part of the Mission's midterm internal review. The contract for the current technical advisor expires in October 1995. The Project Manager has requested that the Mission extend the technical advisor's contract for an additional year.*

***Recommendation:** The Evaluation Team recommends that the current Technical Advisor be extended for one year from the date of his original contract.*

## PROJECT MANAGEMENT TEAM

*Issue:* The PMU often does not work as a team utilizing the skills and attributes of the staff to its highest potential. Two areas require examination: communications within the PMU itself; and, the level of responsibility currently granted to the Deputy Project Manager.

*Recommendation:* The Project Manager needs to delegate more authority to the Deputy Manager. Communications within the PMU need to be improved. Regular staff meetings, regular planning meetings (probably the same), and the use of E-mail should be considered.

## SUBPROJECT MONITORING

*Issue:* There has been very little monitoring of the effectiveness or efficiency of subproject operations, the operations of the environmental subcontractor, or other subcontractors. There have already been two consultancies which partially designed a computerized information system to track subprojects. It remains uncompleted and unused.

The technician in charge of monitoring and evaluation of all of the MOA's projects is also charged with implementing AESP's subproject monitoring system. However, the computer equipment in the Ministry's Data Bank dates to the days of 'main frames' and is impossibly obsolete. It is not practical for the technician to share a PC in the PMU offices as is currently the case.

*Recommendations:* The monitoring system designed by the consultants should be analyzed and updated, completed, and implemented as soon as possible. Subproject monitoring criteria should be developed subprojects and should be used to check periodically on the success or failure of the subprojects in regard to the criteria. The system should include a baseline survey for subproject beneficiaries which captures production, yield, and income data, as well as gender segregated information. It should also monitor the activities of all subcontractors. The MOA employed in the Data Bank section should be provided with a PC computer capable of managing a monitoring system of this type.

## PROJECT IMPLEMENTATION

### SUBPROJECT FUNDING

*Issue:* The PMU approved two subprojects in January but has not disbursed any funds as yet, and currently has seven additional subprojects under consideration. Five of these subprojects were rated within several points of one another during a recent selection process exercise. These five subprojects all surround a group of small to medium farmers who are highly motivated and who have already demonstrated their sincerity by going through the registration process to be

a legal entity, broken ground, and repaired roads. Their subprojects are also sound with excellent production and marketing potential.

**Recommendation:** The Mission should seek ways to fully fund the seven subprojects as soon as possible.

### SUBPROJECT MANAGERS

**Issue:** Two subprojects which have been approved since January have yet to receive any Project resources and are about to lose their market windows. The principal reason is that they require managers which are to be hired as MOA employees through arcane procedures that no one is quite sure of. Additionally, as many as five additional subprojects could potentially be funded under the Project all of which will need MOA managers, and all of which will need to be selected through this arduous procedure.

**Recommendation:** Managers should be directly accountable to the members of the farmer organizations for whom they are working. If the managers are required to be MOA employees, then the members, or their boards of directors, should ratify the selection of the person, and should be able to request their removal as well. The PMU should hire the managers directly to avoid the lengthy GOJ hiring procedures. **THIS IS A CASE OF IMMEDIATE URGENCY!**

### THE ENVIRONMENT

#### ENVIRONMENTAL ASSESSMENTS OF SUBPROJECTS

**Issue:** Subprojects that are considered for approval contain an environmental section that purports to be an assessment of possible impacts.

**Recommendation:** A real environmental assessment, carried out by the subcontractor responsible for environmental issues, should be made for each subproject that is approved for funding, prior to any final approval or funding of such a subproject.

#### ENVIRONMENTAL MONITORING OF SUBPROJECTS

**Issue:** Environmental monitoring of ongoing subprojects is to be carried out under the Ronco subcontract. The contract expires in October 1995.

**Recommendation:** A contract for environmental monitoring beyond October 1995 should be let. Environmental monitoring under such a contract should comply with the Project EIA and include monitoring soil erosion and runoff, agrochemical pollution of soils and water, impacts on natural vegetation (such as vegetation clearing or burning), biodiversity, impacts on selected fauna

(perhaps birds and fish), and downstream impacts on coastal water (where appropriate and applicable).

#### AGROCHEMICAL SAMPLING

**Issue:** Agrochemicals are to be sampled in soils and water as part of the monitoring program. Analysis of samples is currently incomplete.

**Recommendation:** The agrochemical sampling and analysis should be totally overhauled. Samples for pesticide residues should be collected from soils, from water, stream beds and aquatic fauna. Sampling methods should be determined by pesticide residue experts and sample analysis should be done in a laboratory outside Jamaica until it is firmly established that a Jamaican laboratory has the capacity to accurately analyze the samples in a timely fashion.

#### THE USE OF IPM.

**Issue:** IPM training has taken place within the scope of the Project, but transfer to the local farmer level has been minimal at best.

**Recommendation:** IPM training should be provided at the local farmer level. A project, perhaps linked with work on pesticide use studies, should be developed that will do research on IPM methods that are particularly relevant and appropriate for Jamaica and the various crops and agronomic conditions within the country.

#### TECHNICAL

##### USDA PRECLEARANCE PROGRAM SUSTAINABILITY

**Issue:** The Present US\$0.08 per unit cess that the JEA is charging for using the program is inadequate at current levels of throughput to cover the cost of the USDA/APHIS Preclearance Program.

**Recommendation:** The present cess of US\$0.08 should be continued until the end of December, 1995 and at that time reviewed as to its ability to cover the costs of the program. The JEA also needs to mobilize its exporter/members to increase the throughput. When the "one stop" facility begins efficient operation, the cess may be increased to US\$0.12 per box, or higher, depending on throughput.

## SUPPORT SERVICE FOR FIELD PEST MANAGEMENT

**Issue:** The preclearance program is not merely an inspection of boxes but also the development of a system of preventing and monitoring the spread and multiplication of pests in the country. In order to achieve this, sufficient information must be generated regarding the status and identification of pests. One must also have a reference collection of pests and the PQ Inspectors must be able to recognize the important ones. Such a support system would enhance the efficiency of the preclearance program.

**Recommendations:** The Ministry of Agriculture needs to appoint a consultant to prepare a list of all the field pests affecting important export crops. The consultant should also collect specimen samples of pests, and identify and label them to create a reference collection. The PQ Inspectors require training on basic entomology to aid them in recognizing pests. PQ Inspectors should also collect and preserve the insects that they encounter on a day to day basis. The assistance of the USDA/APHIS Officer is also vital for this.

## INCREASED DEMAND FOR EFFICIENT SERVICE

**Issue:** The volume of crops exported through the Preclearance Program has increased considerably. When the "One Stop" facility begins to operate, additional PQ officers will be required. The PQ officers should have reliable transport, equipment, and tools. The exporters are already demanding more efficient service.

**Recommendations:** The Ministry of Agriculture needs to appoint six (6) more PQ Inspectors. Some of them should visit the field and packing houses to monitor, advise and take necessary steps to control pests. The Marketing Division should be allowed to use the JD\$7,500 per month which they are collecting as concession fees to provide reliable transport for PQ officers. The MOA should review the compensation of PQ officers with a view towards staff retention.

## THE COMPLEXITY OF MANAGEMENT OF THE PRECLEARANCE PROGRAM

**Issue:** As previously mentioned, there are too many agencies with different interests who implement parts of this program. For efficient management, there needs to be effective coordination, communication and inter personal relationships.

**Recommendation:** The JEA and MOA need to revitalize the Agricultural Export Complex Committee. If need be, a change of members should be made to suit the present situation. This committee should lead, monitor, and advise in solving the problems of the program. The Marketing and Credit Division needs to nominate a Desk Officer to coordinate with the JEA Program Manager.

## **LESSONS LEARNED**

*If external evaluators are to measure project progress, a project information system must be in place and functioning. The Logical Framework Matrix should be effectively employed in both the project design and evaluation phases.*

*Host Government support, especially in the area of policy directives and budgetary allocations, is a prerequisite to developing the necessary long term strategies to address selfsufficiency of government services.*

*For a national program to succeed, there should be proper planning well in advance, effective coordination and communication, determination to implement action plans, and sound financial and administrative capabilities.*

**MAIN BODY OF REPORT**

## 1 INTRODUCTION AND METHODOLOGY

This midterm evaluation of the Agricultural Export Services Project (AESP) in Jamaica was conducted in May and June 1995, approximately 15 months before the Project Activity Completion Date (PACD). A contract team of three members conducted the evaluation under the auspices of Cargill Technical Services, Inc. (CTS) through a work order under the Food and Agricultural Systems Indefinite Quantity Contract (IQC). The members of the team included a development/evaluation specialist, an agricultural production/agribusiness specialist, and an environmental assessment specialist. All three had extensive evaluation experience with various donors and non governmental organizations throughout the world.

The methodologies employed in the evaluation included three general areas: 1) an in depth review of documents related to the Project, both at the Mission and the Project Management Unit (PMU); 2) extensive interviews with Mission, PMU and USDA/APHIS staffs; past, present and future Project beneficiaries, especially farmers; Government of Jamaica (GOJ) representatives, especially within the Ministry of Agriculture and Mines (MOA); subproject managers and administrators; and private sector representatives, particularly exporters; and, 3) field trips to approximately one half of the past, current, and proposed subprojects. Additionally, the evaluation team leader was requested to participate in the selection process for the final subprojects to be financed under AESP. This involved the establishment of selection criteria, weighing these criteria according to their relative importance, and evaluating seven proposed subprojects based on these criteria. This opportunity not only allowed the team to gain a more indepth knowledge of these seven proposed subprojects; it also provided a critical insight into the process of subproject selection in general.

Once an initial draft document was prepared, it was distributed to the Mission, the GOJ, and Project staff for their comment. The comments and opinions received were incorporated into this final document. In the interest of achieving a broad readership of the evaluation document, the Scope of Work (SOW) limited the evaluation document to 40 pages, plus appropriate appendices.

The **goal** of the Project is to foster economic growth and equity. According to the Project Paper (PP), "This will be done by increasing the production and productivity of selected non traditional and traditional agricultural exports, particularly those produced by small and medium farmers by improving their access to quality services and other resources." The **purpose** of the Project, "is to increase **the exports** of selected non traditional and traditional agricultural products. This will be accomplished by focusing project resources on enhancing productivity through improving/expanding export related services."

The Project was designed 'inhouse' by Mission staff with assistance from local consultants who were responsible for the preparation of the six analyses required for any PP document. The Project Agreement was signed and the funds obligated in September 1989. Originally designed as a seven year project to end in September 1996, it is most likely that a 'no cost increase' extension of one year will be granted. The total cost of the Project was estimated to be US\$18,850,000 with US\$10,000,000 coming from USAID and US\$8,850,000 coming from the GOJ and local private sources. Subsequent budgetary cuts mandated from AID/Washington have reduced the Mission's contribution which is now not likely to exceed US\$7.5 million.

As designed, the Project had six components/elements, three action and three support. The first element, Export Production Subprojects, is to assist, "producer groups and associations to expand the production and marketing of export crops." The second, Production and Post Harvest Export Services, "supports key public sector agencies in improving/expanding essential services to the producers and exporters of agricultural products". The third, Export Project Design and Management Services, uses local financial institutions with agricultural export borrowers, "to identify and solve problems related to increased output of commercial farms." The remaining three elements include a Project Management Unit (PMU), an Audit and Evaluation component, and a Contingency and Inflation component.

The team would like to add that, for the most part, we have been tasked with evaluating two separate projects, both stemming from the same original design. The first modality of the project, from late 1989 to early 1993, concentrated on dealing with traditional Jamaican agricultural exports such as coffee, cocoa, and bananas and relying on parastatal commodity boards as implementing organizations. Additionally, during this first phase the PMU was composed of only two local hire personnel, a Project Manager and an Accounts Clerk. In contrast, the second phase, dating from late 1994 to the present, has dealt primarily with non traditional export crops (tubers, fruits and vegetables) using small and medium farmer organizations such as cooperatives as the implementing agencies. The second phase of the Project also produced the first Project budget, the first annual work plan, and the first audit. The first steps towards making the Preclearance Program of the USDA/APHIS economically self sustaining were also initiated.

Furthermore, the two original members of the PMU were replaced, a local hire Deputy Project Manager and a second administrative person were added, and a U.S. PSC Technical Advisor was hired to assist the PMU. While this restructuring of the Project was taking place (early 1993 to mid 1994) the Project came to a virtual standstill in terms of implementing new subprojects with little being accomplished aside from monitoring and the closing of some of the subprojects begun during the first phase.

## 2 BACKGROUND

### 2.1 GENERAL

Much has been written about Jamaican agriculture, including USAID and World Bank documents. A regurgitation of that body of literature will not be presented here with the exception of the following highlights. This will be followed by a more in depth discussion of three issues which impact directly on the AESP, the way in which it was implemented, and its ability to respond to the needs of its targeted beneficiaries.

Only 39 percent of Jamaica's land mass can be considered flat - having less than a 10 degree slope. Of this, the portion dedicated to agriculture tends to be divided between large holdings owned by government or plantation owners and planted to sugar cane or citrus orchards. An additional 31 percent of the land has slopes ranging from 10 to 30 degrees and the remaining 30 percent contains slopes greater than 30 percent. While approximately 50 percent of the population lives in rural areas, a smaller percentage derives its income solely from agriculture.

Of the total number of farms, 65 percent are less than 5 acres (small holders), and 28 percent are between 5 and 10 acres (medium holders). Nevertheless, 65 percent of the farmland is in farms that contain more than 10 acres. Additionally, due to the relative lack of profitability in agriculture and the hard physical labor required, the average age of a Jamaican farmer is 54 years old. While 25-35 percent of farmers are reported to be women, farm labor appears to be segregated with women's activities concentrated in the harvesting, preparation for market, and marketing activities. The phenomenon also exists whereby women remain on the farm while their male counterparts work in urban areas or overseas.

Jamaican agriculture suffers from a downward spiral in its investment/profitability ratios which has led to a drastic impact on production and productivity. The country's agriculture has declined greatly both in terms of comparisons with decades past and with surrounding islands and other countries of the Caribbean Basin. Likewise, structural adjustment policies which have helped the country in general terms, have led to a massive decapitalization of the services that government provides to agriculture including research, extension, and infrastructure such as roads, water supplies, and marketing facilities. In addition, gradual deforestation has led not only to declining biodiversity on the island but to dramatic changes to rainfall patterns and amounts.

Nevertheless, Jamaica is not without substantial assets which can, and are, being brought to bear on the sector. Its proximity to U.S. markets and its relatively low transportation costs to the U.S., Canada, and the U.K. are an advantage. Likewise, specific ecological factors such as winds, soils, and water give Jamaican agricultural exports a perceived or real advantage in many crops in terms of quality, taste, and appearance. Large Jamaican populations in the U.S., Canada, and the U.K. offer a ready market for Jamaican agricultural export commodities. It appears that several agricultural commodities have jumped the ethnic boundaries in these countries and have further stimulated demand in their general populations.

The AESP seeks to assist Jamaica in exploiting these assets, especially amongst small and medium farmers who produce the vast majority of the non traditional crops being exported as well as a significant portion of the traditional export crops.

## 2.2 DEVALUATION AND INFLATION

As recently as 1989, when the Project was designed, the US to Jamaican Dollar ratio was 1 to 5.5. This rose to approximately 1 to 20 over the 1992/93 period and to 1 to 33 at the time of this evaluation. This has resulted in a six fold decrease in the purchasing power of the Jamaican Dollar or, conversely, in a six fold increase in the price of imported agricultural inputs. (Jamaica has no indigenous production of fertilizer, agrochemicals, or seed stocks.) This is in addition to inflationary tendencies which were 40 percent in 1992, 35 percent in 1993, and 27 Percent in 1994.

While the impact of devaluation has been positive in terms of the relative prices of Jamaican exports, it has been devastating in terms of the prices of agricultural inputs required for the country to maintain its position in a rapidly changing technological world. Exacerbating this problem is the very high cost of credit in the country - currently averaging between 40 and 60 percent, which discourages both small and large farmers from making the investments required

to be **technologically** competitive with their neighbors. While part of the reason for these high interest rates is high inflation and the risks related to agricultural investments, the Central Bank is attempting to stabilize the value of the Jamaican Dollar by setting its official discount rate at levels which are designed to absorb excess liquidity due to remittances and the illicit crops.

While definite and lucrative market opportunities do exist for specific Jamaican agricultural exports, devaluation, its impact on imported agricultural inputs, and artificially high interest rates, especially for agricultural credit have been a major drag on the potential of the AESP to raise rural incomes. (As is discussed in other sections of this report, agricultural production and exports have increased, often dramatically, in recent years, partially due to the Project. However, this has been due mainly to increases in acreage of various crops rather than in per acre productivity, which is more a product of technological innovation.)

### 2.3 HURRICANE GILBERT

When the evaluation team arrived in Jamaica and began to familiarize itself with the Project, its goal and purpose, and the ways in which it had been implemented, we were struck by the differences in both the way the Project was designed as well as the way in which it had been implemented when compared to other countries and projects which have received AID funding over the past decade; especially during the first phase of the Project as was mentioned in the Introduction to this report. At this point in time, almost six years since the Project was designed and authorized, there is virtually no institutional memory available to the evaluation team as to the rationale behind the design and implementation of the first phase of the Project. Nevertheless, in an attempt to return to the time when the Project was designed and extending into the first phase of Project implementation, we have developed a plausible hypothesis for the relative differences in both the design and implementation of the Project.

In September of 1988, hurricane Gilbert struck the island and created such devastation (a one hundred year event), that many donors, including USAID, were compelled to switch their priorities to disaster relief efforts in order to resuscitate Jamaica's ruined economy. Coffee and bananas were especially hard hit, with cocoa and other tree crops also seriously affected. Since bananas, coffee, and cocoa were, and still are, mainstays of Jamaican agriculture, decisions were made to support these damaged industries through several measures including the AESP. Since all three of **these crops** were supported by commodity boards, especially in terms of small and medium farmers, a decision was made to support these crops through the boards in an attempt to reach the **rural poor**. By 1993, when the Mission conducted its own internal review of the Project, **recovery**, for the most part, had been accomplished and the AESP was redirected towards the more non traditional crops.

### 2.4 CONTINUITY IN IMPLEMENTATION MANAGEMENT

To date, the AESP has had one complete change in the personnel of the PMU and at least four personnel changes in the Mission's Project Officer position. In the case of the PMU there was no continuity in either the Project Manager's or the Project Accountant's position. Indeed, several months passed from the time the first Project Manager and Project Accountant quit their posts and new incumbents were hired. A similar lack of continuity was found in the case of the

position of the Mission Project Officer. With the exception of the current Project Officer who overlapped with her predecessor by one week, there was virtually no continuity between those who designed the Project and those who were successively assigned to monitor and supervise its implementation.

With each successive change in personnel, each new manager and officer has attempted to put his/her own interpretation on how the Project should be implemented. These changes in implementation philosophy, as well as in the relationship between the Mission's Project Officer and the PMU, led to long delays in the past in the identification, selection, and implementation of new Project supported subprojects. This was especially noticeable in the 1993/94 period when implementation activities came to a virtual stand still for more than a year.

## 2.5 ENVIRONMENT

Jamaica is faced with several serious environmental problems: watersheds are degraded; siltation and agrochemical pollution have seriously impacted streams and rivers; the coral reefs are in danger from high nitrate sedimentation entering coastal waters; and deforestation has left the island with only 6-7 percent of its natural forests. Though several types of environmental legislation are in place, few regulations have been promulgated, leaving the responsible authorities with few enforcement powers.

The primary authority in charge of environmental affairs is the Natural Resources Conservation Authority (NRCA) - established in 1991 by the Natural Resources Conservation Act. A plethora of other organizations and acts are in place that deal with specific environmental issues (See Appendix 4 - Principal Environmental Laws). Despite this (and though there is extensive overlap), there is little apparent control exercised. Enforcement appears nearly nonexistent. The NRCA currently is formulating regulations to give it powers to require Environmental Impact Assessments (EIA's), issue permits, effectively prosecute violators of environmental acts, and monitor activities related to the environment. Some of the activities under the AESP fall under the list of activities requiring EIA's.

There are several nongovernmental organizations (NGO's) in the environmental field - the major ones being the Environmental Foundation of Jamaica (which receives some funding from USAID), the National Environmental Society Trust (NEST), the Portland Environmental Protection Association (PEPA), and the National Coral Reefs Protection Society (NCRPS), among others. These organizations either fund or carry out small environmental projects.

Given the nature of the environmental component of the AESP, the major relevant organizations of concern would be the NRCA and the relatively new Pesticide Control Authority (PCA), since the major environmental issues are those of agrochemical pollution and soil/watershed conservation.

For carrying out the work required under the RONCO subcontract, analysis of agrochemical content in soils and water is required. Several laboratories exist which can do some of the analyses, though none seems capable of performing a complete pesticide analysis. The NRCA, the PCA and the Environmental Control Division (ECD) of the Ministry of Health, are in the

process of either establishing or upgrading laboratories that may be able to analyze for pesticide pollution and/or pesticide residues.

### 3 PROJECT INPUTS

The Mission has provided grant funded inputs in the areas of technical assistance, training, commodity procurement, operational support, facilities upgrading, contingency/inflation, and evaluation/audit. Additionally, the GOJ and selected NGOs were to have provided funding in the areas of technical assistance, training, and operational support. The following table (Table 1) shows the division of these inputs as designed in the Project Paper according to each Project element/component as well as the expected source of funds; the Mission, the GOJ, or the NGO/Private Sector.

Table 1 Summary Cost Estimates and Financial Plan (US\$000)				
Component/Element	USAID	GOJ	NGO/Private Sector	Total
<b>1. Export Production</b>				
Technical Assistance	1,000	0	0	1,000
Training	300	40	40	380
Commodities	955	0	0	955
Operational Support	1,445	250	250	1,945
<b>Sub-Total</b>	<b>3,700</b>	<b>290</b>	<b>290</b>	<b>4,280</b>
<b>2. Production/Export Services</b>				
Technical Assistance	1,300	0	0	1,300
Training	400	150	0	550
Commodities	425	0	0	425
Operational Support	225	1,000	0	1,225
Upgrading facilities	350	0	0	350
<b>Sub-Total</b>	<b>2,700</b>	<b>1,150</b>	<b>0</b>	<b>3,850</b>
<b>3. Export Project Design and Management Services</b>				
Technical Assistance				
Feasibility Studies	310	0	900	1,210
Problem Solving	1,980	0	5,710	7,690
Operational Support	110	0	160	270
<b>Sub-Total</b>	<b>2,400</b>	<b>0</b>	<b>6,770</b>	<b>9,170</b>
<b>4. Project Management Unit</b>				
Commodities	150	0	0	150
Operational Support	350	350	0	700
<b>Sub-Total</b>	<b>500</b>	<b>350</b>	<b>0</b>	<b>850</b>
<b>5. Audits/Evaluations</b>	<b>200</b>	<b>0</b>	<b>0</b>	<b>200</b>
<b>6. Contingencies/Inflation</b>	<b>500</b>	<b>0</b>	<b>0</b>	<b>500</b>
<b>TOTALS</b>	<b>10,000</b>	<b>1,790</b>	<b>7,060</b>	<b>18,850</b>

Source: Project Paper

Table 1 can be compared with Table 2 below, which shows actual obligated and earmarked funds on a component/element basis as of June 7, 1995. (The Mission's record keeping system allocates funds among the components/elements but does not stratify the data according to the categories of inputs as they are laid out in the Project Paper.)

Element	Obligated/Earmarked Totals	Unobligated/Earmarked Totals	Disbursed
1. Export Production	2,398	37	1,933
2. Production/Export Services	2,014	43	1,449
3. Export Project Design and Management Services	339	32	323
4. Project Management Unit	858	249	526
5. Evaluation/Audit	93	0	0
6. Contingency/Inflation	117	0	49
Totals	5,819	362	4,280
Grand Total	6,181		
Less Disbursed Total	4,280		
<b>Total Pipeline</b>	<b>1,901</b>		

Source: Controller's Office.

Several notable comparisons are worth making at this point. For example:

- \* Out of the original US\$10.0 million authorization, the AESP has been significantly reduced to a point where it is not likely to exceed US\$7.5 million.
- \* The GOJ contribution to the Project estimated in the Project Paper to be US\$1.79 million, stood at US\$1.263 million as of 3/31/95 which appears to be on target.
- \* The NGO/Private Sector contributions, especially from the Banking sector, were never realized, or were never accounted for. (With the notable exception of the JADF, the Agricultural Credit Bank, the National Commercial Bank, and the Citizens' Bank which have recently united to support Western Banana, a company started under a phase 1 subproject.)

## 4 PROJECT OUTPUTS

The following section compares the expected/planned outputs as set forth in the Project Paper with those actually achieved as of this evaluation. As will be noted, most of the comparisons are qualitative and not quantitative which somewhat limits the level of analysis performed. Through a subcontract with Volunteers in Overseas Cooperative Assistance (VOCA), two consultancies were funded with the intention of designing and implementing a "Statistical Impact Measurement System". This system was never completed and therefore never implemented. The lack of such a system makes an analysis of Project impact much more difficult and less precise.

### 4.1 EXPECTED OUTPUTS (EOPS) AND EVALUATION FINDINGS

In this section we present the expected outputs (EOPS) from the Project as they are defined in the Project Paper and compares them with actual outcomes encountered by the Evaluation Team.

#### 4.1.1 Improved Yields for Selected Export Crops.

This varies between crops. The Mini-Set Yam Subproject was the most successful, with yield increases reaching more than 400 percent. The spread effect to dasheen and other root crops is quite positive. Improvements in the production of bananas appears to be a function of increased acreage rather than yields. In the case of other crops data are not available. However, due to greatly increased input costs as well as high interest rates for production credit, most small and medium farmers have not been able to achieve the yields of which their crops are capable.

#### 4.1.2 Increased Export Earnings from Selected Export Crops.

This EOPS is one of the most difficult to quantify. Nevertheless, export earnings from a large range of export commodities have been increased as a result of the Preclearance Facility funded under the Project. The reformulation of the Agricultural Marketing Corporation has assisted 30 exporters in the assembly, packaging, and quality control of various export commodities which probably has led to increased export earnings. Coffee producers are now in a better position to negotiate prices with the Coffee Industry Board, which in turn has increased export earnings at the farm level.

#### 4.1.3 Increased Investment in the Agricultural Sector.

This is another EOPS which is very difficult to quantify. However, increased investment in traditional crops including coffee, cocoa, and bananas is fairly evident although it appears that this increase has been in terms of area under production rather than investment in improved technologies which would increase yields. A general shift in investments towards nontraditional crops (root crops, tree crops, and vegetables), while not great in magnitude, has led to significant increases in the levels of the products being exported.

#### **4.1.4 More Efficient Public Sector Support Services for Export Agriculture.**

The quasi privatization and renovation of the AMC complex is providing more efficient support services for up to 30 exporters of agricultural commodities. The availability of the preclearance facilities at Norman Manley International Airport in Kingston and Sangster International Airport in Montego Bay has resulted in far more efficient procedures for those exporters who use the facilities. Nevertheless, serious doubts exist as to whether or not either the public or private sectors will be able to maintain these services once Project support ends.

#### **4.1.5 More Efficient Private Sector Services for Export Agriculture.**

Current private sector services for exporters of agricultural commodities are limited to those provided by the Jamaica Exporters' Association (JEA). To the extent that the Project has assisted in strengthening the image of the JEA through subcontracts to privatize the Preclearance facilities and to conduct feasibility studies for future subprojects, a conclusion can be drawn that the private sector has been made more efficient as a result of the Project. This is especially the case in terms of the image that the JEA provides to its members as well as its power and abilities to lobby government on behalf of its members.

#### **4.1.6 1,200 Farmers will be Better Informed on the Nature of Export Crop Demand and on Appropriate Technology Through Training Sessions Conducted Locally.**

No training plan existed for the Project until very recently and no statistics have been kept as to the number of training participants. The best that can be said, however, is that short term farmer training in cultural practices has taken place--most likely in excess of the 1,200 farmers targeted in this EOPS--especially through IICA in the case of yams, RADA in the case of IPM, and the various boards in the case of traditional crops. Some of this can be attributed directly to the Project. Additionally, the University of Florida through a subcontract with RONCO which has a subcontract with the Mission to provide environmental training and monitoring has provided five short term seminars; four on IPM and one on conservation biology.

#### **4.1.7 12 Senior Level Officials from the MOA or Producer Groups will Benefit from Long Term Training, Etc.**

To the best of the Evaluation Team's ability to ferret out information concerning this EOPS, no long term training has ever been conducted under the AESP and the component was most likely dropped in the early years of the Project.

#### **4.1.8 200 Small and Medium Producers will Improve the Business Operation of Their Businesses Through Technical Assistance Provided Through the IFIs.**

For reasons unknown to the Evaluation Team, the proposed use of intermediate financial institutions to jointly support AESP subprojects was never implemented. Alternatively, the Project seeks to improve the business operations of cooperatives and other types of farmer organizations through the mandatory presence of a manager in all subprojects approved since the beginning of 1995.

#### 4.1.9 **Three Development Finance Institutions will Improve the Quality of Their Loan Portfolios by Offering Technical Assistance in Problem Solving to Their Clients.**

As was stated above, this element/component of the Project was never implemented and the Evaluation Team has been unable to find out why.

#### 4.2 ENVIRONMENT

While not an EOPS, the Project Paper contains a Condition Precedent (CP) relating to the environment. Within the CP, the need for environmental sustainability is emphasized and an EIA is required prior to the commitment of funds to any subproject. Though the suggestion was not included in the PP, the Technical and Institutional Analysis recommended that the Project assist the Ministry of Industry and Commerce to establish and operate a pesticide residues laboratory. Given the lack of such facilities in Jamaica, it is unfortunate that this suggestion was not adopted.

The Project EIA examined three alternatives for the Project's environmental component:

- Alternative 1: doing as specified in the original PP (this did not include specific measures to control, mitigate or monitor impacts of agrochemical use);
- Alternative 2: a comprehensive environmental component, too lengthy to discuss here, but outlined in Appendix 4; and 3:
- Alternative 3: do nothing. The EIA recommended Alternative 2 and the mandated its use for the Project.

Alternative 2 recommended that the PMU coordinate the environmental component. The Project subcontracted with RONCO, a US based consulting firm, to handle the environmental aspects of the Project. In turn, RONCO subcontracted the University of Florida to do the training component of the subcontract and Dr. Herman Hamilton to carry out the sampling and monitoring activities.

In compliance with the Project EIA, RONCO was to provide the following:

- 1) **Environmental Impact Assessments** for all subprojects
- 2) **Mitigative measures** to lessen negative impacts
- 3) **Environmental input** to the review and approval process for subprojects.
- 4) **Training** - particularly in Conservation Biology (CB) and Integrated Pest Management (IPM):
- 5) **Monitoring** of soil and water quality; forest cover and composition; and biodiversity.
- 6) **Monitoring** of plant pests and pesticide use (this included making a collection of pests and their natural enemies and assuring that only approved pesticides were used).

The RONCO subcontract was reduced and the Scope of Work changed at least twice since its inception. The pesticide analysis aspect was dropped and later reinstated; the Diagnostic Center for pesticides was deleted; the forest cover and composition and the biodiversity aspects apparently were dropped at some point - though documentation of this has not been found;

training was reduced; the time inputs of Dr Hamilton were reduced substantially; and the sampling (water and soil) was regarded at one point as "not essential to the EIA of the subproject".

## 5 PROGRESS TOWARDS ACHIEVING THE PROJECT PURPOSE

The Project Purpose of the seven year AESP as stated in the Logical Framework Matrix to the Project Paper, "...is to increase the exports of selected non traditional and traditional agricultural products. This will be accomplished by focusing Project resources on enhancing productivity through improving/expanding export related services." The assumptions related to the Project Purpose are: "that GOJ policies for agricultural exports remain positive," and that, "investment/transportation constraints are addressed by other projects." The indicators to measure the achievement of the Project Purpose are, "An eight percent annual growth in the volume of selected non traditional agricultural exports" and, "An eight percent annual growth in the volume of selected traditional agricultural exports."

The Evaluation Team is confident in stating that by using the above mentioned indicators the Project Purpose has been met, and even surpassed, by a wide margin. We would hasten to add, however, that the indicators are at least partially flawed. While an eight percent annual increase in traditional exports would be significant in normal times, in the years immediately following a natural disaster such as hurricane Gilbert it is not that great an achievement, given the low starting point. Likewise, an eight percent annual increase in non traditional exports is relatively achievable given the small base from which the majority of non traditional crops are measured.

Furthermore, the vagueness of the words "selected crops" leaves much room for ambiguity. In terms of traditional crops, coffee and cocoa exports have experienced annual increases of more than eight percent while banana exports have remained the same. In the case of non traditional, such crops as yams, dasheen, and papayas have experienced phenomenal increases in export volumes while many other crops have experienced increases to a lesser degree.

Lastly, the issue of attribution must be addressed. While it is quite evident that the subproject which promoted the miniset yam technology was directly related to the 400 percent increase in yam production and in the increase in yam exports (and promises to do the same with dasheen and other root crops), the case is far less clear with crops such as coffee and cocoa. Notwithstanding, the area where an increase in export commodities can be attributed most definitely to a Project component is the case of the preclearance facilities at both of Jamaica's international airports.

## 6 RELEVANCE AND APPROPRIATENESS OF PROJECT DESIGN

The fundamental premises upon which the AESP was designed--its Goal, Purpose, and Outputs--are extremely relevant to the needs of Jamaican agriculture and to the economy as a whole. This is as true today as it was in 1989 when the Project was designed.

The Team would like to point out several positive points in the design which are particularly noteworthy:

- \* The selection of crops and their sequencing was very appropriate. In the first phase of the Project, bananas, coffee, and cocoa were the principal export crops addressed. These crops (along with sugar cane and citrus which are not supported under this Project), are the mainstay of Jamaica's agricultural economy and were especially hard hit by hurricane Gilbert. Now in the second phase, non traditional crops with particular market stability are being targeted. In one way this approach has assisted in the diversification of Jamaica's agriculture.
- \* The continued funding of the USDA/APHIS Preclearance Program which grew from handling several hundred thousand units of agricultural exports in 1989 to over 1,500,000 predicted for 1995, was a significant accomplishment. The number of commodities registered for preclearance through the program increased from 13 to 55 over the same period. The value of the Preclearance Program to Jamaica is substantial although difficult to quantify due to many non monetized variables.
- \* The use of commonly shunned commodity boards was encouraged in an attempt to reach small and medium farmers. This enabled the Project to reach the target population more quickly, assist the boards during their shift from state support to relative self sufficiency, and work with the crops with the greatest potential short term impact.

On the less positive side, several other issues should be mentioned, most of which pertain to phase one of the Project:

- \* More thought should have been given to the use of IFIs since this component never got off the ground. This is especially important since the Project design was premised on the IFIs' contributing as much as US\$7.06 million to export promotion type subprojects.
- \* The long term training component appears not to have met with much demand and was dropped. It is also questionable that senior Ministry officials be considered for long term training given the relative time remaining in their careers.
- \* While continued financial support to the Preclearance Program is seen as an important part of the Project, mandatory mechanisms should have been designed with an eye towards sustainability. A condition precedent in the Grant Agreement specifying what the GOJ must do to accommodate the Program should have been considered. This issue was partly dealt with in the phase 2 of the Project by a Cooperative Agreement with the JEA.
- \* The PMU was damagingly understaffed during the first phase of the Project. One manager and an accounts clerk was simply too small a staff to manage the Project or even properly administer it. The absence of a technical advisor with expertise in tropical production and marketing was particularly short sighted.

- \* **Concern** for environmental issues appears to have been an afterthought and was not sufficiently accounted for in the design.
- \* The Pesticide Residue Laboratory mentioned in the Technical Analysis was not funded in the final Project Paper budget.

## 7 MAJOR FINDINGS AND CONCLUSIONS

### 7.1 PROJECT MANAGEMENT

#### 7.1.1 The Project Coordinating Committee (PCC)

*Findings:* The PCC is composed of representatives from key MOA departments, the PMU, and more recently, the JEA, and the JADF. The PMU Technical Advisor and the USAID Project Officer have a voice but no vote. It is chaired by the Permanent Secretary (PS) and meets once per month. It is to the Project what a board of directors is to a company. Since its membership is composed of high level people, a quorum is sometimes difficult to achieve even when alternate representatives can be sent to the meetings. Alternatives are often not briefed by their superiors as to the issues at stake. The PCC is capable, however, of coming to decisions and enforcing them.

*Conclusion:* The PCC is an appropriate mechanism to set Project policy and oversee its management, although follow through on implementing is sometimes slow and drawnout.

#### 7.1.2 The Project Management Unit (PMU)

*Findings:* The first PMU was composed of a Project Manager and an Accounts Clerk. The present PMU is more appropriately staffed by a senior Project Manager, a Deputy Project Manager, a Senior Accountant and an Accounts Clerk. An expatriate Technical Advisor assists the Jamaican team. These five staff members work together well. The PMU is capable of implementing and administering the Project although procedures to interact with the PCC and the USAID Project Officer need to be worked out. Communications, both within the PMU, and between the PMU and the PCC and Project Officer sometimes break down. The Deputy Project Manager is **capable** of much more responsibility than is currently being delegated.

*Conclusion:* The PMU in its second incarnation is much better equipped to manage the Project and some fine tuning is all that is necessary at this time. Project management in general, could benefit from increased communications and the sharing of information and ideas between and among the PMU and the PCC and Project Officer.

#### 7.1.3 The USAID Project Officer

*Findings:* From inception, Mission Project Officers have played a proactive role in project management, assisting in the day to day decision making of the PMU. This has included direct management of certain components to the exclusion of the PMU. This includes the subcontract

with RONCO and the University of Florida for environmental work, the VOCA subcontract for short term technical assistance, and the USDA/APHIS PASA agreement for the Preclearance Program. In the first phase of the Project when the PMU was understaffed, this modality of direct management was required and appropriate. However, at this point with a fully staffed PMU, this relationship adds an additional layer to a decision making process, which is already too lengthy and drawn out.

*Conclusions:* The Project is now in a second phase of implementation with a much strengthened PMU. The need for proactive management on the part of the Project Officer needs to be reconsidered.

#### 7.1.4 Environment

*Finding:* It is clear that, despite a very strong and comprehensive EIA which outlined the environmental component, the environment was regarded as an "add on" throughout the Project. Very little attention was paid to the component either by USAID or the PMU. Though the training aspects of the RONCO subcontract attracted some attention at one point, the monitoring and environmental assessment aspects were largely ignored, except when USAID wanted to reduce these activities or to reinstate them after the reduction.

*Finding:* Though the EIA, PP and RONCO subcontract required environmental input to the subproject review and approval process, Dr Hamilton was not initially given access to the PCC. In fact, some first phase subprojects were approved without his input.

*Conclusion:* The environmental component could not operate effectively in a context in which it was ignored or relegated to cosmetic status. The requirements of the PP regarding environmental input in subproject approval were not complied with.

#### 7.1.5 Project Reporting

*Finding:* The Evaluation Team experienced difficulty in collecting Project data both at the PMU and the Mission. This was due to a lack of reporting on the part of the PMU to the Mission, and partly to a failure to implement the Statistical Impact Measurement System which is only partially designed. Currently, monthly/quarterly reports consist of the minutes of the monthly (often postponed) PCC meetings which do not present consistent, organized, trackable information on Project progress.

Additionally, the PMU was charged with developing a Procurement Plan and a Training Plan for approval by the Project Officer. The Training Plan was not submitted until November 1994. And the Procurement Plan has yet to be submitted until the final subprojects are selected. However, much of the training was carried out by the University of Florida which was under a subcontract with RONCO. Since the RONCO subcontract is managed directly by the Mission with little PMU involvement (the August 1995 farmer level course in conservation biology is one exception), the lack of urgency in preparing the Training Plan is somewhat understandable. Nevertheless, the lack of a Training Plan from the inception of the Project is most likely what led to the long term training program for 12 MOA officials being dropped.

Concerning the Procurement Plan, according to the arrangement between the PMU and the Mission, all commodity purchases over US\$ 25,000 require Mission approval. Nevertheless, it appears Mission approval, at least verbal, is sought for purchases worth far less than US\$ 25,000. If a Procurement Plan were in place which already had the Mission's approval, time and effort could be saved.

*Conclusion:* The reporting requirements between the PMU and the Mission are inadequate. The lack of realistic Training and Procurement Plans over the Project's life is one of the reasons the Mission's Project Officer(s) have tended to be proactive in their management styles.

*Finding:* The RONCO subcontract required an Initial Report, Quarterly Reports, and a Final Report. This requirement was later changed to include Trip Reports from Dr Hamilton. These reports (except the Final) were completed and submitted to USAID. However, until relatively recently, the reports were not copied to the PMU.

*Conclusion:* It is clear that the PMU exercised little or no authority over the RONCO subcontract, since it did not insist on receiving reports directly from the RONCO representative. USAID, on the other hand, seems to have taken on direct management of the subcontractor - a responsibility that should have been left to the PMU. The result has been that no effective management of the subcontractor by the Mission in the past has taken place.

#### 7.1.6 Project Subcontracting

*Findings:* As part of the implementation of the Project, the Mission contracted with five organizations for specific Project activities. The USDA/APHIS was contracted through the PASA mechanism to provide technical assistance for the Preclearance Program. One weakness of this contracting mechanism is that lines of communication and authority are blurred. An example of this is that the USDA/APHIS officer reports directly to his supervisor in Hyattsville, Maryland rather than to the ONRAD Director or the Mission Director. This has resulted in poor communications and misunderstandings as to the role and responsibilities of the officer.

RONCO was contracted with to provide technical assistance, training, and monitoring services on environmental issues. In order to execute this contract, RONCO subcontracted with the University of Florida to provide the training, while Dr. Herman Hamilton was contracted to provide technical assistance and environmental monitoring concerning the subprojects. The dollar amount of the RONCO contract was reduced several times over the life of the Project to the point where very little of the intent of the original contract remains.

VOCA was contracted to provide short term technical assistance in a wide range of areas from group organization to the market potential for yams. Among the people interviewed by the Evaluation Team concerning VOCA's technical assistance the response was mixed. Several of the VOCA provided consultants performed quality work while others did not.

The JEA was contracted under two cooperative agreements, one to conduct feasibility studies for upcoming subprojects (which in turn was subcontracted out to the JADF), and another to assist in the privatization of the Preclearance facilities. While the results of the first cooperative agreement were positive, the second is behind schedule and the sustainability of the Preclearance Program is in doubt.

IICA was contracted to introduce, extend, and monitor the miniset yam subproject which met with high adoption rates and equally high spread effects. Part of the reason for the success of this contract was that the farmers who adopted the new technology substantially customized the technique according to their own resource base and other criteria. There was to have been a second phase to this contract to expand the extension work to additional parts of the island. However, it was discovered that farmers were spreading the technology themselves and the second phase was dropped.

*Conclusions:* In the main, the contracts entered into by the Mission to support the AESP worked, or are working, well with the exception of the RONCO contract which was reduced several times, and the Cooperative Agreement for the Preclearance Program which is not yet sustainable.

***Subcontractors to RONCO:***

*Finding:* The EIA required longterm TA in Environmental Management and IPM. Dr H Hamilton may be regarded as filling the Environmental Management position, but no longterm IPM Specialist has ever been in place, though shortterm training in IPM has been offered. There was no shortterm TA in wildlife/biodiversity, soil and water conservation, on farm forestry and buffer zone management, aquatic biology, water quality or social ecology, though some training in CB was offered.

*Conclusion:* The conditions of long and shortterm TA in environment, as required by the EIA, were not met, except in the case of the Environmental Management Specialist.

*Finding:* The University of Florida was subcontracted to carry out environmentally related training through a series of courses in Conservation Biology and Integrated Pest Management and to assist in providing a pesticide related database for Jamaica. The original training scheme was reduced when the RONCO contract was reduced. Aside from the second CB course, which was canceled by USAID, the required courses and database installation were offered.

*Finding:* Various laboratories were contracted to provide analysis of soil and water samples. The pesticide analyses were to be done by the University of the West Indies (UWI). However, this analysis was delayed repeatedly by UWI.

*Conclusions:* The arrangements with various local laboratories were adequate as regards analysis of nitrates and other chemicals in water samples. However, when pesticide analyses were delayed, RONCO should have arranged, as initially planned, to have them carried out by the University of Florida or other laboratories outside of Jamaica. The management of sample analysis was totally inadequate.



## 7.2 PROJECT IMPLEMENTATION

### 7.2.1 Subproject Identification and Implementation

*Findings:* During the first stage of the Project, subproject proposals were generally poorly written and difficult to compare with one another. It also appears that the criteria for subproject selection defined in the Project Paper were too vague to guide the decision makers in the PCC and the Mission. As a result the approval and disbursement process was often quite protracted. Likewise, reporting requirements were equally vague and often not enforced, most likely due to the lack of sufficient staff at the PMU. Several of the original subprojects have not yet been closed out pending audits and the recreation of accounting records according to AID guidelines. The new administrative staff at the PMU (Senior Accountant and Accounts Clerk) are attempting to reconcile these old subprojects and are making adequate progress considering the other demands on their time.

Due to the internal review conducted by the Mission in 1993, changes were made in the selection criteria and procedures for implementation of the subprojects. This process, however, took over 15 months during which no new subprojects were identified or implemented. Nevertheless, the current process is much more standardized and transparent, although it still requires an excessive amount of time. The JADF, through the JEA, has standardized the feasibility studies for the subprojects making them much easier to analyze and compare. Two subprojects were approved using this new methodology in January 1995, although no funds have been disbursed to date and no implementation has occurred. In early June, 1995 seven additional subprojects, for which JADF feasibility studies had been written, were evaluated and prioritized and are currently on hold pending notification from the Mission as to the funding levels which will be available to the project. (See Appendix 8 for the criteria used, the weights applied to each criteria, and the scores given to each subproject.)

An additional factor which has caused the subprojects which were approved in January to be placed on hold, and which will also constrain any new subprojects once they are approved, is the requirement that each one have a manager in place before any funds can be disbursed. (This only applies to the first year of the subproject, after which the members of the group being assisted can hire the manager of their choice.) This is not an insurmountable problem in its own right, however, the PCC is requiring that these managers be employees of the MOA which involves a labyrinth of bureaucratic procedures which no one fully understands.

*Conclusions:* While the JADF through the JEA has made great strides in improving the quality and comparability of the feasibility studies for proposed subprojects, the process for selecting, approving, and implementing subprojects is still too lengthy and cumbersome. Additionally, the policy of requiring a subproject manager to be an employee of the MOA is misguided, extremely drawn out, and avoids the issue of accountability between the members of the group being assisted and their manager.

## 7.3 ENVIRONMENTAL CONCERNS

### 7.3.1 Environmental Monitoring

*Finding:* The PMU has not taken responsibility for monitoring the RONCO subcontract and USAID has paid little attention to those elements included in the subcontract. Despite statements in the SAR's to the contrary, this is evidenced by the continued failure to obtain sampling results, and the failure to ensure that the subproject approval process included an environmental assessment, at least during the first phase of the Project.

*Conclusion:* Neither the PMU nor USAID has provided adequate monitoring of the conditions of the RONCO subcontract. As a result, deficiencies in subcontractor performance have gone uncorrected, leading to an ineffective and inadequate environmental component.

### 7.3.2 Proposal Development

*Finding:* There appears to have been little effort to assess the potential impacts of subprojects on the environment during the proposal development stage. Most of the subproject documents have identical (or nearly identical) environmental sections. Although EIA have been developed, they still are not adequate.

*Conclusion:* Only a partial effort to determine the potential impacts of subprojects on the environment was made at the proposal stage. The environmental sections of the proposals were not adequate and did not meet the requirements of the PP.

### 7.3.3 Review and Approval Criteria

*Finding:* The RONCO subcontract required that environmental factors be included in the review and approval process for subprojects. In some cases no environmental input was made during the approval process. In other cases it is doubted that environmental considerations carried much weight. In no case were all of the elements specified in the EIA addressed.

*Conclusion:* The conditions EIA and of the RONCO subcontract, and therefore the conditions of the PP, **regarding** inclusion of environmental factors in subproject review and approval were not adequately met.

### 7.3.4 Subproject Compliance with PP Guidelines

*Finding:* From reports submitted by RONCO it is clear that the use of certain pesticides that were on the banned or restricted list for Project use, was common. In particular, paraquat (Gramaxone), Furadan, benlate, metaldehyde and Endosulphans are used throughout most, if not all of the subprojects. Chemicals are being used in an improper, and sometimes dangerous, way in most or all of the subprojects, despite the fact that the grantee was to enforce the use of protective devices and clothing and to ensure the safe transport, storage and mixing of pesticides. Facilities for safe storage were to be designated. Cholinesterase testing of sprayers was to be

done, along with regular field observations of pesticide use. Pesticide residues from soils, surface water and ground water were to be determined. Samples were to be taken to determine changes in biodiversity.

*Findings:* Nitrate and phosphate levels in waters within subproject areas exceed NRCA guidelines - by many times in some cases. In some of the subprojects, planting is on slopes that exceed 40 percent (sometimes 60 percent). Problems associated with road construction can be found in some of the subprojects. There is a general lack of adequate soil conservation practices. Banana sleeve disposal, and disposal of plastic used in yam production, has not been adequately addressed. Levels of fertilizers were exceedingly high in some of the proposed subprojects. As mentioned, some subprojects were approved without consideration of environmental factors. Subproject social impact assessments generally are very brief, ill conceived and inadequate.

*Finding:* On the positive side, some subprojects have instituted some soil conservation practices such as gully control, trenches and drains in fields, contour barriers, and encouragement of litter retention within rows. The yam project involving IICA provided literature for farmers on soil conservation; introduced methods that required a smaller or no yam support pole; encouraged mulching and contouring; and lead to better fertilizer placement.

*Conclusions:* With few exceptions, the guidelines of the EIA regarding environmental factors, have not been followed. Though some efforts have been made within certain subprojects to reduce negative environmental impacts, neither the PMU nor USAID have made the required effort to enforce compliance with good environmental practice, as was required by the Project EIA.

## 7.4 PROJECT ACCOMPLISHMENTS AND IMPACT

The Evaluation Team's comments concerning accomplishments and impact were treated in section 4 of this report which concerned Project outputs as defined in the Project Paper. Nevertheless, some important findings need to be underscored here.

### 7.4.1 The Lack of a Project Monitoring System

*Findings:* As was stated above, two consultancies were performed under the VOCA contract for the design of a statistical impact measurement system. At present, this system remains incomplete and has therefore not been implemented. One of the reasons given for the lack of movement on this activity is that the new wave of subprojects have yet to be implemented. If this is the case, the collection of baseline information, which will enable a before and after comparison of the subprojects could easily be lost. Also, this system as designed will only measure the impact of the second phase subprojects.

*Conclusions:* Without some form of Project information system it is almost impossible (except through anecdotal information), for the Evaluation Team to analyze the impact of subprojects,

be they from the first phase of the Project or the second. Additionally, the information system as designed will fall far short of expectations if it only measures impact from the subprojects. The concept of a baseline seems to be missing from the system as well as a comprehensive approach which measures progress of the Project in areas other than the subprojects.

#### 7.4.2 Sustainability of Subprojects and other Project Components

*Findings:* In the current batch of subprojects the issue of sustainability is addressed through two measures: the collection of various 'cesses' which includes a pay as you go philosophy; and, the institution of a revolving fund concept which is to provide group members with continuous access to credit year after year, or crop after crop. The amount of each cess (input supply, marketing, transportation, management, overhead, etc.) has yet to be determined and the farmers' ability to pay them and still make a profit will not be known until actual operations begin. Also, given the life of the Project, the revolving fund of each subproject will only revolve once before the PACD. Thus given the fact that no interest will be charged, even to maintain the value of the fund, there is a strong likelihood that these funds will become decapitalized over time (some of the potential groups who will benefit from the subprojects have agreed to charge a 'financial cess' which will be paid into the fund to preserve its value.).

The Preclearance Program which is due to run out of Project funding in September 1996, and which costs approximately US\$240,000 per year to operate, is currently not sustainable given the present volumes of produce going through the program and the current value of the cess being charged by the JEA (US\$.08 per box or unit exported).

*Conclusions:* Mixing the concept of a cess with that of interest or maintenance of value payments is risky and, as such, jeopardizes the sustainability of the revolving funds and the subprojects themselves.

The Preclearance Program is extremely important to Jamaica and the country could very well lose it if measures are not taken quickly to increase the value of the cess, increase the 'throughput' the facilities, or both. This is especially critical given the current status of the Montego Bay facility which has not been available for preclearance inspections since services were curtailed on June 7, 1995.

#### 7.4.3 Impact of Technical Assistance - Environment

*Finding:* In the RONCO subcontract, Technical Assistance was provided in the form of a local representative, Dr. H. Hamilton, who handled the environmental assessment and monitoring aspects as well as training logistics. The University of Florida provided training in IPM, CB and computer database provision (training is discussed below). Despite sampling being done on subprojects, there is little available by way of analysis (no real information on pesticide residues in soils or water). Few strong recommendations have been made regarding compliance with good environmental practice.

*Finding:* The original RONCO contract required the monitoring of forestry and forest composition; biodiversity; and the collection of pests and their natural enemies. This was later changed. Nonetheless, no serious attempts appear to have been made to monitor any of these factors prior to the elimination of the requirement to do so.

*Finding:* The computer database was installed at CARDI.

*Conclusion:* This activity has been largely ineffective. Very little of value has come from the environmental assessment and monitoring components of the RONCO contract. Responsibility for this rests with RONCO, the PMU and USAID.

#### 7.4.4 Impact of Training

*Finding:* IICA, with the yam project; RADA, with some of the other subprojects; and some of the commodity boards, with relevance to subprojects, provided some training for farmers - predominantly in cultural practices.

*Finding:* Longterm training for Ministry of Agriculture personnel was included in the PP, but this provision appears to have been dropped by agreement in January 1992 and by formal written agreement in May 1993.

*Finding:* No training plan was submitted until November of 1994.

*Conclusions:* Training at the farmer level did occur, but no evaluation of its impact has been found. Given that no training plan was submitted until very recently, it is easy to conclude that training did not receive high priority from the Project.

#### 7.4.5 Environment

*Finding:* Training, done by the University of Florida, included courses in IPM, CB, and some audio/visual and computer aspects. The audio/visual and computer training appear to have been successful within the limits of prior training of the Jamaican personnel. IPM training has continued annually throughout the Project, with responsibility for the training gradually turned over to the Jamaican counterparts, who now teach the course. The initial CB training had problems with lack of attendance by many of the UWI people who had signed on. In addition, there was disagreement on the types of materials to be presented, the audience, the need for "foreign" teachers, etc. Participant rating of the course written materials was uniformly low though rating of the instructors was generally high - as was the rating of the course as a whole. There was general consensus that the courses were not appropriate for the targeted AESP beneficiaries. The second CB course was developed in an environment where the UF and, USAID and the PMU were not communicating. As a result of disagreements on course content and participation, the course was canceled.

*Finding:* No training of farmers has been done under the RONCO subcontract, as was required by the Project EIA. There was no direct training on pesticide use under the contract though RADA has done some training in some of the subprojects. Westban, the non Blue Mountain

coffee subproject, and the yam subproject have provided informative materials to farmers. However, the Westban material recommends Paraquat, the placement of fertilizer on the soil surface, and fails to make any recommendations on disposal of banana sleeves. RADA, responsible for extension on the subprojects (as well as countrywide), appears reactive rather than proactive in most instances.

*Conclusions:* The IPM courses appear to have been of value to the participants, though little or no evidence of IPM practices exist in the field, leading one to conclude that, at the subproject level, the training has not been effective. The CB course appears to have been rather academic, it lacked participants from some of the key players in the field (such as the management unit of NRCA), and the practices taught have been put into practice on few of the subprojects. The audio/visual and computer training appears to have been of value. Training of trainers has not lead to widespread adoption of environmentally sound practices in the field, indicating a low level of "trickle down".

Overall, the training component, though perhaps effective for some school teachers, university students, and government personnel, was not adequately beneficial to the farmers themselves.

## 7.5 GENDER

*Finding:* Issues of gender seem to have been largely ignored by the Project. We have seen no gender specific data on beneficiaries nor any special gender related subprograms with the subprojects.

*Conclusion:* Gender issues were ignored by the Project, at all levels, however, current plans for the future appear well conceived.

## 7.6 COORDINATION WITH OTHER DONORS OR USAID PROJECTS

### 7.6.1 USAID and Other Donor Assistance

*Finding:* Several other donor projects exist that are related to the AESP. These include the Hillside Agricultural Project (HAP), the Development of Environmental Management Organizations (DEMO), IICA projects and CARDI projects. IFAD is working in the Kingston watershed in coffee and cocoa, the Dutch government is working in the Rio Grande watershed, CIDA is working in forest management, institutional development and JAMPRO, the Japanese is working with Blue Mountain coffee, and the World Bank is considering irrigation for sugar cane and an agricultural research and extension project.

*Finding:* The HAP works in some common areas with various subprojects. Coordination of efforts seems minimal, but so does overlap. Some farmers are benefitting from the presence of both projects. The DEMO project is relatively recent in relation to the AESP. The strengthening of organizations such as the EFJ and the NRCA may lead to positive impacts on the environments within the subproject areas. The IICA pursuance of the miniset yam technology may spread to some of the current subprojects and the work of CARDI may be integrated with other subproject

extension efforts. The CARDI database (FAIRS) provided by the Project may assist research efforts on pesticides that may be undertaken by any of several organizations, such as the PCA, NRCA and the ECD.

*Conclusions:* Coordination with other donor projects and groups could have been much more extensive, particularly in the case of HAP. The provision of FAIRS to CARDI will prove useful only if various organizations are made aware of its existence and allowed access to it.

#### 7.6.2 Coordination with Private Sector Groups

*Finding:* Coordination took place between the Project and the Jamaica Exporters Association (JEA), the various commodity boards involved in the subProjects, and the sub-project cooperatives. It appears that coordination generally was good, though in several cases disbursement of funds was slow and problematic.

*Finding:* The Project was to coordinate with and involve financial institutions in the process. This was never done, apparently due to problems with interpretation of the requirements of Component 3 of the PP.

*Conclusion:* Aside from a failure to institute Component 3 of the PP, coordination with related implementing organizations appears to have been affected successfully.

### 7.7 SPECIAL CONCERNS

#### 7.7.1 The Pre-clearance Program

##### *The Relevance of the Program.*

*Finding:* This pre-clearance program, which was one of the first in the Caribbean and is the only one of 30 worldwide which is funded through a USAID grant-funded project. Its functions are to:

1. Safeguard against the rejection of shipments at U.S. ports of entry.
2. Prevent total loss of produce, and/or unnecessary transportation cost in the event that the produce is rejected and has to be brought back to Jamaica.
3. Prevent the delay of produce at the U.S. ports of entry since it would not usually be reinspected upon arrival.
4. Provide additional security as all pre-cleared shipments need to be inspected and sealed.
5. Meet certain quarantine entry requirements.
6. Make available the services of an USDA/APHIS officer in Jamaica to provide technical advice.

However, Project funding to this component are soon due to end and the JEA is scheduled to take over the funding of the program currently estimated to be US\$240,000 per year.

**Conclusion:** The pre-clearance program is relevant and necessary for the government and agricultural economy of Jamaica. It is also necessary in order for the GOJ to achieve its policy of agricultural growth through increased exports of agricultural produce.

### ***Progress and Growth of the Program.***

**Findings:** The Pre-clearance program has been successful in that it has expanded its operations in volume, manpower and locations. It began in 1985 with eleven (11) crops approved for pre-clearance and one local officer serving five (5) exporters in the Kingston area only. Presently, fifty-five (55) crops are approved for pre-clearance, and nine (9) local officers are serving fifty-five (55) exporters in Kingston and Montego Bay. In addition, there has been a dramatic increase in the volume of products pre-cleared and fumigated. In 1985, 130,123 cartons were pre-cleared; this had increased by 87.7 percent to 1,068,600 cartons in 1994. An estimated 1,500,000 cartons are expected by the end of 1995 if current trends continue.

**Conclusion:** This program, with all its present problems, has managed to expand steadily, progress and serve the exporting community and the country.

### ***JEA Privatization Plan.***

**Findings:** The GOJ, through the MOA, has established a fumigation and pre-clearance program for agricultural commodities. Agro-partners Limited (APL), a joint-venture between the JEA, the JADF, and the ADC is the concessionaire operating the Agricultural Export Complex (AEC) at the Norman Manley International Airport. In 1994, JEA commissioned a consultant to develop a privatization program which is being implemented by the JEA. The following major recommendations made by the Consultant have been implemented:

1. Appointed personnel to operate the Complex.
2. Appointed a Program Manager.
3. Instituted a computerized accounting and record-keeping system.
4. Collected nearly US\$14,000 in various fees and, as of May 1, 1995, imposed a cess of U.S.\$0.08 per box on all commodities being processed by the pre-clearance facility. This cess will go towards the financing of the Guarantee Trust Fund which USDA requires as a pre-condition to a country's being approved for the program.
5. Conducted workshops and seminars for exporters.
6. Improved the services and the infrastructure needed for the program.

**Conclusion:** The JEA, through its efforts, quickly restored confidence in the program and set in motion a privatization process. JEA is now headed in the right direction but much needs to be accomplished, most important of which is the very sustainability of the program itself. The amount of the cess, together with the projected throughput, need to be re-evaluated in the near term to see if costs can be sustained.

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### **USDA/APHIS Requirements**

*Findings:* The evaluation team had occasion to travel with the APHIS officers for on-site inspections and meetings with farmers. According to the APHIS team, even after ten years of existence, the program has not met goals, has not become sustainable, and lacks forward planning. Some of the expressed concerns are:

1. The program has not reached a stage of sustainability; it is still dependent on USAID support for funding.
2. Increased incidents of pests interceptions at the ports of entry due to a lack of proper pest-management in the fields and packing houses.
3. Lack of nation-wide pest surveys, pest identification capability, reference pest collections, and the implementation of an IPM program.
4. Inadequate personnel, essential tools, lighting, and screening of the inspection area.
5. Lack of progress on the "one stop" facility at both international airports.

*Conclusion:* The concerns expressed are genuine and some effect mandatory USDA/APHIS functions. In order for the program to continue, these problems must be rectified.

### **Role of The Ministry of Agriculture**

*Findings:* The MOA had played a lead role in the establishment of the Export Complex, and the implementation of the pre-clearance program. The role of the Ministry is well documented in the Contract Agreement between the Ministry, the JEA and the AMC. The Ministry is fulfilling most of its obligations according to the contract despite its limited resources. However, the following major areas must be addressed:

1. Provide adequate support service for the Plant Quarantine staff such as pest-identification, pest survey and information, inspection tools, reliable transportation, manpower, staff accommodation, etc.,.
2. Effect repairs to the second fumigation chamber.
3. Provide equipment such as a forklift and affect repairs to existing equipment to satisfy the terms of lease agreement with APL.
4. Increase emphasis of RADA extension agents towards IPM programs among farmers.
5. Take necessary steps to introduce "one stop" facilities in Kingston and Montego Bay international airports.

*Conclusion:* The Ministry of Agriculture has fulfilled some of its obligations, but must address remaining problems urgently.

### **The One Stop Facility**

*Findings:* According to the Privatization Program, both international airports should have become "One Stop" facilities by March, 1995. This has not materialized. The JEA through one of its Program Managers, is coordinating this activity. The Airport Authority in Montego Bay has provided building space for pre-clearance in its Charter Terminal. However, this building needs

modifications such as loading and unloading bays, screening, office partitioning, inspection tables, proper lighting and other essentials. The Marketing Division of the MOA has funds to implement these changes. The JEA has hired a consultant to prepare a document with plans and a budget for the Kingston facility which is to be completed soon, although the proposed deadline for this activity of March 1, 1995 has not been met.

It appears that the Airports Authority, Air Jamaica, Customs, MOA, and JEA are all co-operating in this effort.

*Conclusion:* Progress is gradual and many elements remain in the planning stage. As with the other parts of this project element much need to be done urgently in order that the facilities remain.

#### ***Fumigation And Fumigation Chamber***

*Findings:* There are two fumigation chambers at the Kingston facility but only one is working. The other needs its door fixed. Due to salinity in the air, the exhaust ducts, exhaust chimney, re-enforcing cables and isolators for the three cold storage rooms are either corroded or broken. The hot water tank is leaking and a solenoid valve in the gas-pipe line is malfunctioning. The Export Complex Manager alone does all the fumigation and administration of the complex.

*Conclusion:* The regular maintenance of the building and equipment is inadequate.

#### ***Continuation of the Pre-clearance Program.***

*Findings:* The continuation of this program after April 1996, depends on several factors:

1. The presence of an USDA/APHIS officer in Jamaica.
2. Financing of the budget for the USDA/APHIS officer and the rest of the Pre-clearance Program by JEA.
3. Provision of adequate PQ staff and other essential elements by the GOJ and the Ministry of Agriculture.
4. Implementation of both "One Stop" facilities.
5. Introduction of an IPM program.
6. Generation of adequate data on the status of pests and pest identification systems.
7. Work towards the "Assured Certifications Program".

*Conclusion:* These tasks appear difficult but there is determination and positive attitudes on all sides.

#### ***Management of the Program***

*Findings:* The program is managed by several agencies. The GOJ, through the MOA established the program. The MOA administers the program through the Marketing and Credit Division, and the PQ officers service the program. The JEA, through the APL, manages the day to day activities. The resident USDA/APHIS officer oversees the program. The AESP, through

USAID, supports the Program including the APHIS officer's budget. The Agricultural Export Complex Committee monitors the progress and activities of the Complex. The involvement of Airports Authority, Customs, the Airlines, and RADA are also essential.

*Conclusion:* For the survival and the continuation of this program, greater co-operation, coordination and communication is essential.

### 7.7.3 Integrated Pest Management

*Finding:* There is a need for an extended and expanded IPM program in Jamaica. The misuse of pesticides in the agricultural sector is widespread. There is little information disseminated on the proper use of pesticides; alternative methods of pest control (such as biological control, field sanitation practices, or crop rotation); or the monitoring of pesticide residue levels. Several organizations have expressed great interest in IPM, so any effort must be a coordinated one.

The USDA, PMU, RADA, the PCA, and CARDI are working on a plan to take IPM information to the farmer level.

*Conclusion:* Any expansion or extension of IPM practices or training would be welcomed by a large audience of both NGO and governmental organizations as well as farmers themselves. It is essential that Jamaica have the capacity to monitor pesticide use and its effects and to develop more environmentally-friendly means of pest control.

### 7.7.4 Environmental Impact

#### *Effectiveness of Recommendations and Mitigation Measures*

*Finding:* Monitoring of the environmental factors was done through the RONCO sub-contract. Monitoring was restricted, in practice, to some agro-chemical and soil conservation aspects. No results have been forthcoming on the monitoring of pesticide residues; few results are in on pollution due to fertilizers entering surface or ground waters; few observations have been made on the impacts of cultivation practices or road construction on erosion and runoff. Chemicals on the non-approved list have been and continue to be used within sub-projects. NRCA and other organizations should have been informed of monitoring results, but were not. The forestry monitoring, **bio-diversity** and pest identification and collection were never implemented.

*Finding:* No **initial** environmental assessments were done for some sub-projects in the first phase of the Project. Sub-project proposals contain inadequate environmental analyses.

*Finding:* Despite the requirements mandated in the EIA, and required in order to comply with Sections 117, 118 and 119 of the Foreign Assistance Act, few hard recommendations for mitigation have been made despite the existence of some serious environmental impacts and no enforcement mechanisms were developed to deal with any problems found.

*Conclusions:* Few recommendations for mitigation were made and little emphasis was put on those that were. This, combined with the total absence of an enforcement procedure has in the

past rendered the environmental monitoring and mitigation component essentially useless, and in violation of the requirements of the Foreign Assistance Act.

### *Effectiveness of the Environmental Monitoring*

*Finding:* USAID has wavered on the entire issue of monitoring - cutting it back, gutting the pesticide monitoring and then restoring some of the sampling, expressing a lack of interest in the program through lack of effective management, and ignoring recommendations or the enforcement of same.

*Finding:* A Diagnostic Center was to be developed by RONCO. This was cut from the program in January 1992 (formally in May 1993), with the suggestion that other Jamaican or US laboratories be used. It was decided to use Jamaican labs. The Jamaican laboratories to analyze samples, though many in number, are ill-equipped, badly run, non-functional in some cases, and lacking in qualified staff in other instances. Monitoring of pesticide residues currently cannot be done in Jamaica in a timely and reliable manner.

*Finding:* Forest composition, bio-diversity, and other elements of the RONCO contract were never addressed as part of the monitoring. These issues form an essential part of environmental monitoring.

*Finding:* Even if the analysis of pesticide residue sampling in water and soils had been forthcoming, the more meaningful means of analysis would have been through biological tissue analysis (using fish or fish eggs in the case of water). Cholinesterase testing of some of the spray men or farmers who spray was also to be done.

*Findings:* No sampling of any kind was done in the mangrove areas on the coast or in any estuaries or other areas where rivers and streams empty into the sea. No effects of the siltation and/or agro-chemical loads from Project areas on coral reefs or coastal waters were studied. When water sampling was done, no flow records were obtained. No stream bed sampling for agro-chemicals was undertaken. Samples for pesticide analysis were stored so long that many will now be useless to analyze. Inadequate investigation was done on the impacts of road development and improvement in sub-projects. No monitoring of worker health and safety was included in the Project.

*Conclusions:* The environmental monitoring system was entirely inadequate and due to lack of enforcement, rendered completely meaningless. Sampling methods were inadequate and the various factors studied did not cover the appropriate scope. The entire sampling, monitoring, and analysis program should have been overhauled very early on and adequate funding should have been provided. Farm worker health and safety should have been a prime element in the monitoring program.

Comments on environmental issues that are relevant to the Project in general, but not appropriate for inclusion in the main body of the report, can be found in Appendix 4 - Additional Environmental Concerns.

### **Requirements of the Project EIA**

*Finding:* The requirements of the Project EIA were ignored in large part. As stated in the EIA, the requirements are meant to bring the Project into compliance with Sections 117, 118, and 119 of the Foreign Assistance Act.

*Conclusion:* The Project is in violation of the requirements of Sections 117, 118, and 119 of the Foreign Assistance Act, by its failure to implement the conditions of the Project EIA.

#### **7.7.5 Linkages Between Project Components**

*Findings:* The linkages between Project components in a general sense are fairly obvious. Simplistically, Element 1 finances production-based sub-projects to increase the quantity, quality, and profitability of selected export crops. Element 2, which is principally the renovation of the AMC facilities and the continuation of the Pre-clearance Program facilitates the exportation of the commodities produced under Element 1. Element 3 provides funds for the feasibility studies which later result in potential sub-projects. Finally, Element 4, the PMU, provides a management structure within which the first three elements operate. Additionally, as an analysis of the Project Implementation Letters (PILs) demonstrates (See Appendix 3.) funds have been shifted between and among the various elements of the Project as needs have arisen and targets of opportunity have been identified, especially during the first phase of the Project.

*Conclusions:* The first four elements of the Project are mutually supportive of one another in a general sense, however, the terms training, technical assistance, monitoring, and procurement have tended to be loosely defined which has allowed for several activities to be funded which only benefitted project implementation and the achievement of the Project Purpose in the broadest sense.

#### **7.7.6 Crop Selection**

*Finding:* All the sub-projects selected for support under the AESP are consistent with the criteria outlined in the PP. The criteria set forth in PP provide adequate guidelines for optimal crop selection. Due to its flexibility, the Project supports any crop which exhibits strong potential market opportunities as well as production potential.

*Conclusion:* **There is no major problem with crop selection.** Indeed, in the team's opinion, any crop including coffee, cocoa, and even bananas, should be supported as long as market premiums exist for, essentially, all that Jamaica can produce.

#### **7.7.7 Extension of the PACD**

*Finding:* Many of the Project's proposed activities took longer than anticipated to be implemented. The 15-month hiatus between the first and second phases of the Project also set back the implementation of the Project. Lastly, between 5 and 7 sub-projects will begin implementation over the next few months and will most likely not be fully sustainable by the current PACD of September 30, 1996.

**Conclusions:** Given the delays in Project implementation to date, many key activities will not have been accomplished by the September 30, 1996 PACD. A 'no cost' extension to the PACD of one year will be required.

#### 7.7.8 Auditing Requirements

**Finding:** The status of the sub-project audits from phase 1 was sufficiently on course and due for completion shortly. The Evaluation Team therefore spent little time assessing the process due to its advanced nature. There is a possibility that funds will be left over after the close out of the phase one sub-projects.

**Conclusion:** Auditing requirements for phase 1 sub-project closeouts are on schedule. Any excess funds left over from phase one sub-projects should be reallocated to those in phase two.

## 8 ISSUES AND RECOMMENDATIONS

### 8.1 PROJECT MANAGEMENT

#### 8.1.1 The Project Management Unit

##### *The Technical Advisor*

**Issue:** During the first phase of the Project the PMU was understaffed which impacted on its ability to efficiently and effectively manage the Project. The lack of an experienced technical advisor in the production and marketing of tropical agricultural products was particularly troublesome. This flaw in the Project design was corrected as part of the Mission's mid-term internal review. The contract for the current technical advisor expires in October 1995. The Project Manager has requested that the Mission extend the technical advisor's contract for an additional year.

**Recommendation:** The Evaluation Team recommends that the current Technical Advisor be extended for one year from the date of his original contract.

##### *The Project Management Team*

**Issue:** The PMU often does not work as a unit utilizing the skills and attributes of the staff to its highest potential. Two areas require examination: communications within the PMU itself; and, the level of responsibility currently granted to the Deputy Project Manager.

**Recommendation:** The Project Manager needs to delegate more authority to the Deputy Manager. Communications within the PMU need to be improved. Regular staff meetings, regular planning meetings (probably the same), and the use of E-mail should be considered.

### 8.1.2 The Role of the USAID Project Officer

*Issue:* Management of the Project has changed significantly with the hiring of five new professionals and the addition of a technical advisor. While the presence of the USAID Project Officer in Project management was required during the first phase, it is not as critical at this point in time and it adds an additional layer to the decision making process which is already too lengthy and drawn out. Also, the current PSC Project Officer is on a renewable 6-month contract and has not received training in project management.

*Recommendation:* The Mission's Project Officer should gradually withdraw from the management of the Project and assume the role of monitor; especially in regards to compliance with USAID regulations and procedures. Her position should be made permanent for the life of the project, and she should be given the opportunity to attend an AID-sponsored project management course.

### 8.1.3 Project Reporting

*Issue:* Neither monthly nor quarterly reports are prepared by the PMU. Rather, the minutes of the monthly PCC meetings are accepted in place of regular reports. These minutes do not provide the necessary information to adequately monitor the progress of the Project.

*Recommendation:* A system of monthly, or at a minimum quarterly, reporting should be instituted. These reports should contain sections on each of the sub-projects including select information provided by the Sub-project Information System (See below.), as well as sections such as the results of PCC meetings, the Pre-clearance Program, environmental monitoring, gender, training activities, and others. The Technical Advisor's weekly report should be attached.

### 8.1.4 Sub-Project Monitoring

*Issue:* There has been very little monitoring of the effectiveness or efficiency of sub-project operations, the operations of the environmental sub-contractor, or other sub-contractors. There have already been two consultancies which partially designed a computerized information system to track sub-projects. It remains uncompleted and unused.

The technician in charge of monitoring and evaluation of all of the MOA's projects is also charged with implementing AESP's sub-project monitoring system. However, the computer equipment in the Ministry's Data Bank dates to the days of 'main frames' and is impossibly obsolete. It is not practical for the technician to share a PC in the PMU offices as is currently the case.

*Recommendations:* The monitoring system designed by the VOCA consultants should be analyzed and updated, completed, and implemented as soon as possible. Sub-project monitoring criteria should be developed sub-projects and should be used to check periodically on the success or failure of the sub-projects in regard to the criteria. The system should include a baseline survey for sub-project beneficiaries which captures production, yield, and income data, as well as gender

segregated information. It should also monitor the activities of all sub-contractors. The MOA employed in the Data Bank section should be provided with a PC computer capable of managing a monitoring system of this type.

#### 8.1.5 USAID/USDA Relationship

*Issue:* Communications between the USDA Technical Officer (and his colleagues and superiors in the USDA), and the Mission are not good and hold the potential for conflicting goals and methods of operation.

*Recommendation:* The PASA agreement needs to be reviewed to determine lines of supervision and communication.

### 8.2 PROJECT IMPLEMENTATION

#### 8.2.1 Sub-Project Funding

*Issue:* The PMU approved two sub-projects in January but has not disbursed any funds as yet, and currently has seven additional sub-projects under consideration. Five of these sub-projects were rated within several points of one another during a recent selection process exercise. These five sub-projects all surround a group of small to medium farmers who are highly motivated and who have already demonstrated their sincerity by: a) going through the registration process to be a legal entity; b) broken new ground; and c) repaired access roads. Their sub-projects are also sound with excellent production and marketing potential.

*Recommendation:* The Mission should seek ways to fully fund the seven sub-projects.

#### 8.2.2 Sub-Project Managers

*Issue:* Two sub-projects which have been approved since January have yet to receive any Project resources and are about to lose their market windows. The principal reason is that they require managers which are to be hired as MOA employees through arcane procedures that no one is quite sure of. Additionally, as many as five additional sub-projects could potentially be funded under the Project all of which will need MOA managers, to be selected through this arduous procedure.

*Recommendation:* Managers should be directly accountable to the members of the farmer organizations for whom they are working. If the managers are required to be MOA employees, then the members, or their boards of directors, should ratify the selection of the person, and should be able to request their removal as well. The PMU should hire the managers directly to avoid the lengthy GOJ hiring procedures. THIS IS A CASE OF IMMEDIATE URGENCY!

#### 8.2.3 Sub-project Revolving Funds

*Issue:* Most of the sub-projects include the concept of a revolving fund to finance the agricultural input needs of farmers. The concept of interest payments, however, has not been introduced.

**Recommendation:** In order that the revolving funds do not become decapitalized due to inflation and/or devaluation, and especially to avoid the atmosphere of the welfare programs of the past, an interest rate should be charged equal to at least the rate of inflation.

#### 8.2.4 PACD Extension

**Issue:** The Project lost approximately 15 months of implementation time between the first and second phases of its life. Organizing and implementing as many as seven new sub-projects dealing with small to medium farmers and non-traditional crops will require more than the current 15 months that the project has to run until its PACD.

**Recommendation:** The Evaluation Team recommends that the PACD of the Project be extended for one year until September 30, 1997.

#### 8.2.5 Disposition of Sub-project Vehicles

**Issue:** Several of the phase one sub-projects contained vehicles for use by extension agents, managers, and others. For the most part these vehicles are old, well-used, and high in maintenance costs. As the various phase one sub-projects are closed out there is a need for a decision as to what to do with these vehicles.

**Recommendation:** The Evaluation Team recommends that the vehicles purchased for use in phase one sub-projects be permanently transferred to the organizations and agencies where they are currently assigned.

### 8.3 ENVIRONMENT

#### 8.3.1 Environmental Assessments of Sub-Projects

**Issue:** Sub-projects that are considered for approval contain an environmental section that purports to be an assessment of possible impacts.

**Recommendation:** A real environmental assessment, carried out by the sub-contractor responsible for environmental issues, should be made for each sub-Project that is approved for funding, prior to any final approval or funding of such a sub-project.

#### 8.3.2 Environmental Monitoring of Sub-Projects

**Issue:** Environmental monitoring of ongoing sub-projects is to be carried out under the Ronco sub-contract. The contract expires in October 1995.

**Recommendation:** A contract for environmental monitoring beyond October 1995 should be let. Environmental monitoring under such a contract should comply with the Project EIA and include monitoring soil erosion and run-off, agro-chemical pollution of soils and water, impacts on natural vegetation (such as vegetation clearing or burning), bio-diversity, impacts on selected

fauna (perhaps birds and fish), and downstream impacts on coastal water (where appropriate and applicable).

### 8.3.3 Agrochemical Sampling

*Issue:* Agro-chemicals are to be sampled in soils and water as part of the monitoring program. Analysis of samples is currently incomplete.

*Recommendation:* The agro-chemical sampling and analysis should be totally overhauled. Samples for pesticide residues should be collected from soils, from water, stream beds and aquatic fauna. Sampling methods should be determined by pesticide residue experts and sample analysis should be done in a laboratory outside Jamaica until it is firmly established that a Jamaican laboratory has the capacity to accurately analyze the samples in a timely fashion.

Sampling must include cholinesterase sampling that was mandated by the Project EIA. Samples to determine fertilizer-related pollution to water quality should be analyzed at one laboratory consistently, with double samples used as a check, and with periodic double analysis using different laboratories. All sampling should be carried out several times during the cropping year at each location within and outside the sub-project areas. Some samples should be taken at appropriate river mouths, estuaries or mangrove wetlands to determine concentrations entering the marine system.

Consideration should be given to funding a project to look at pesticide residues in the produce and pesticide levels in the blood of a sample of farm workers and spray men as it is possible that public health is being impacted by the misuse of pesticides.

### 8.3.4 The use of IPM

*Issue:* IPM training has taken place within the scope of the Project, but transfer to the local farmer level has been minimal at best.

*Recommendation:* IPM training should be provided at the local farmer level. A project, perhaps linked with work on pesticide use studies, should be developed that will do research on IPM methods that are particularly relevant and appropriate for Jamaica and the various crops and agronomic conditions within the country.

### 8.3.5 Soil Conservation

*Issue:* Soil conservation did not receive enough emphasis in the first phase of the Project though some soil conservation practices were observed in the field.

*Recommendation:* Crops and agronomic practices that lend themselves to conservation of the soil, as well as reduced use of agro-chemicals, should be encouraged. Dasheen production requires little pesticide use and the intensive production methods suggested by certain farmers leads to less

rainfall directly hitting the soil. Mini-set yam production using grass mulch around and between rows, combined with the incorporation of fertilizer into the soil, provides for conservation of the soil and reduced pollution from fertilizer run-off.

Individual soil bunds for bananas and other tree crops, or the use of contours should be mandated in sub-projects. Field sanitation should be encouraged. Banana sleeve recycling and safe disposal should be requirements for any sub-projects using the sleeves. The use of organic fertilizers (again, dug in rather than surface-applied) should be encouraged wherever possible. Agro-forestry, especially using multiple-use plants, should be promoted.

### 8.3.6 Management of the Environmental Component

*Issue:* In the first phase of the Project the environment was treated by USAID and the PMU as an unimportant add-on, rendering the monitoring portion nearly useless.

*Recommendation:* The PMU and USAID should take a more direct interest in environmental monitoring under the Project. Coordination with in-country environmental organizations, such as NRCA and PCA should be developed. The environmental sub-contract should be restructured to emphasize effective and efficient monitoring, utilizing laboratories outside the country. The PMU should take responsibility for the direct management and oversight of the environmental component with assistance from the Project Officer and the Mission's Environmental Officer.

### 8.3.7 Environmental Training

*Issue:* Though several IPM training courses have been given, along with one CB course and some computer training, the training efforts apparently have not reached the local farmer level.

*Recommendation:* Any further training under the Project should be directed at the farmer level and should stress IPM and soil conservation along with pesticide application and use procedures and worker health and safety. Apparently an upcoming course will be directed at farmers.

### 8.3.8 Mitigation and Enforcement

*Issue:* Neither mitigation nor enforcement of mitigation measures has taken place in an effective manner.

*Recommendation:* Specific mitigation measures, submitted in sufficient detail, should be presented to the sub-project managers through the PMU. Those mitigation measures included in the Project EIA must be complied with. Mitigation efforts should then be monitored. Should mitigation measures not be followed, enforcement procedures should be developed and utilized to ensure the sound environmental practices are adhered to. Authority for enforcement is set forth in the Project EIA, allowing the Project Manager to cut the grant of a sub-project if there is non-compliance with environmental requirements.

### 8.3.9 Use of the FAIRS database

*Issue:* The FAIRS database, housed at CARDI, is designed to be used in pesticide research. Few people appear to know of its existence.

*Recommendation:* A workshop should be held with potential users of the FAIRS database, including relevant governmental and non-governmental organizations. Users should be allowed easy access to the system to ensure the widest possible use.

### 8.3.10 Use of Chemicals

*Issue:* Several chemicals that are either restricted or banned from use in this Project are, in fact, commonly used throughout the sub-project areas.

*Recommendation:* Though it may be difficult to prove that non-approved chemicals have been purchased with USAID funds (as opposed to other sources), the use of such chemicals in the sub-projects should be prohibited and funds should be withheld until the use of such chemicals is discontinued.

## 8.4 TECHNICAL

### 8.4.1 Pre-clearance Program Sustainability

*Issue:* The Present US\$0.08 per unit cess that the JEA is charging for using the program is inadequate at current levels of throughput to cover the cost of the USDA/APHIS Pre-clearance Program.

*Recommendation:* The present cess of US\$0.08 should be continued until the end of December, 1995 and at that time reviewed as to its ability to cover the costs of the program. The JEA also needs to mobilize its exporter/members to increase the throughput. When the "one stop" facility begins efficient operation, the cess may be increased to US\$0.12 per box, or higher, depending on throughput.

### 8.4.2 Support Service For Field Pests Management

*Issue:* The pre-clearance program is not merely an inspection of boxes but also the development of a system of preventing and monitoring the spread and multiplication of pests in the country. In order to achieve this, sufficient information must be generated regarding the status and identification of pests. One must also have a reference collection of pests and the PQ Inspectors must be able to recognize the important ones. Such a support system would enhance the efficiency of the pre-clearance program.

*Recommendations:* The Ministry of Agriculture needs to appoint a consultant to prepare a list of all the field pests affecting important export crops. The consultant should also collect specimen samples of pests, and identify and label them to create a reference collection. The PQ Inspectors

require training on basic entomology to aid them in recognizing pests. PQ Inspectors should also collect and preserve the insects that they encounter on a day to day basis. The assistance of the USDA/APHIS Officer is also vital for this.

#### 8.4.3 Increased Demand For Efficient Service

*Issue:* The volume of crops exported through this program has increased considerably. When the "One Stop" facility begins to operate, additional PQ officers will be required. The PQ officers should have reliable transport, equipment, and tools. The exporters are already demanding more efficient service.

*Recommendations:* The Ministry of Agriculture needs to appoint six (6) more PQ Inspectors. Some of them should visit the field and packing houses to monitor, advise and take necessary steps to control pests. The Marketing Division should be allowed to use the JD\$7,500 which they are collecting as concession fees to provide reliable transport for PQ officers. The MOA should review compensation of PQ officers with a view of ensuring staff retention.

#### 8.4.4 Proper Maintenance of Buildings and Equipment

*Issue:* The Export Complex and fumigation chambers at Norman Manley International Airport is nearly ten years old, and are very close to the sea. As a result, metal electrical parts deteriorate rapidly. Some of them need urgent repairs and replacement.

*Recommendation:* Repair work should be done as soon as possible. The contract agreement between the MOA and the JEA specifies the responsibilities. The Marketing and Credit Division should monitor the conditions of the building and equipment and bring necessary maintenance to the attention of the Concessionaire.

#### 8.4.5 ~~Lack of an Assistant for the Export Complex Manager~~

*Issue:* The Export Complex Manager has far too many functions to perform. He alone does all the fumigation work. Ideally and per safety requirements for fumigation, two persons should be involved while fumigating.

*Recommendation:* The Concessionaire needs to appoint an assistant to the Manager who should be trained in fumigation.

#### 8.4.6 The Complexity of Management of the Pre-clearance Program

*Issue:* As previously mentioned, there are too many agencies with different interests who implement parts of this program. For efficient management, there needs to be effective coordination, communication and inter-personal relationships.

*Recommendation:* The JEA and MOA need to re-vitalize the Agricultural Export Complex Committee. If need be, a change of members should be made to suit the present situation. This committee should lead, monitor, and advise in solving the problems of the program. The

Marketing and Credit Division needs to nominate a Desk Officer to coordinate with the JEA Program Manager.

## 9 LESSONS LEARNED

- 9.1 If external evaluators are to measure project progress, a project information system must be in place and functioning. The Logical Framework Matrix should be effectively employed in both the project design and evaluation phases.
- 9.2 Host Government support, especially in the area of policy directives and budgetary allocations, is a prerequisite to developing the necessary long term strategies to address self-sufficiency of government services.
- 9.3 For a national program to succeed, there should be proper planning well in advance, effective coordination and communication, determination to implement action plans, and sound financial and administrative capabilities.

*Finding:* The original RONCO contract required the monitoring of forestry and forest composition; biodiversity; and the collection of pests and their natural enemies. This was later changed. Nonetheless, no serious attempts appear to have been made to monitor any of these factors prior to the elimination of the requirement to do so.

*Finding:* The computer database was installed at CARDI.

*Conclusion:* This activity has been largely ineffective. Very little of value has come from the environmental assessment and monitoring components of the RONCO contract. Responsibility for this rests with RONCO, the PMU and USAID.

#### 7.4.4 Impact of Training

*Finding:* IICA, with the yam project; RADA, with some of the other subprojects; and some of the commodity boards, with relevance to subprojects, provided some training for farmers - predominantly in cultural practices.

*Finding:* Longterm training for Ministry of Agriculture personnel was included in the PP, but this provision appears to have been dropped by agreement in January 1992 and by formal written agreement in May 1993.

*Finding:* No training plan was submitted until November of 1994.

*Conclusions:* Training at the farmer level did occur, but no evaluation of its impact has been found. Given that no training plan was submitted until very recently, it is easy to conclude that training did not receive high priority from the Project.

#### 7.4.5 Environment

*Finding:* Training, done by the University of Florida, included courses in IPM, CB, and some audio/visual and computer aspects. The audio/visual and computer training appear to have been successful within the limits of prior training of the Jamaican personnel. IPM training has continued annually throughout the Project, with responsibility for the training gradually turned over to the Jamaican counterparts, who now teach the course. The initial CB training had problems with lack of attendance by many of the UWI people who had signed on. In addition, there was disagreement on the types of materials to be presented, the audience, the need for "foreign" teachers, etc. Participant rating of the course written materials was uniformly low though rating of the instructors was generally high - as was the rating of the course as a whole. There was general consensus that the courses were not appropriate for the targeted AESP beneficiaries. The second CB course was developed in an environment where the UF and, USAID and the PMU were not communicating. As a result of disagreements on course content and participation, the course was canceled.

*Finding:* No training of farmers has been done under the RONCO subcontract, as was required by the Project EIA. There was no direct training on pesticide use under the contract though RADA has done some training in some of the subprojects. Westban, the non Blue Mountain

extension efforts. The CARDI database (FAIRS) provided by the Project may assist research efforts on pesticides that may be undertaken by any of several organizations, such as the PCA, NRCA and the ECD.

*Conclusions:* Coordination with other donor projects and groups could have been much more extensive, particularly in the case of HAP. The provision of FAIRS to CARDI will prove useful only if various organizations are made aware of its existence and allowed access to it.

## 7.6.2 Coordination with Private Sector Groups

*Finding:* Coordination took place between the Project and the Jamaica Exporters Association (JEA), the various commodity boards involved in the subProjects, and the sub-project cooperatives. It appears that coordination generally was good, though in several cases disbursement of funds was slow and problematic.

*Finding:* The Project was to coordinate with and involve financial institutions in the process. This was never done, apparently due to problems with interpretation of the requirements of Component 3 of the PP.

*Conclusion:* Aside from a failure to institute Component 3 of the PP, coordination with related implementing organizations appears to have been affected successfully.

## 7.7 SPECIAL CONCERNS

### 7.7.1 The Pre-clearance Program

#### *The Relevance of the Program.*

*Finding:* This pre-clearance program, which was one of the first in the Caribbean and is the only one of 30 worldwide which is funded through a USAID grant-funded project. Its functions are to:

1. Safeguard against the rejection of shipments at U.S. ports of entry.
2. Prevent total loss of produce, and/or unnecessary transportation cost in the event that the produce is rejected and has to be brought back to Jamaica.
3. Prevent the delay of produce at the U.S. ports of entry since it would not usually be reinspected upon arrival.
4. Provide additional security as all pre-cleared shipments need to be inspected and sealed.
5. Meet certain quarantine entry requirements.
6. Make available the services of an USDA/APHIS officer in Jamaica to provide technical advice.

However, Project funding to this component are soon due to end and the JEA is scheduled to take over the funding of the program currently estimated to be US\$240,000 per year.

- (1) Export Production Sub-Projects--focuses on the development of sub-projects with producer groups and associations to expand the production and marketing of export crops. This component is designed to encourage and stimulate the production of non-traditional and traditional export crops through support to cooperative and producer groups.
- (2) Production and Post-Harvest Export Services--supports key public sector agencies in improving/expanding essential services to the producers and exporters of agricultural products; and
- (3) Export Project Design and Management Services--seeks to stimulate the identification, introduction, and testing of modern agricultural production technologies and management practices under actual export conditions.

#### Sub-Projects

To date the project has funded eight sub-projects. Of these, three are active and five have been completed. The completed projects include three banana production sub-projects, a yam technology promotion sub-project, and a cocoa production sub-project. Ongoing sub-projects include a coffee cooperative management improvement sub-project, production of selected non-traditional export crops by a farmer's cooperative, and high density dasheen production for fresh and processed export, by a farmer's cooperative.

Sub-project funding has ranged from US\$98,000 for support for increased production for cocoa for the Richmond cocoa fermentary to US\$600,000 for the yam technology promotion sub-project.

The project is completing the review and selection process for funding of the final new sub-projects. The proposals under review include four involving production of various non-traditional vegetable, root crops and fruit, one of which is an expansion of the previous yam sub-project, and one involving contract farming of pond fish.

#### Production and Post Harvest Services

Activities financed under this element include the following:

- o Financial underwriting of the costs associated with the agricultural pre-clearance program that provides in-country Animal and Plant Health Inspection Services (APHIS) approved inspection and certification for pests, of agricultural commodities which are being exported to the U.S. market.

### **USDA/APHIS Requirements**

*Findings:* The evaluation team had occasion to travel with the APHIS officers for on-site inspections and meetings with farmers. According to the APHIS team, even after ten years of existence, the program has not met goals, has not become sustainable, and lacks forward planning. Some of the expressed concerns are:

1. The program has not reached a stage of sustainability; it is still dependent on USAID support for funding.
2. Increased incidents of pests interceptions at the ports of entry due to a lack of proper pest-management in the fields and packing houses.
3. Lack of nation-wide pest surveys, pest identification capability, reference pest collections, and the implementation of an IPM program.
4. Inadequate personnel, essential tools, lighting, and screening of the inspection area.
5. Lack of progress on the "one stop" facility at both international airports.

*Conclusion:* The concerns expressed are genuine and some effect mandatory USDA/APHIS functions. In order for the program to continue, these problems must be rectified.

### **Role of The Ministry of Agriculture**

*Findings:* The MOA had played a lead role in the establishment of the Export Complex, and the implementation of the pre-clearance program. The role of the Ministry is well documented in the Contract Agreement between the Ministry, the JEA and the AMC. The Ministry is fulfilling most of its obligations according to the contract despite its limited resources. However, the following major areas must be addressed:

1. Provide adequate support service for the Plant Quarantine staff such as pest-identification, pest survey and information, inspection tools, reliable transportation, manpower, staff accommodation, etc.,.
2. Effect repairs to the second fumigation chamber.
3. Provide equipment such as a forklift and affect repairs to existing equipment to satisfy the terms of lease agreement with APL.
4. Increase emphasis of RADA extension agents towards IPM programs among farmers.
5. Take necessary steps to introduce "one stop" facilities in Kingston and Montego Bay international airports.

*Conclusion:* The Ministry of Agriculture has fulfilled some of its obligations, but must address remaining problems urgently.

### **The One Stop Facility**

*Findings:* According to the Privatization Program, both international airports should have become "One Stop" facilities by March, 1995. This has not materialized. The JEA through one of its Program Managers, is coordinating this activity. The Airport Authority in Montego Bay has provided building space for pre-clearance in its Charter Terminal. However, this building needs

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- o A Participating Agency Service Agreement (PASA) was also signed with the U.S. Department of Agriculture (USDA). This has facilitated attendance by Jamaican nationals at marketing conventions in the U.S., dialogue between Jamaicans and the U.S. on trade constraints affecting Jamaican produce entering the U.S., and on-site technical seminars, in the U.S. and Jamaica, for selected crops.
- o A Cooperative Agreement with Volunteers in Overseas Cooperative Assistance (VOCA) to provide follow up T.A. to sub-projects in areas such as marketing, finance and administration.

The project is implemented by the Ministry of Agriculture and is managed by a Project Management Unit (PMU) staffed by a project manager, accountant, secretary and technical advisor. Due to some serious implementation problems, most notably in the export production sub-project component where the lack of an adequate process to identify and develop proposals for market-driven production sub-projects resulted in delays of over a year, an internal management review was conducted two years ago. As a result of that review, the project tried to develop a more agile and efficient selection mechanism. In May, 1994 USAID signed a cooperative agreement with the Jamaica Exporters' Association (JEA) to provide such a mechanism.

The management review also pointed to the need to provide readily available technical assistance to production sub-projects to overcome grantee identified technical problems. In May, 1994 USAID signed another cooperative agreement with Volunteers in Overseas Cooperative Assistance (VOCA) to provide short-term technical assistance to the sub-project activities.

The Cooperative Agreement with JEA was subsequently amended in November of 1994 to provide additional funding to help the JEA establish a privatization scheme for the USDA/APHIS agricultural pre-clearance program that would enable it to become fully self sustaining by the end of the AESP project - September 30, 1996.

Other organizations that the project coordinates with locally include the Rural Agricultural Development Agency (RADA), Jamaica's promotion agency (JAMPRO), the Jamaica Agricultural Development Foundation (JADF), local coffee and cocoa cooperatives, and other public and private sector groups involved in agriculture.

#### Special Considerations

In addition to its interest in the team's findings regarding the effectiveness of the project, its implementation to date and any necessary corrective actions, the Mission also wants to determine

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USAID, supports the Program including the APHIS officer's budget. The Agricultural Export Complex Committee monitors the progress and activities of the Complex. The involvement of Airports Authority, Customs, the Airlines, and RADA are also essential.

*Conclusion:* For the survival and the continuation of this program, greater co-operation, coordination and communication is essential.

### 7.7.3 Integrated Pest Management

*Finding:* There is a need for an extended and expanded IPM program in Jamaica. The misuse of pesticides in the agricultural sector is widespread. There is little information disseminated on the proper use of pesticides; alternative methods of pest control (such as biological control, field sanitation practices, or crop rotation); or the monitoring of pesticide residue levels. Several organizations have expressed great interest in IPM, so any effort must be a coordinated one.

The USDA, PMU, RADA, the PCA, and CARDI are working on a plan to take IPM information to the farmer level.

*Conclusion:* Any expansion or extension of IPM practices or training would be welcomed by a large audience of both NGO and governmental organizations as well as farmers themselves. It is essential that Jamaica have the capacity to monitor pesticide use and its effects and to develop more environmentally-friendly means of pest control.

### 7.7.4 Environmental Impact

#### *Effectiveness of Recommendations and Mitigation Measures*

*Finding:* Monitoring of the environmental factors was done through the RONCO sub-contract. Monitoring was restricted, in practice, to some agro-chemical and soil conservation aspects. No results have been forthcoming on the monitoring of pesticide residues; few results are in on pollution due to fertilizers entering surface or ground waters; few observations have been made on the impacts of cultivation practices or road construction on erosion and runoff. Chemicals on the non-approved list have been and continue to be used within sub-projects. NRCA and other organizations should have been informed of monitoring results, but were not. The forestry monitoring, bio-diversity and pest identification and collection were never implemented.

*Finding:* No initial environmental assessments were done for some sub-projects in the first phase of the Project. Sub-project proposals contain inadequate environmental analyses.

*Finding:* Despite the requirements mandated in the EIA, and required in order to comply with Sections 117, 118 and 119 of the Foreign Assistance Act, few hard recommendations for mitigation have been made despite the existence of some serious environmental impacts and no enforcement mechanisms were developed to deal with any problems found.

*Conclusions:* Few recommendations for mitigation were made and little emphasis was put on those that were. This, combined with the total absence of an enforcement procedure has in the

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project close-out reports for terminated projects been prepared? What measures can be taken to ensure that all reporting requirements are complied with?

**B. Implementation**

1. How effective are existing implementation procedures and arrangements, with particular attention to procurement methods, grant mechanisms, financial accounting, project monitoring and the flow of funding to sub-projects? Is there any way to improve the financial reporting process? Are there any duplications of effort between USAID and the PMU in the financial management of the project? Are host country contracting requirements mandated by USAID being effectively implemented by the PMU? Is there an adequate method for determining in-kind host country contributions to the project? If not, what measures can be taken to achieve same?
2. Were the measures taken to improve the process for soliciting and developing proposals adequate? How well has JEA performed in arranging for the development of appropriate fundable sub-project proposals? What are the principal strengths and weaknesses of the most recent proposals submitted to the PCC? Has the PMU established effective review and approval criteria for sub-project and sub-grant activities? Are proposed sub-projects fitting the guidelines as specified in the Project Paper?
3. Why wasn't Component 3, which targeted financial institutions as a key vehicle to identify and solve problems related to increased output of commercial farms, implemented according to its design? Have the activities presently being funded out of this component addressed problems related to increased output of commercial farms?

**C. Accomplishments and Impact**

1. Has the project succeeded in providing assistance to its specified beneficiaries--small and medium sized farmers? Has it improved their access to services and other resources? Has project participation had an impact on the income generation capacity of participants? Has the approach of working with producer groups and associations been successful in reaching small and medium-sized farmers?

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### **Requirements of the Project EIA**

*Finding:* The requirements of the Project EIA were ignored in large part. As stated in the EIA, the requirements are meant to bring the Project into compliance with Sections 117, 118, and 119 of the Foreign Assistance Act.

*Conclusion:* The Project is in violation of the requirements of Sections 117, 118, and 119 of the Foreign Assistance Act, by its failure to implement the conditions of the Project EIA.

#### **7.7.5 Linkages Between Project Components**

*Findings:* The linkages between Project components in a general sense are fairly obvious. Simplistically, Element 1 finances production-based sub-projects to increase the quantity, quality, and profitability of selected export crops. Element 2, which is principally the renovation of the AMC facilities and the continuation of the Pre-clearance Program facilitates the exportation of the commodities produced under Element 1. Element 3 provides funds for the feasibility studies which later result in potential sub-projects. Finally, Element 4, the PMU, provides a management structure within which the first three elements operate. Additionally, as an analysis of the Project Implementation Letters (PILs) demonstrates (See Appendix 3.) funds have been shifted between and among the various elements of the Project as needs have arisen and targets of opportunity have been identified, especially during the first phase of the Project.

*Conclusions:* The first four elements of the Project are mutually supportive of one another in a general sense, however, the terms training, technical assistance, monitoring, and procurement have tended to be loosely defined which has allowed for several activities to be funded which only benefitted project implementation and the achievement of the Project Purpose in the broadest sense.

#### **7.7.6 Crop Selection**

*Finding:* All the sub-projects selected for support under the AESP are consistent with the criteria outlined in the PP. The criteria set forth in PP provide adequate guidelines for optimal crop selection. Due to its flexibility, the Project supports any crop which exhibits strong potential market opportunities as well as production potential.

*Conclusion:* **There is no major problem with crop selection.** Indeed, in the team's opinion, any crop including coffee, cocoa, and even bananas, should be supported as long as market premiums exist for, essentially, all that Jamaica can produce.

#### **7.7.7 Extension of the PACD**

*Finding:* Many of the Project's proposed activities took longer than anticipated to be implemented. The 15-month hiatus between the first and second phases of the Project also set back the implementation of the Project. Lastly, between 5 and 7 sub-projects will begin implementation over the next few months and will most likely not be fully sustainable by the current PACD of September 30, 1996.

are collected to fund all costs of stationing an APHIS officer in Jamaica after September, 1996? Evaluate the JEA program manager's and the APHIS officer's progress to date in establishing a permanent facility in Montego Bay and establishing a one-stop facility in Kingston. Make specific recommendations on ways to improve the management and operation of the facilities and to ensure that the pre-clearance program continues after September, 1996. Also provide recommendations as to how the IPM program can be expanded and extended within Jamaica.

2. Environmental Impact--How effective has the project been in implementing the recommendations and mitigation measures developed under the project's Environmental Assessment? Has the project's environmental monitoring function been effective? If not, how can it be strengthened?
3. Linkages between the project components--Are activities carried out under project components mutually supportive, especially the provision of assistance to producer associations to encourage export production under Component 1 and assistance provided to the GOJ and other providers of support services under Component 2?
4. Sustainability--How does this project address USAID's broad goal of sustainability? Which, if any, aspects of this project are sustainable?
5. Crop Selection--Have crops selected for support under the project been consistent with the criteria outlined in the PP? Have the criteria set forth in the PP proven able to provide adequate guidance for optimal crop selection?
6. Project Assistance Completion Date (PACD) Extension--Is the GOJ's request for a one year PACD no-funds extension to complete new sub-project activities justified?

The evaluation report shall provide findings and answers to these questions along with conclusions (interpretations and judgements) that are based on the findings, and recommendations emanating therefrom. The report shall also provide lessons learned that may emerge from the analysis.

### 8.1.2 The Role of the USAID Project Officer

*Issue:* Management of the Project has changed significantly with the hiring of five new professionals and the addition of a technical advisor. While the presence of the USAID Project Officer in Project management was required during the first phase, it is not as critical at this point in time and it adds an additional layer to the decision making process which is already too lengthy and drawn out. Also, the current PSC Project Officer is on a renewable 6-month contract and has not received training in project management.

*Recommendation:* The Mission's Project Officer should gradually withdraw from the management of the Project and assume the role of monitor; especially in regards to compliance with USAID regulations and procedures. Her position should be made permanent for the life of the project, and she should be given the opportunity to attend an AID-sponsored project management course.

### 8.1.3 Project Reporting

*Issue:* Neither monthly nor quarterly reports are prepared by the PMU. Rather, the minutes of the monthly PCC meetings are accepted in place of regular reports. These minutes do not provide the necessary information to adequately monitor the progress of the Project.

*Recommendation:* A system of monthly, or at a minimum quarterly, reporting should be instituted. These reports should contain sections on each of the sub-projects including select information provided by the Sub-project Information System (See below.), as well as sections such as the results of PCC meetings, the Pre-clearance Program, environmental monitoring, gender, training activities, and others. The Technical Advisor's weekly report should be attached.

### 8.1.4 Sub-Project Monitoring

*Issue:* There has been very little monitoring of the effectiveness or efficiency of sub-project operations, the operations of the environmental sub-contractor, or other sub-contractors. There have already been two consultancies which partially designed a computerized information system to track sub-projects. It remains uncompleted and unused.

The technician in charge of monitoring and evaluation of all of the MOA's projects is also charged with implementing AESP's sub-project monitoring system. However, the computer equipment in the Ministry's Data Bank dates to the days of 'main frames' and is impossibly obsolete. It is not practical for the technician to share a PC in the PMU offices as is currently the case.

*Recommendations:* The monitoring system designed by the VOCA consultants should be analyzed and updated, completed, and implemented as soon as possible. Sub-project monitoring criteria should be developed sub-projects and should be used to check periodically on the success or failure of the sub-projects in regard to the criteria. The system should include a baseline survey for sub-project beneficiaries which captures production, yield, and income data, as well as gender

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funded proposals). The evaluation team will have access to all records kept on the project by USAID, the Ministry of Agriculture, the PMU and individual sub-project implementors.

The team will work primarily in Kingston but will travel throughout the island to visit sub-project sites. The USAID Project Officer will be assigned to assist the evaluation team.

The evaluation schedule will require the two members of the evaluation team to spend five weeks in Jamaica. While in Jamaica, team members will be authorized and expected to work a six-day week. The team leader will finalize the evaluation report upon return to the contractor's home office. Evaluation activities will be scheduled as follows:

Week One: Arrival, entry briefing, initial introductions and site visits. Begin document review and interviews. The team will submit to the USAID project officer a workplan including an outline of work to be done, identifying individual responsibilities and specifying a time frame.

Weeks Two, Three and Four: Site visits, interviews and document review continue.

Week Five: Prepare and distribute draft report; brief Mission, PMU and MOA. This briefing should include findings, conclusions and recommendations. Comments made at the briefing will be incorporated, as appropriate, in the final draft.

Week Six: Prepare final evaluation report for submission to USAID. Final evaluation report should be submitted no later than two weeks from the team leader's departure from Jamaica.

The evaluation will commence on or about May 15, 1995.

#### V. REPORTING REQUIREMENTS:

##### AESP Evaluation Report

The evaluation report will include an Executive Summary, Project Identification Data Sheet, Table of Contents, Report Body and Appendices.

The Executive Summary will state the development objectives of AESP; purpose of the evaluation; methodology used; findings, conclusions and recommendations; and lessons learned about the design and implementation of this type of project.

The body of the report will include discussion of (1) the purpose and questions of the evaluation; (2) the economic, political and

**Recommendation:** In order that the revolving funds do not become decapitalized due to inflation and/or devaluation, and especially to avoid the atmosphere of the welfare programs of the past, an interest rate should be charged equal to at least the rate of inflation.

#### 8.2.4 PACD Extension

**Issue:** The Project lost approximately 15 months of implementation time between the first and second phases of its life. Organizing and implementing as many as seven new sub-projects dealing with small to medium farmers and non-traditional crops will require more than the current 15 months that the project has to run until its PACD.

**Recommendation:** The Evaluation Team recommends that the PACD of the Project be extended for one year until September 30, 1997.

#### 8.2.5 Disposition of Sub-project Vehicles

**Issue:** Several of the phase one sub-projects contained vehicles for use by extension agents, managers, and others. For the most part these vehicles are old, well-used, and high in maintenance costs. As the various phase one sub-projects are closed out there is a need for a decision as to what to do with these vehicles.

**Recommendation:** The Evaluation Team recommends that the vehicles purchased for use in phase one sub-projects be permanently transferred to the organizations and agencies where they are currently assigned.

### 8.3 ENVIRONMENT

#### 8.3.1 Environmental Assessments of Sub-Projects

**Issue:** Sub-projects that are considered for approval contain an environmental section that purports to be an assessment of possible impacts.

**Recommendation:** A real environmental assessment, carried out by the sub-contractor responsible for environmental issues, should be made for each sub-Project that is approved for funding, prior to any final approval or funding of such a sub-project.

#### 8.3.2 Environmental Monitoring of Sub-Projects

**Issue:** Environmental monitoring of ongoing sub-projects is to be carried out under the Ronco sub-contract. The contract expires in October 1995.

**Recommendation:** A contract for environmental monitoring beyond October 1995 should be let. Environmental monitoring under such a contract should comply with the Project EIA and include monitoring soil erosion and run-off, agro-chemical pollution of soils and water, impacts on natural vegetation (such as vegetation clearing or burning), bio-diversity, impacts on selected

rainfall directly hitting the soil. Mini-set yam production using grass mulch around and between rows, combined with the incorporation of fertilizer into the soil, provides for conservation of the soil and reduced pollution from fertilizer run-off.

Individual soil bunds for bananas and other tree crops, or the use of contours should be mandated in sub-projects. Field sanitation should be encouraged. Banana sleeve recycling and safe disposal should be requirements for any sub-projects using the sleeves. The use of organic fertilizers (again, dug in rather than surface-applied) should be encouraged wherever possible. Agro-forestry, especially using multiple-use plants, should be promoted.

### 8.3.6 Management of the Environmental Component

*Issue:* In the first phase of the Project the environment was treated by USAID and the PMU as an unimportant add-on, rendering the monitoring portion nearly useless.

*Recommendation:* The PMU and USAID should take a more direct interest in environmental monitoring under the Project. Coordination with in-country environmental organizations, such as NRCA and PCA should be developed. The environmental sub-contract should be restructured to emphasize effective and efficient monitoring, utilizing laboratories outside the country. The PMU should take responsibility for the direct management and oversight of the environmental component with assistance from the Project Officer and the Mission's Environmental Officer.

### 8.3.7 Environmental Training

*Issue:* Though several IPM training courses have been given, along with one CB course and some computer training, the training efforts apparently have not reached the local farmer level.

*Recommendation:* Any further training under the Project should be directed at the farmer level and should stress IPM and soil conservation along with pesticide application and use procedures and worker health and safety. Apparently an upcoming course will be directed at farmers.

### 8.3.8 Mitigation and Enforcement

*Issue:* Neither mitigation nor enforcement of mitigation measures has taken place in an effective manner.

*Recommendation:* Specific mitigation measures, submitted in sufficient detail, should be presented to the sub-project managers through the PMU. Those mitigation measures included in the Project EIA must be complied with. Mitigation efforts should then be monitored. Should mitigation measures not be followed, enforcement procedures should be developed and utilized to ensure the sound environmental practices are adhered to. Authority for enforcement is set forth in the Project EIA, allowing the Project Manager to cut the grant of a sub-project if there is non-compliance with environmental requirements.

require training on basic entomology to aid them in recognizing pests. PQ Inspectors should also collect and preserve the insects that they encounter on a day to day basis. The assistance of the USDA/APHIS Officer is also vital for this.

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*Issue:* The volume of crops exported through this program has increased considerably. When the "One Stop" facility begins to operate, additional PQ officers will be required. The PQ officers should have reliable transport, equipment, and tools. The exporters are already demanding more efficient service.

*Recommendations:* The Ministry of Agriculture needs to appoint six (6) more PQ Inspectors. Some of them should visit the field and packing houses to monitor, advise and take necessary steps to control pests. The Marketing Division should be allowed to use the JD\$7,500 which they are collecting as concession fees to provide reliable transport for PQ officers. The MOA should review compensation of PQ officers with a view of ensuring staff retention.

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*Issue:* The Export Complex Manager has far too many functions to perform. He alone does all the fumigation work. Ideally and per safety requirements for fumigation, two persons should be involved while fumigating.

*Recommendation:* The Concessionaire needs to appoint an assistant to the Manager who should be trained in fumigation.

#### 8.4.6 The Complexity of Management of the Pre-clearance Program

*Issue:* As previously mentioned, there are too many agencies with different interests who implement parts of this program. For efficient management, there needs to be effective coordination, communication and inter-personal relationships.

*Recommendation:* The JEA and MOA need to re-vitalize the Agricultural Export Complex Committee. If need be, a change of members should be made to suit the present situation. This committee should lead, monitor, and advise in solving the problems of the program. The

**APPENDIX 1**  
**EVALUATION SCOPE OF WORK**

ATTACHMENT I

SCOPE OF WORK

ACTIVITY TO BE EVALUATED

Name of Project:	Agricultural Export Services
Project	(AESP)
USAID Number:	532-0165
Authorized LOP Funding:	US\$10,000,000
Planned Completion Date:	September 30, 1996
Estimated Evaluation Dates:	June, 1995

I. PURPOSE OF THE EVALUATION

The purpose of this mid-term evaluation is to (1) assess and analyze project impact and progress to date toward achieving project goals, strategies and objectives; (2) identify any policy or implementation issues affecting implementation of the project, and propose corrective actions as appropriate; and (3) examine the project's validity in view of USAID's new strategic policy priorities.

II. BACKGROUND

The Agricultural Export Services Project (AESP) is a seven year, US\$10 million effort which began in September 1989. The PACD is September 30, 1996. The project's goal is to foster economic growth and equity in Jamaica. Its purpose is to increase the production and productivity of selected non-traditional and traditional agricultural exports, particularly those produced by small and medium sized farmers by improving their access to quality services and other resources.

The project strategy is to focus project resources to enhance productivity of export crops in whose production Jamaica has a comparative advantage by relieving constraints to export crop development and by improving/expanding export-related services. Essentially, this strategy is carried out through a two-prong effort. One focus is on working with public and private institutions that directly impact on export agriculture. The second focus is the pursuit of policy dialogue on a sectoral level, i.e., providing assistance on technical and institutional issues that impact directly on export agriculture.

Project resources have been focused on three distinct, but related, project components:

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**PIL #**

- 10 2/11/91 Approves Tryall Banana Development Sub-project using funds from Component 1 not to exceed US\$ 220,000. Purpose is to establish production of export quality bananas on 460 acres subdivided into 5 acre plots for distribution to selected farmers.
- 10A 7/15/91 Decreases amount approved in PIL 10 by US\$ 16,500 to allow USAID to procure one vehicle for use on the Tryall Banana Sub-project.
- 11 3/11/91 Approves the hiring of an accountant for the PMU.
- 12 5/28/91 Approves All Island Banana Growers' Association Sub-project not to exceed US\$ 750,000 from Component 1. US\$ 350,000 to be transferred from Component 3 to Component 1 to partially fund this sub-project.
- 13 7/30/91 Approves contract for architectural and engineering services to refurbish AMC installations.
- 14 7/25/91 Increases earmarked and committed funds for the implementation of recommendations made in the Environmental Assessment. Funding not to exceed US\$ 150,000, raised to US\$ 295,422, and to be taken from Component 2. US\$ 110,000 to be transferred from Component 6 (Contingencies) to Component 2.
- 15 9/16/91 Authorizes the expenditure of US\$ 10,450 for five private sector companies to attend an agricultural trade show in Boston.
- 16 8/20/91 Summarizes the requirements for Host Country Contracting procedures.
- 17 9/12/91 Designates new Mission representatives for the Project.
- 18 11/22/91 Approves Leather Leaf Fern Sub-project for technical assistance and inputs provided by a sub-contract to JAMPRO, not to exceed US\$ 128,800 from Component 3.
- 19 12/9/91 Approves Seed-stock Development Project for Beef Cattle at Minard Estates up to US\$ 249,245 to be taken from Component 2.
- 20 2/7/92 Cancels PIL 14 and transfers US\$ 150,000 from Component 6 (Contingencies) to Component 2.
- 21 Issued and then canceled.
- 22 1/7/92 Authorizes up to US\$ 30,000 to fund a feasibility study for the establishment of a hot water treatment facility for mangoes. Funds to come from Component 3.

bio-diversity of flora and fauna, assessment of potential issues in soil conservation, a description of forested areas (natural, secondary growth, etc), a survey of aquatic biota, and a description of social ecology issues. Potential adverse impacts should be identified and mitigative measures should be set forth for each of the above aspects. Means of monitoring should be described.

- d) training: the CB course under the RONCO contract should proceed. However, it must be directed at the farmer level and should take place in the field. It should contain aspects of buffer zone management. Any further IPM training must be directed at farmers and must be at a level appropriate to their understanding.
  - e) extension: particularly when the results of agro-chemical baselines are in, appropriate extension efforts must be designed to educate farmers on the use of pesticides. Public health officers should be involved and illustrations of potential effects on farmer health should be stressed. The ecological effects on aquatic and terrestrial biota should be illustrated using audio/visual materials wherever possible.
  - f) monitoring: once the program outlined under c) above has been carried out, monitoring should begin. However, for nearly all of the outlined factors it will not be necessary to monitor more than once or twice per year. Monthly monitoring is too expensive and would not serve the purpose of change-detection any better than would semi-annual or annual monitoring.
  - g) follow-up: should monitoring results show a deterioration in any of the parameters the Project would be obligated to consider cutting grants to sub-projects or taking other remedial action. Should improvements be indicated, an analysis of extension efforts should be made to determine which were most effective and the extension program may be re-designed to emphasize such practices.
  - h) liaison: there are many NGO's and governmental organizations interested, and responsible for, environmental protection activities. The PMU should liaise with these whenever possible and should seek their support and participation in the baseline sampling, extension and monitoring efforts. The EIA stresses the need to cooperate with outside agencies.
- 4) **Short-term Activities:** the RONCO contract remains in effect until October 1995. At that point the Project may wish to re-bid the activities or to redesign the contract with RONCO. Whatever the case, activities within the environment component must proceed until October in such a way that meaningful results are obtained. To do this the following actions are recommended:
- a) the IEE's for new sub-projects must be more thorough and must include the elements outlined in 3c above. A team approach, described above, should be used.
  - b) the Project must make a start on a, b, c, d, e and h above.

- c) for the RONCO contract re-design or re-bid, the requirements should be based on those in the EIA. The general ecological components should be carried out by an appropriately staffed team of Jamaican scientists. The pesticide sampling should be designed by experts from the US or elsewhere and sampling should be done by a US/Jamaican team. Analyses must be done in the US and results must be obtained swiftly. Training at the farmer level must be emphasized. Monitoring should be designed as outlined in 3 f and g above.
  - d) all appropriate environmental actions outlined in the EIA should become part of the sub-project agreements so members of the sub-project cooperatives or other bodies understand the need for compliance.
  - e) the PMU can begin to develop strategies for protection of lands (eg wetlands, native forests, secondary growth forests, hillsides, etc). This can be done in conjunction with RONCO and interested NGO's and government organizations.
  - f) in compliance with the EIA, the PMU can begin identifying farmers for training (particularly for the new course).
- 5) *Other activities:* it may be that the technical library requirement in the EIA has been partially complied with in the acquisition of FAIRS. Any further relevant information that comes in can be added.
- 6) *Old Samples:* unanalyzed pesticide samples from older sub-projects should be discarded as they have been kept too long in storage. No further samples should be taken until the program under 3c above is instituted. Those analyzing the presently held samples should be told not to do any further work on the samples.
- 7) *Cost:* we believe the primary concern should be an attempt to comply with the EIA since the Project to date is in such serious non-compliance. However, realizing that costs are an important factor, the Project can use current funding in the RONCO contract to begin the program outlined above. Thereafter, the main expense will be the pesticide sampling and analysis effort - the ecological survey side and monitoring can be done using Jamaican scientists and perhaps supervised university students, interested NGO's or other governmental organizations. Monitoring will only occur 1 - 2 times per year (depending on the specific factor), further training and extension efforts will be different in content but not necessarily cost. Overall, the effort should not be much more costly than the current RONCO contract, with the exception of the pesticide effort - however, this can be restricted to the smallest scientifically accepted sampling size. Given the money wasted on work that resulted in incomplete analyses, non-enforcement, and lack of compliance, a small additional cost for the pesticide program should not be a problem.

**APPENDIX 4**  
**ADDITIONAL ENVIRONMENTAL CONCERNS**

## APPENDIX 4

### ADDITIONAL ENVIRONMENTAL CONCERNS

#### SECTION A: A MONITORING SYSTEM FOR ENVIRONMENTAL FACTORS

**The monitoring system for the Project should take into account the following:**

- 1) Jamaica has high endemicity in its flora (40%), with great diversity and many endangered or threatened species (67 in the Blue Mountain area alone).
- 2) Bird life appears sparse though there are some 250 species. A large bird kill occurred on one of the banana estates a few years ago - the exact cause is unknown but pesticides may have been involved.
- 3) Jamaica has 16 species of rare, threatened or endangered fauna.
- 4) A thorough monitoring program should include monitoring flora and fauna.

#### **Pesticide Information:**

- 1) 50% of foliar and 90% of aerial spray could reach the soil surface.
- 2) One may find increased levels of pesticide residues in heavy soils.
- 3) Pesticides can negatively effect soil micro-flora and fauna.
- 4) Pesticide use can result in a loss of insect predators.
- 5) The relationship of dose and the effects on soil fauna is logarithmic.
- 6) The persistence of pesticide residues must be examined.
- 7) Regular spraying, as opposed to spraying on the basis of observed need, should be discouraged.

#### **Chemicals Used in Sub-projects:**

*Furadan* - toxic to fish and nearly water insoluble. The Project EIA restricts its use to granules (as opposed to liquid) with less than 10% active ingredient.

*Dimethoate* - toxic to fish and bees.

*Endosulphan* - very toxic to fish, birds, and bees and water insoluble.

*Paraquat* - slightly toxic to fish and birds, very dangerous to eyes. Not approved by the Project EIA.

*Monocrotophos* - moderately toxic to fish, highly toxic to bees and birds. water soluble. Not approved by the Project EIA.

*Metaldehyde* - water insoluble, combustible, hazardous to bees.

*Benlate* - toxic.

*Isazophos* - hazardous to bird, not to be used on sandy soils, water soluble, highly toxic.

#### **Use of Practices:**

- Pesticides should not be used near harvest time.
- Washing of equipment should not be done in rivers.
- Protective gear should be used when mixing, cleaning and spraying, and disposal.
- Instructions for mixing and use of each pesticide should be followed.
- Fertilizers should be dug into the soil, not laid on the soil surface.
- Soil testing should be done, where possible, to determine fertilizer requirements.

#### **SECTION B: ENVIRONMENTAL REQUIREMENTS OF THE PROJECT EIA**

The Project EIA was carried out in May 1990 by Tropical Research and Development. In the document three alternatives were investigated - the selected option for the environmental component is outlined below.

Near the end of the document the Project EIA stated that "it is essential that all future project evaluations determine the degree to which the project is in compliance with the recommendations made in this present EIA." This has been done in the main body of the evaluation report.

#### **General Requirements of the EIA:**

In order to **comply** with Sections 117, 118, and 119 of the Foreign Assistance Act, the following requirements were laid down in the Project EIA:

- 1) all approved sub-projects must contain specific criteria and measures to assure safe and correct use of agro-chemicals and conservation of soil, water, bio-diversity, and tropical forests.
- 2) training for GOJ personnel, extension staff from grower associations and other groups in agro-chemical use, soil and water conservation, wild land buffer zone management. A technical library and resource center on these topics should be developed.
- 3) technical and financial support to private entities, NGO's and related entities for collection, analysis and maintenance of data on environmental conditions.

- 4) work with other projects to identify critical habitats and ecologically sensitive areas presently or potentially threatened by export agricultural field activities. Development of strategies for implementing and maintaining protection zones in these areas.
- 5) financial and technical support for demonstration areas for safe agro-chemical use, soil and water conservation and buffer zone management.
- 6) financial and technical support to local and national NGO's and others for development and implementation of environmental education programs.

Numbers 1 - 4 were requirements and 5 and 6 were recommendations. For the most part, the required elements were implemented in small part only and the recommended elements were not implemented at all.

**Mitigation measures set forth in the Project EIA were as follows:**

- 1) contract an Environmental Management Specialist and a Pesticide Use/IPM Specialist for a minimum of 4 years each.
- 2) provide short-term TA in a) wildlife and bio-diversity, b) soil and water conservation, c) on-farm forestry and tropical forest/buffer zone management, d) aquatic biology, e) water quality, and f) social ecology.
- 3) PMU to identify farmers for training
- 4) PMU to initiate environmental education strategy and plan and begin the organization of technical data and a resource center to house same.
- 5) PMU to assure no net loss of wetlands.
- 6) PMU to assure no native forests felled or cleared.
- 7) aquaculture projects to have no adverse impacts on wetlands.
- 8) IEE for each sub-project
- 9) no cultivation on slopes greater than 40 percent and all sub-projects to adopt soil conservation methods.
- 10) no clearing of mature secondary or primary tropical forests.
- 11) PMU to design environmental monitoring.
- 12) PMU to identify ecologically sensitive critical habitats that may be threatened.

In large part, most of these mitigative measures were not implemented by the Project.

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## SECTION C: RECOMMENDATIONS ON HOW TO PROCEED WITH COMPLIANCE WITH THE EIA.

As stated previously, the EIA set out several points with which the Project was to comply. In order to comply as much as possible with these requirements during the remainder of the Project's life, the following actions should be taken:

- 1) *Authority:* the EIA clearly puts the responsibility for compliance at the level of the PMU in the first instance. USAID obviously must insure such compliance but the PMU should carry out the activities. The general strategy for compliance should be a joint effort between the PMU and the Project Officer. It is critical that the strategy for compliance be developed immediately and that compliance activities begin as soon as possible. Since the Project is in such serious non-compliance, further delays are inexcusable.
- 2) *Focus:* given the unfortunate history of the environment component, it would be unwise to go back over past projects in an attempt to partially comply, while focussing on full compliance for new projects. Therefore, it is recommended that all efforts be expended in an effort to comply with the EIA on those sub-projects currently operational and those that will come on-line over the remainder of the Project life.
- 3) *Long-Term Activities:* over the remainder of the Project life the Project must attempt to comply as fully as possible (given the remaining time and other resources) with the EIA requirements. To do this, the following activities must be done:
  - a) a strategy must be developed (jointly by PMU and the Project Officer, with other USAID input) to address the EIA requirements in the remaining time. The strategy must address issues of agro-chemical pollution, soil conservation, bio-diversity, habitat protection, etc - as outlined in the EIA.
  - b) for agro-chemicals: a realistic program of baseline sampling for ongoing and upcoming sub-projects must be developed. This should include sampling of water, soils, stream bed silts, aquatic fauna, offshore (including estuary, mangrove swamps, river mouths) bottom sampling, and cholinesterase sampling of farmers. This should be begun as soon as possible by a qualified group of samplers and the analysis should be done in the US. There are several governmental organizations and NGO's interested in pesticide problems. These may be interested in assisting at the sampling level. Some brief training in sampling techniques probably will be necessary. In the case of stream beds and offshore sampling, nitrates, phosphates and other fertilizer elements, as well as pesticides, should be tested for.
  - c) other environmental factors: for each of the ongoing or upcoming sub-projects a small team of experts must carry out a survey of critical habitats, the bio-diversity of flora and fauna, soil conservation issues of importance (on-farm, along roadways, along streams, etc), forestry characteristics, aquatic biota, and issues of social ecology, as required by the EIA. This should be done using Jamaican scientists wherever possible. At this point, the level of effort should be greater than a reconnaissance-level study, with habitat categorization, listing of any endangered, threatened or rare species of flora or fauna, a visual assessment of the

**APPENDIX 5**

**PEOPLE AND ORGANIZATIONS CONTACTED**

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## APPENDIX 5

### PEOPLE AND ORGANIZATIONS CONTACTED

#### Non-governmental Organizations:

Ms. C. Levy	Gosse Bird Club
Peace Corps Volunteer	Portland Environmental Protection Assoc.
Dr. Terrance Thomas	Environmental Foundation of Jamaica

#### Governmental Organizations:

Mr. Clarence Franklin	Permanent Secretary, MOA
Mr. Moses Smith	Data Bank, MOA
Mr. Medley	Natural Resources Conservation Authority
Mr. Wright	
Dr. M. Barrett	
Dr. Paul Whyllie	Registrar, Pesticide Control Authority
Mr. Watson	Environmental Control Division, MOH
Mr. Evans	
Mr. Campbell	
Mr. Hopeton Fraiser	RADA
Mr. Shand	"
Mr. Silas Coley	Plant Quarantine Officer
Mr. L. Brown	
Mr. Henry	
Mr. Walton	
Mr. N. Baugh	
Mr. Lenny Morgan	Agricultural Marketing Corporation
Mrs. Audry Wright	JAMPRO
Mrs. Marie Strachen	Planning Unit, MOA
Mr. Fabian Edman	Plant Quarantine, MOA
Mrs. Valarie Roberts	Marketing Unit, MOA
Mr. Hugh Graham	NADF

#### Project Management Unit:

Mr. A.C. Allen	Project Manager, AESP
Ms. Paulette Lyons	Deputy Project Manager, AESP
Mr. Earl Guise	Technical Advisor, AESP
Mr. Creary	Administrator/Accountant

#### Commodity Boards:

Mr. Castleton Brown	Cocoa Industry Board
Mr. Lowell G. Brown	Coffee Industry Board
Mr. Lenworth Henery	Coffee Industry Board
Mr. Joseph Walton	" " "

**Farmers:**

Mr. Ricky Wates	Papaya Grower and Exporter
Mr. Piers Harvey	
Mr. Paul Marchette	
Mr. Stewart	
Mr. Plunkett	Tryall Banana Cooperative
Mr. Delroy Bailey	Harvest Planter Cooperative
Mr. A. Buchanan	WEXFARM
Mr. Lewis	WEXFARM
Mr. Glasgow	"
Mr. Carlton Cunningham	Outback Farmers' Organization
Mr. A. S. Sinclair	Mandeville Coffee Cooperative
Mr. P. Declu	
Mr. Sinclair	
Mr. Osmand Smith	Rio Grande Cooperative

**USAID:**

Mr. Michael Kaiser	Acting Head, ONRAD
Mr. Steve Reeves	Environmental Officer, ONRAD
Ms. Jennifer Rousseau	Project Officer, ONRAD
Ms. Jane Ellis	Project Officer, ONRAD
Mr. Larry Tengan	USDA/APHIS Officer
Ms. Shirley Hunter	Controller
Ms. Joanne Feldman Lawrence	OPPD
Ms. Marsha Rigazio	OGD/Training
Mr. Peter Boothe	Voucher Section
Ms. Donna Robertson	Project Accountant

**USDA/APHIS:**

Mr. Darcy Axe	Head, Pre-clearance Program
Mr. David Lowe	Pre-Clearance Officer
Mr. B.J. Lewis	Pre-clearance Officer

**Others:**

Ms. Pauline R. Gray	Executive Director, JEA
Mr. Charles Reid	Project Development Officer, JEA
Dr. Herman Hamilton	RONCO
Mr. Hernal L. Hamilton	Managing Director, JETCO
Mr. Conrad Douglas	Conrad Douglas and Associates
Dr. M. Chutter	AfriDev - aquatic ecologist
Dr. Janice Reid	CARDI
Dr. Lindsay	CARDI
Ms. Hyacinth Chin-Sue	IICA
Dr. Armando Reyes-Pacheco	IICA

Ms. Marjorie Stair  
Mr. Arthur Murray  
Mr. Terrance J. McWhinney  
Mr. Joe Suah  
Mr. Conrad Ornstein  
Dr. Robert Hartman  
Dr. Clarence Barfield

WESTBAN  
WESTBAN  
Agro-Partners Ltd.  
HAP  
DEMO  
International Agricultural Programs, UofF  
Department of Entomology, U of Florida

**APPENDIX 6**  
**BIBLIOGRAPHY**

**APPENDIX 6**  
**BIBLIOGRAPHY**

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Prescribed Description or Category of Enterprise, Construction or Development in a Prescribed  
Area Which Will Require Permit in Accordance With Section 9 and May Require EIA in  
Accordance With Section 10. NRCA.

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Poole, Allen, "Yam and Dasheen Export Marketing Study," VOCA, 11/94.

**APPENDIX 7**

**SCHEDULE OF EVALUATION TEAM**

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## APPENDIX 7

### SCHEDULE OF EVALUATION TEAM

- MAY**
- 15 Jackson arrives.
  - 16 Jackson and Jayasingh receive briefing from Mission and PMU staff. Begin review of project documents.
  - 17 Review of project documents. Initial meeting with USDA/APHIS team.
  - 18 Field visit to Port Maria Papaya farm, Harvest Planter, Advanced Technologies (bell pepper, tomato, papaya, and packing facilities)
  - 19 Field visit to pre-inspection facility at Montego Bay Airport, visits to yam, sweet potato, and pepper farmers. Joint meeting with Papaya Growers' Association and USDA/APHIS team at RADA offices, Falmouth.
  - 20 Review of project documents, preparation of evaluation work plan.
  - 21 Review of project documents, preparation of evaluation work plan.
  - 22 Attend USDA/APHIS final presentation. Meet with AMC, visit Norman Manley International Airport export facility.
  - 23 Review documents.
  - 24 Meetings in Kingston; JEA, Kingston Airport Facility.
  - 25 Meetings in Kingston; JAMPRO, PMU.
  - 26 Meetings in Kingston; MOA, RADA, PS
  - 27 Meeting with CARDI, Review of Documents.
  - 28 Review of Documents. Hennessey arrives.
  - 29 Meetings in Kingston; IICA, JEA, MOH.
  - 30 Field Trip to Rio Grande.
  - 31 Field Trip to Shirley Castle, Claverty Cottage.

- JUNE**
- 1** Field Trip to Tryall, Harvest Planters, PCC Meeting.
  - 2** Field Trip to WESBAN.
  - 3** Field Trip to WEXFARM.
  - 4** Field Trip to Outback.
  - 5** Field Trip to Mandeville.
  - 6** Meetings in Kingston; MOA, PMU.
  - 7** Meetings in Kingston; USAID. Preparation of report outline.
  - 8** Meetings in Kingston, attend JEA Pre-Clearance Seminar. Meetings with RONCO Environmentalist, Mission Ecologist.
  - 9** Drafting evaluation report.
  - 10** Drafting evaluation report.
  - 11** Drafting evaluation report.
  - 12** Drafting evaluation report. First draft delivered to Mission, PMU.
  - 13** Preparation of Annexes.
  - 14** Preparation of Annexes.
  - 15** First Draft Review and Feedback; Mission and PMU.
  - 16** Incorporation of Feedback.
  - 17** Evaluation Team disburses.
  - 19** Jackson completes Evaluation Report, prepares Executive Summary and PES.

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**PIL #**

- 23 2/3/92 Approves Revitalization of the Non-Blue Mountain Coffee Cooperative Societies sub-project not to exceed US\$148,650 from Component 1. Sub-contract to be signed with the Coffee Industry Board.
- 24 2/7/92 Approves Acceleration of Cocoa Production in Richmond Fermentary Area sub-project, not to exceed US\$ 98,580, from Component 1.
- 25 3/19/92 Cancels PIL 22 which "earmarked and committed" US\$ 30,000 for a feasibility study on hot water dip for mangoes, and "approves" the same US\$ 30,000.
- 26 7/28/92 Earmarks and commits an additional US\$ 300,000 to the All Island Banana Growers Association sub-project funded under PIL 12.
- 27 5/7/92 Approves travel and per diem for a USDA/APHIS employee to assist in setting up a Pre-clearance Exporters' Association, not to exceed US\$ 2,980.
- 28 8/24/92 Earmarks and commits funds up to US\$ 318,182 for the Western Banana Development Sub-project for the development of 3,000 acres of bananas. Funds to be provided from Component 1.
- 29 7/1/92 Advises Ministry of Finance of new AID guidelines for audits of recipient organizations.
- 30 7/2/92 Provides guidance for host country contracting for an Environmental Appraisal and Environmental Impact Assessment of Shirley Castle/Claverty Cottage Coffee Project.
- 31 8/10/92 Authorizes the transfer of US\$ 100,000 from Component 2, US\$ 100,000 from Component 3, US\$ 100,000 from Component 5, and US\$ 100,000 from Component 6 to Component 1 in order to fund new sub-projects.
- 32 8/10/92 Earmarks and commits up to US\$ 12,350 for five private sector companies to attend a Produce Marketing Exposition in Denver, Colorado.
- 33 10/20/92 Approves request to repair the sliding doors of the fumigation chamber at Norman Manley International Airport for up to US\$ 650.
- 34 Not Issued.
- 35 12/30/92 Proposed the hiring of a U.S. technical advisor to the PMU, the position to be incrementally funded up to US\$ 350,000. Scope of Work attached. Also proposed the creation of a local hire Deputy Director/Field Manager.
- 36 4/20/93 Earmarks US\$ 12,000 for three individuals to attend the Agricultural Biotechnology for Sustainable Productivity Seminar.

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**PIL #**

- 37 Not Issued. Although PIL 41 refers to it as approval to transfer US\$ 64,000 from Component 5 (Evaluation and Audit) to Component 2. Further states that PIL 37 was never signed.
- 38 5/25/93 Agrees with a letter from the Permanent Secretary in taking exception to the title of Project Manager stipulated in PIL 37 for the person within the Mission responsible for Project oversight. Proposes the new title of Project Management Advisor.
- 39 6/3/93 Approves the extension of a Limited Scope Grant Agreement with CARDI by three months.
- 40 Canceled.
- 41 6/18/93 Refers to PILs 37 and 38 and suggests that the Mission designated employee be titled "Project Specialist". Furthermore, requests the transfer of US\$ 64,000 referred to in PIL 37 which was never signed.
- 42 7/9/93 Earmarks up to US\$ 31,501 to conduct the environmental assessment mentioned in PIL 30 of the Claverty Cottage and Shirley Castle areas which are in the Blue Mountain Coffee Development Program.
- 43 7/26/93 Transfers US\$ 6,000 from Component 6 (Contingencies) to Component 4 (PMU) to pay for the travel costs of four candidates for the position of Technical Advisor.
- 44 8/10/93 Advises the Permanent Secretary of a change of personnel in the Mission causing a change in the alternative representative position.
- 45 8/12/93 Advises the Permanent Secretary as to AID's Standard Provisions which address the procedures to be followed for use and control of project commodities.
- 46 8/11/93 Approves the selection of a contractor for repairs to the cold rooms at the Norman Manley International Airport.
- 47 11/16/93 Agrees to increase the local currency contribution to the National Yam Export Development Project by J\$ 1,849,383 due to inflation and the devaluation of the Jamaican dollar. Due to the devaluation, this action did not increase the US dollar amount of the sub-project.
- 48 Not Issued.
- 49 Not Issued.
- 50 8/30/93 Increases the local currency amount earmarked for Component 4 (PMU) by J\$ 2,065,908 due to devaluation. This does not increase the overall amount in US dollars.

**PIL #**

- 51 9/14/93 Transfers US\$ 63,683 from Component 6 to Component 2 to cover the costs of the RONCO environmental monitoring function for FY 94. This action fully depletes Component 6.
- 52 8/30/93 Advises CARDI as to the procedures for use and control of computer equipment provided to Herman Hamilton of RONCO to conduct environmental monitoring.
- 53 9/13/93 Authorizes up to US\$ 23,550 to repair the cold rooms at Norman Manley International Airport. Ties into PIL 46.
- 54 Not issued.
- 55 10/5/93 Authorizes the creation of the position of Deputy Project Manager/Field Coordinator and upgrades the existing Clerical Officer to that of Accounts Clerk at the PMU.
- 56 Not issued.
- 57 11/29/93 Agrees to increase the local currency budget for the Acceleration of Cocoa Production at Richmond Fermentary sub-project. This is due to devaluation and does not cause the US\$ ceiling to increase.
- 58 Not issued.
- 59 4/22/94 Agrees to increase the local currency contribution to the refurbishment of AMC facilities due to inflation. Also agrees to extend the completion date by 11 months due to the default of the original engineering firm. This did not increase the US dollar contribution to the sub-project.
- 60 12/7/93 Provides guidance as to the use and disposition of project vehicles.
- 61 Not issued.
- 62 12/6/93 Specifies method of payment for PMU Technical Advisor.
- 63 12/21/93 Informs the Permanent Secretary that the Mission representative to the PCC is to be an **ex-officio**, non-voting member.
- 64 Not issued.
- 65 1/25/94 Agrees to increase the local currency contribution to the WESTBAN Production Sub-project by J\$ 3.5 million.

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PIL #

- 66 2/22/94 Earmarks US\$ 7,381 to fund a course given by the University of the West Indies titled, Management of Perishables - Key Aspects of Post Harvest Handling and Marketing. Funds to be taken from Component 3.
- 67 3/14/94 Earmarks US\$ 3,807 in local currency to pay higher salaries to clerks working for the Non-Blue Mountain Coffee Cooperative sub-project due to devaluation.
- 68 4/20/94 Earmarks US\$ 2,134 to pay the salary of the Accounting Clerk approved in PIL 55.
- 69 3/16/94 Extends the completion date of the Acceleration of Cocoa Production in the Richmond Fermentary Area Sub-project by six months.
- 70 4/14/95 De-earmarks and de-commits US\$ 259,744.85 previously earmarked for the All Island Banana Growers Association Sub-project in PILs 12 and 26. This was the amount 'left over' in US dollars due to devaluation. The local currency ceiling for the sub-project was spent in its entirety.
- 71 4/11/94 De-earmarks and de-commits US\$ 48,135.33 earmarked to the Seed Stock Development Sub-project. Although the entire local currency budget was spent, due to devaluation this amount in US dollars was left over. The PCC agreed not to further fund the sub-project due to the GOJ's decision not to privatize Minard Estate.
- 72 4/14/94 De-earmarks and de-commits US\$ 100,059.18 previously earmarked for the Provision of Technical Assistance to Growers of Leather Leaf Fern. These funds were 'left over' after the sub-project was completed.
- 73 5/6/94 Re-requests a copy of the MOA's Commodity Control System Description requested in PILs 45 and 60. As of the date of this PIL no description had been received.
- 74 6/13/94 Advises the Permanent Secretary of the status of the Pre-clearance Program with the intention of the JEA assuming the program's entire operating costs by first quarter 1996.
- 75 6/13/94 Same as PIL 74 but addressed to the Executive Director of the JEA.
- 76 10/6/94 Agrees to purchase one forklift for use at the Norman Manley Pre-clearance facility if the MOA agrees to purchase a forklift currently on loan from the JEA. Also provides a list of activities that the MOA should complete in order to receive the Project-financed forklift including repairs at the Norman Manley facility, permission for the JEA to charge a cess to its members, and an explicit commitment to work with the JEA to establish a pre-clearance facility at the Montego Bay Airport.
- 77 12/1/94 Informs the Deputy Prime Minister and Minister of Agriculture of the urgent need to improve the facilities for pre-clearance at the Montego Bay Airport as per USDA requirements. Any arrangement must be guaranteed for two years.

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- 78 1/23/95 Transfers remaining obligated funds between components to fund the RONCO contract and the USDA/APHIS contract. Also transfers funds to component 4 for its operations during FY 95.
- 79 2/6/95 Approves budget and work plan, and commits funds for FY 95. However, only approves of PMU expenses authorized by PILs 5, 55, and 68. Additionally, reduces the number of overseas field trips citing cuts in the Mission's budget. Also, approves two sub-projects; the Harvest Planters Co-operative Society and the Western Export Farmers and producers Association (WEXFAM). This PIL approves US\$ 700,000 for sub-project activities during FY 95, including US\$ 192,000 for Harvest Planters, and US\$ 176,000 for WEXFAM.
- 80 Not issued.
- 81 4/3/95 Approves a no cost extension to the Lowland Coffee Co-operative Rehabilitation Sub-project of eight months.
- 82 4/13/95 Requests concurrence from the Permanent Secretary to: earmark US\$ 25,392.83 to the Acceleration of Cocoa Production at Richmond Fermentary; reduces the de-earmarking of funds to the Seed Stock Development, Minard Estates; and, reduces the de-earmarking of funds to the All Island Banana Growers Association.
- 83 5/12/95 Approves an increase in the local currency budget of J\$ 5,397,700 for improvements in the AMC level 4 facility.

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**APPENDIX 8**

**SUBPROJECT SELECTION METHODOLOGY**

## APPENDIX 8

### SUBPROJECT SELECTION METHODOLOGY

The following sub-project selection methodology was employed by a representative group of eight professionals designated by the PCC to conduct an analysis of the sub-projects and come up with recommendations as to their priority ranking for funding under the AESP. Each sub-project is evaluated separately against 13 variables which had been previously weighted as to their desirability. Variable by variable and sub-project by sub-project, each participant was asked his/her number of points out of the maximum number given to each variable. Simple averages per variable and per sub-project were then calculated and scored as follows: (If the reader is interested,

<b>Sub-project Selection Criteria Worksheet</b>									
		<b>Max. No. Points</b>	<b>High -gate</b>	<b>Bath</b>	<b>Rio Grande</b>	<b>Aqua- culture</b>	<b>Anth- urium</b>	<b>Outback</b>	<b>Thetford</b>
1	Diversification of crops within subproject	8	6.57	8.00	7.75	1.44	0.88	7.88	7.29
2	Diversification of crops within AESP	5	3.86	3.00	2.13	5.00	5.00	3.00	4.50
3	Existing Infra.	(8)							
	a) Domestic Water	3	3.00	3.00	3.00	3.00	3.00	1.25	1.50
	b) Office/Storage	1	0.00	0.50	1.00	1.00	1.00	0.00	0.00
	c) Packing House	1	0.00	0.68	1.00	1.00	1.00	0.00	0.00
	d) Irrigation Pot.	3	2.50	1.57	2.63	2.13	3.00	1.88	1.75
4	Job Creation	10	8.50	8.57	9.00	3.00	3.13	8.50	8.88
5	Accessibility to Farms	5	4.42	4.42	3.31	5.00	5.00	2.25	5.00
6	Stage of Group Dev./Organ. Readiness	8	6.67	7.43	6.75	6.500	2.25	4.57	7.00
7	Risk of Crop/Market Failure	5	2.83	3.12	3.13	4.00	2.63	3.00	2.18
8	Profitability/IRR	5	4.25	4.378	4.25	4.00	4.00	4.00	3.31
10	# of Beneficiaries	10	8.50	8.63	9.25	2.14	1.75	8.25	8.50
11	Projected Foreign Exchange Earnings	10	8.83	8.00	7.75	9.00	7.38	8.38	7.25
12	Grant Amount/Bene.	10	5.86	6.63	8.75	2.43	0.88	7.13	8.63
13	Group Cohesion: Proactive, Leadership, Equity	10	8.00	8.88	9.00	6.86	2.13	7.38	7.75
<b>TOTAL</b>		<b>100</b>	<b>79.29</b>	<b>82.82</b>	<b>84.70</b>	<b>60.75</b>	<b>44.28</b>	<b>72.90</b>	<b>78.29</b>
<b>PRIORITY RANKING</b>			<b>3</b>	<b>2</b>	<b>1</b>	<b>6</b>	<b>7</b>	<b>5</b>	<b>4</b>