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AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

1. TRANSACTION CODE: C (A = Add, C = Change, D = Delete)
Amendment Number: ONE
DOCUMENT CODE: 3

COUNTRY/ENTITY: Cape Verde

3. PROJECT NUMBER: 655-0011

4. BUREAU/OFFICE: AFR 06

5. PROJECT TITLE (maximum 40 characters): FOOD CROP RESEARCH

6. PROJECT ASSISTANCE COMPLETION DATE (PACD): MM 06 DD 30 YY 90

7. ESTIMATED DATE OF OBLIGATION (Under 'B.' below, enter 1, 2, 3, or 4)
A. Initial FY 82 B. Quarter 4 C. Final FY 87

8. COSTS ($000 OR EQUIVALENT $1 =)

A. FUNDING SOURCE	FIRST FY B. FX	C. L/C	D. Total	LIFE OF PROJECT E. FX	F. L/C	G. Total
AID Appropriated Total	1,089		1,089	4,438	250	4,688
(Grant)	(1,089)	( )	(1,089)	( )	( )	( )
(Loan)	( )	( )	( )	( )	( )	( )
Other U.S. 1.						
Other U.S. 2.						
Host Country					2,021	2,021
Other Donor(s)						
TOTALS	1,089		1,089	4,438	2,271	6,709

9. SCHEDULE OF AID FUNDING ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE 1. Grant	2. Loan	D. OBLIGATIONS TO DATE 1. Grant	2. Loan	E. AMOUNT APPROVED THIS ACTION 1. Grant	2. Loan	F. LIFE OF PROJECT 1. Grant	2. Loan
1) SH	141	968		3,688		1,000		4,688	
2)									
3)									
4)									
TOTALS				3,688		1,000		4,688	

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each): 721, 876

11. SECONDARY PURPOSE CODE

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)
A. Code: R/AG, XII
B. Amount

13. PROJECT PURPOSE (maximum 480 characters)

To assist the GOCV to develop an adaptive research capacity at the National Institute for Agricultural Research (INIA)

14. SCHEDULED EVALUATIONS
Interim MM 08 YY 85, MM 06 YY 86 Final MM 03 YY 90

15. SOURCE/ORIGIN OF GOODS AND SERVICES
☐ 000 ☒ 941 ☒ Local ☐ Other (Specify)

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a ____ page PP Amendment.)

A. LOP funding increased by $1,000,000 to continue technical and financial support to INIA

B. PACD extended to 6/30/90 from original 9/30/87.

17. APPROVED BY*
Signature: August HARTMAN
Title: Acting AID Representative/ Praia
Date Signed: MM 05 DD 21 YY 87

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION
MM DD YY

* REDSO/WCA Director concurrence granted per Abidjan 11505 (Attached)

* REDSO/WAAC Controller concurrence granted per Abidjan 11242 (Attached)

PROJECT PAPER SUPPLEMENT

CAPE VERDE FOOD CROP RESEARCH PROJECT
(655-0011)

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PP SUPPLEMENT

A. Background: The Food Crop Research Project was authorized on September 30, 1982 at a LOP funding level of $3.688 million for the purpose of assisting the Government of Cape Verde to develop an adaptive research capacity at its Center for Agrarian Studies (now National Institute for Agricultural Research - INIA). With the assistance of BIFAD and its contacts with Title XII institutions, AID signed a four-year contract with the University of Arizona at Tucson to provide technical assistance and to implement the project's degree participant training component. Both the PACD for the project and the expiration date for the University of Arizona contract are October 1, 1987.

B. Proposed Project Modifications:

The essence of the proposed modification is its extension of time with continued AID financed support during the extension. While the level of AID financed support remains fairly constant, some changes in types of support are needed. This proposed amendment will provide:

- equipment support to returning scientists for laboratory and on-farm experimentation;

- one long-term participant (PHD) in Brazil at the Embrapa, one long-term participant (MS) in US, and limited short-term training/seminars throughout the remainder of project;

- the addition of a food crops production economic survey; the extension of the University of Arizona's team leader and soil scientist and additional short-term consultancies to provide program continuity until their counterparts finish their academic programs;

- and, expansion of the project's coverage to include integrated pest management activities.

In addition to increasing the LOP funding by $ 1 million and extending the PACD by 33 months, the proposed PP Supplement will modify the project as noted below.

(1) Project purpose - project purpose remains as stated in the project agreement which is "to build the adaptive research capacity of the Center for Agrarian Studies (now INIA)".

(2) Revised Logical Framework - As the logframe in the original approved PP was incomplete and inconsistent with project agreement, the logframe has been revised. The purpose statement in the log frame has been taken from the project grant agreement. Additional outputs were added to reflect the new funding increment. Further elaboration of important assumptions and objectively verifiable indicators, etc. are also included.

(3) Revised Implementation Plan - The revised implementation identifies key implementation actions for the remainder of the project, incorporates an updated plan of work for INIA research activities as Annex D of the PP Supplement and reflects the extension of the PACD.

(4) Revised Financial Plan - The financial plan is revised detailing the additional funds including earmarkings and provisions for a project evaluation/audit; and,

(5) Draft Training Plan, Commodity Lists and Contract Scopes of Work are included in the PP Supplement and its annexes.

C. Project Purpose and Rationale: The purpose stated on the Project Paper Facesheet is inconsistent with the purpose as presented on the logical framework. Both are inconsistent with the purpose as described in the Project Grant Agreement, which is to assist the Government of Cape Verde to develop an adaptive research capability at the National Institute for Agricultural Research (INIA).

This is consistent with the guidance provided by the PID approval cable to redirect the project's priorities away from production and extension. From its beginnings, the project has been implemented as an institution building project, as evidenced by the almost exclusive training and technical assistance inputs. Furthermore, the project was evaluated in terms of its accomplishments in institution building.[1] Hence, the purpose of the project has not been changed. Rather, a series of what can only be described as editorial corrections have been made for the purpose of consistency. This PP amendment facesheet and Logframe have all been amended to this effect.

The rationale for the extension is based on the demonstrated need to provide substantially increased commodity support and continued technical assistance to INIA and its newly returned degree participants in developing sound long-term research programs for food crops. The original project, while successful in training a core staff and establishing initial research plans and strategies, made only limited provision for essential commodities (vehicles, laboratory equipment, etc.) and failed to reflect the full range of technical requirements for an agricultural research institute in its developmental stages. Such an extension is warranted at this time based on recommendations contained in the recent project evaluation, the demonstrated GOCV commitment to continuing agricultural research, and INIA's development support requirements.

Two external project evaluations have taken place: the first of which was performed by Purdue in 1984, and the second, a mid-term evaluation, which was recently performed by Resource Development Associates (RDA) International, Inc. Both evaluations supported the concept of continued support to agricultural research in Cape Verde, and the more comprehensive RDA evaluation had the following specific comments, drawn from the executive summary:

(1) The need to develop one national agriculture research center based on the Cape Verde support capacity, both physical and human resources, is very sound.

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(1) RDA International, Inc.; Draft Mid-Term Evaluation for Food Crop Research Project Cape Verde; 1986.

(2) The project has made measurable progress, during this first phase, toward the purpose of building an institution with the capacity to demonstrate impact toward assisting the GOCV in attaining its development goal of increased food production.

(3) The project setting is in the National Agriculture Research Institute which has administrative and fiscal autonomy and appears to be based on good concepts of institution building. The Institute is less than ten years old, and offers an excellent opportunity to shape future research.

(4) Technical justification for the development of a viable national agricultural research center in Cape Verde for internal adaptive research is especially sound and must continue to receive USAID support. Cape Verde is more culturally and environmentally similar to some regions of Central and South America than to Africa, therefore, technology transfer from continental Africa would not always be suitable.

Since the establishment of the Center for Agrarian Studies in 1978 (formerly a vocational training center for agricultural foremen under Portuguese administration), the GOCV has made considerable investment, both financial and philosophical, in the future of agricultural research in Cape Verde. In 1984, the Government granted a special legal status to the Center, renamed the National Institute for Agricultural Research (INIA), separating it administratively from the Ministry of Rural Development as a semi-autonomous institute. Along with this administrative separation came financial autonomy in the form of a separate budget. The annual operating budget of INIA has thus grown several orders of magnitude from its establishment to over $200,000/year, independent of donor financing.

Among INIA's activities today are ongoing research trials in a variety of food crops ranging from cassava to citrus fruits, training of extension personnel, diagnostic laboratories for soils and crop protection, and agricultural research conferences hosting delegations from other developing countries.

AID support to INIA began as an ambitious graduate-level staff training and academic technical assistance project supplied from the University of Arizona under Title XII. INIA has since developed a unique relationship with the University of Arizona, due in large part to the similarity of agroclimatological conditions and the wide popularity the University enjoys among Cape Verdeans. Beyond the contractual relationship, University of Arizona and INIA have collaborated on several research projects, including the role of women in agriculture in Cape Verde.

Cape Verde is among the poorest countries in the world suffering from extreme adverse climatic conditions and the lack of a natural resource base capable of supporting its population. Although the skill with which the GOCV administers its foreign exchange reserves is to be commended, there is little doubt that a host of priorities exist that compete with the needs of agricultural research. Accordingly, INIA is understandably limited in its ability to procure the equipment required to support its scientists as they return from their training in the U.S. It is primarily to this need that the Food Crop Research extension responds.

D. Technical Description: AID's Agricultural Strategy Paper states that agriculture provides income and employment for over two-thirds of the population of Africa. The performance of agriculture indicates a decline in per capita food production since 1960 which is attributable to:

1. Unfavorable physical environment and a harsh, unpredictable climate;
2. Unfavorable government policies affecting inputs, marketing, trade and exchanges which do not stimulate agricultural production;
3. Weak institutions which do not have adequate financial backing or facilities to support agricultural research;
4. Insufficient indigenous scientific capacity to carry out a sustainable agricultural development effort; and
5. Lack of farmer-acceptable, improved technologies needed to increase agricultural production and productivity.

Cape Verde, in particular, is affected to one degree or another by the above. The Food Crop Research Project has been a pivotal force in addressing these problems. The recent evaluation stated that a strong case can be made for specific support for agricultural research in Cape Verde because:

1. The islands are geographically unique;
2. Agricultural production must be superimposed on soil conservation, erosion control and water harvesting efforts;
3. There is a history of non-food crop production or colonial-controlled cropping;
4. The climate is unlike that in African countries that are targeted as technology producing countries; and,
5. Cultural and geographic isolation from continental Africa.

The Project has provided valuable guidance to INIA thus far in institutional development. There has been good consolidation of agricultural research activities; where previously there was disorganization and lack of direction, there is now a detailed research strategy based on an improved understanding of farmers' needs as presented in the rural socioeconomic survey, with prioritization of crops and areas of study, and research plans detailed to specific experimental design and responsible scientists (see Annex D - INIA 1987 Workplan). The Project extension will provide the returning scientists with the necessary materials and accompanying guidance to better develop the individual research programs tailored to the conditions in Cape Verde.

At the end of the Project, it is expected that INIA will be well along in developing extendable technical packages for food crops which can be relayed to farmers via training of extension agents. This will be made possible through the equipping of essential laboratories and the expansion of on-farm research activities. Currently, most research activities are based at the research station, although there has been some limited on-farm research and training in extension methods. INIA will also be established among research facilities in Africa as well as elsewhere with operational linkages permitting sharing of research findings.

The assistance provided by the University of Arizona has been critical in bringing the project this far, and its services will be required for the duration of the project. There is a unique relationship between University of Arizona and INIA owing to the similarity of climatic conditions, agricultural production constraints, and the depth of the academic and cultural exchange between the two institutions. It is the considered technical assessment of INIA and USAID/Praia that this relationship continue throughout the project.

Additional long-term training needs have been identified during the project which should be addressed at this time. Certain of these will be met outside of the University of Arizona as a means of developing further institutional linkages (EMBRAPA in Brazil and University of Hawaii). The PACD extension reflects the expected duration of this training.

E. Revised Training Plan: Under the extension, there will be three additional long-term partilcipants trained. The project plans to send a participant to EMPRABA (Empresa Brasileira da Pesquisa Agricola) for the equivalent of a PhD in Appled Plant Physiology, one to the University of Hawaii for a MS degree in Range Management, and another to be determined. All other training done is to be administered accordingly in the project budget.

Additional short-term training is planned for at least two of INIA's staff, and to be included in the University of Arizona contract. A short-term training plan will be finalized by USAID/GOCV in conjunction with Arizona technicians by mid-1987 which includes the exact nature of the training, objectives, dates, and revised cost estimates. There are still funds available under the University of Arizona contract for short-term training beyond the above.

The revised Training Plan is presented below:

Name	Field of Study	Training Level	Return Date
1. Maria Andrade	Plant Breeding	M.S.	10/85
2. Maria T. Andrade**	Plant Physiology	Ph.D.	1990
3. Julio Almeida	Irrigation	M.S.	9/86
4. Luis Alves*	Agro-Climatology	Ph.D.	1989
5. Jorge Brito*	Soil Chemistry	Ph.D.	1989
6. Jorge M. Brito**	IPM-related	short-term	1989
7. Jose Brito	Agricultural Economics	M.S.	1988
8. Julio Fortes*	Field Crops/Water Harvest	M.S.	1988
9. Jose Levy	Horticulture	M.S.	9/86
10. Zuleika da Silva Levy	Nematology	M.S.	9/86
11. Madalena Macedo	Business Administration	Short-term	8/85
12. Joaquim Morais	Library Science	Short-term	10/85
13. Julio Morais	Soil-Water Relations	M.S.	9/86
14. Elisio Rodrigues	Social Science	Short-term	6/86
15. Amadeu Silva**		Short-term	1987
16. Raul Varela*	Economic Anthropology	M.S.	1987
17. Maria Vera Cruz**	Range Management	M.S.	1990

* Still in Training as of 1/87
** Planned

F. Revised Financial Plan: In addition to increasing the LOP funding level of the project by $1,000,000, the line items have been revised to better reflect project implementation actions. Changes include (1) reduction of the training line item as the vast majority of training activities are covered under the contract with the University of Arizona; (2) reduction of the contingency line item as a consequence of the actions described in the implementation plan; (3) increasing the commodity line item as the central rationale for the project; (4) increasing the technical assistance line item to cover extending the services of Arizona's technicians; (5) the addition of a line item for evaluation/audit per AID/W guidance; and (6) the addition of a line item to cover specialized local costs to be borne by the project under the extension (broken out in the detailed budget).

The revised budget breakdown, incorporating the above, is as follows:

PROJECT ELEMENT	BUDGET	THIS AMEND. Incr (Decr)	REVISED BUDGET
(1) technical assistance	2,700	100	2,800
(2) commodity support	404	772	1,176
(3) construction	200	0	200
(4) training	200	(50)	150
(5) contingency	184	(103)	81
(6) evaluation	0	90	90
(7) audit	0	25	25
(8) local cost operations	0	166	166
TOTAL	3,688	1000	4,688

Also required in project documentation is a description of the methods of financing to be used for project funds. As this was not done in the original project paper, it is presented below inclusive of all project funds.

Methods of Implementation and Financing

Project Element	Implementation	Financing	Amount
(1) Technical Asst	ADC	LOC-TFCS	2,800.0
(2) Commodities - U.S.	PSA	Bank L/COM	986.0
(3) PSA Fee	PSA	AID Dir L/COM	55.0
(4) Commodities (local)	PO	Direct Pay	135.0
(5) Training	ADC	Direct Pay	150.0
(6) Construction	HC	Reimburseable	200.0
(7) Evaluation/Audit	ADC	Direct Pay	115.0
(8) Local Cost Operation	Host Ctry	Cash Advance	166.0
(9) Contingency	TBD	TBD	81.0
TOTAL			4,688.0

Note that all construction activity was completed in late 1986. Local cost financing will be agreed to via PILs and will detail the costs and methods of accounting. The AID Representative makes an annual required 121(d) Certification of the accounting systems used by the Government of Cape Verde, and Annex C contains the Authorization for Local Cost Financing as required in Handbook 1B, Chapter 18.

The Host Country contribution has been recalculated for the extension to reflect the approximately $200,000 in operating expenses (independent of donor financing) supplied for INIA. Thus, the total Host Country contribution is estimated at $2,021,000 or approximately 31% of the total cost of the project.

Two more detailed budgets have been developed to assist implementation for the remainder of the project. This is inclusive of the $1,000,000 additional funding distributed as per the revised breakdown presented above, and is based on the most recent reports available from REDSO/WCA's controller.

DETAILED PROJECT BUDGET BREAKDOWN
($000)

LINE ITEM	ESTIMATED COST
I. TECHNICAL ASSISTANCE	2,800.0
A. Original Contract - University of Arizona (extending LT team leader by 17 months with unprogrammed contract funds)	(2,325.0)
B. Contract Extension - University of Arizona	(182.0)
(Team Leader x 14 months)	
(Soils Scientist x 12 months)	
26 months x $7,000/mo.	
Production Economist	(100.0)
10 months x 10,000/mo.	
Short-term consultancies	(110.0)
22 months x $5,000/mo.	
Miscellaneous Contract Costs	(83.0)
II. TRAINING (outside U of A Contract	150.0
A. Maria Isabel Andrade, Ph.D. EMBRAPA	(45.0)
B. Maria Teresa Vera Cruz, M.S. University of Hawaii	(55.0)
C. Graduate Trainee	(50.0)

LINE ITEM	ESTIMATED CC
III. EVALUATION	90.0
A. Mid-Project Evaluation	(65.0)
B. Final Evaluation Two person months x 12,500/mo.	(25.0)
IV. AUDIT	25.0
A. Audit Services Two person weeks x 12,500/wk	(25.0)
V. LOCAL COST OPERATIONS	166.0
A. Contract Personnel	
1. Lab Asst 3.5 yrs x 3,000/yr	(10.5)
2. Field Observer 3.5 yrs x 3,000/yr	(10.5)
3. Support staff 3.5 yrs x 4 people x 2,500/yr	(35.0)
4. Temporary Laborers 3.5 yrs x 3,000/yr	(10.5)
B. Travel/Transportation	
1. Inter-island Travel	(24.5)
2. POL/Maintenance	(75.0)
VI. COMMODITIES	,176.0
A. Project Commodities (procured-to-date)	(334.0)
B. INIA Equipment (See Detailed Commodity List)	(530.0)
C. PSA Fee	(55.0)
D. Shipping & Handling (est 40% x 530.0)	(212.0)
E. Contractor Support Costs (15.0 x 3 years)	(45.0)
VII. CONSTRUCTION	200.0
A. Design/Construction 2 single units/1 Duplex	(200.0)
VIII. CONTINGENCY	81.0
TOTAL BUDGET (INCLUDING EXTENSION)	4,688.0

DETAILED F/X AND L/C EXPENDITURE BREAKDOWN
($,000)

Line Item	F/X	L/C	Total
A. Technical Assistance	2,800	-	2,800
B. Training	150	-	150
C. Evaluation	90	-	90
D. Audit	25	-	25
E. Local Cost Operations	-	166	166
F. Commodities	1,041	135	1,176
G. Construction	-	200	200
H. Contingency	72	9	81
TOTAL	4,178	510	4,688

H. Revised Implementation Plan: As a consequence of extending the PACD from its current 09/87 to 6/30/90, a revised implementation plan is required. The process for ordering the additional commodities, securing the continued assistance of the University of Arizona and fielding the additional participants is shown below with estimated dates and identification of the probable action agent.

ACTION	DATE	RESPONSIBLE AGENT
1. Technical Assistance		
A. University of Arizona Extension		
(1) Prepare PIO/T	3/87	USAID/GOCV
(2) Concurrence	4/87	REDSO
(3) Contract Amendment Signed (09/87 - 12/90)	8/87	REDSO
B. USDA - Plant Protection Specialists		
(1) Prepare PIO/T	6/87	USAID/GOCV
(2) Concurrence	7/87	REDSO
(3) Sign "Work Order"	11/87	AID/W
(4) Technicians Arrive	11/87-1/88 11/88-1/89	USAID/GOCV
2. Training		
A. Long-term Participants		
(1) PIO/Ps for M.S. & PhD.	4/87	USAID/GOCV
(2) Call Forward Participants	7/87	ST/IT & USAID
(3) Participants Return	1989/1990	USAID/GOCV
B. Short-term Training		
(1) Training Plan Finalized	5/87	USAID/GOCV
(2) PIO/Ps drafted	6-12/87	USAID/GOCV
(3) Trainees depart-return	1987-88	USAID/GOCV

3. Commodities

A. AID Procured Commodities

(1) Issue non-competitive waiver for PSA	5/87	USAID/REDSO
(2) Amend or Negotiate new PSA	5/87	USAID/GOCV
(3) Prepare PIO/C(s) as per Detailed Commodity List	6/87	USAID/GOCV
(4) Action on PIO/C	7/87	AID/W & PSA
(5) Commodities Arrive	6/88	USAID/GOCV

B. Locally Procured Commodities (Illustrative)

(1) Obtain Pro Forma	Vendor
(2) Issue Purchase Order	USAID/REDSO
(3) Receive Commodities	USAID
(4) Forward Payment	USAID/REDSO

4. Construction

None Envisioned Under Extension

5. Evaluation/Audit

A. Audit

(1) Request for Audit (if needed)	USAID
(2) Prepare PIO/T for RIG/A Dakar	USAID/REDSO
(3) Negotiate Work Order	RIG/A DAKAR
(4) Audit Begins	USAID

B. Project Implementation Reports

(1) Submit Reports	2xyearly	USAID/GOCV
(2) Review and Comment	"	USAID/W & REDSO

C. Final Evaluation

(1) Request REDSO services at Scheduling Conference	9/89	USAID/GOCV
(2) Evaluation	3/90	USAID/REDSO

I. Revised Evaluation Plan: The Project was evaluated in June of 1985 and August of 1986, the results of which form the justification for this amendment. It is unlikely that further technical evaluation will be required prior to the end-of-project. However, it is incumbent on the Mission to periodically evaluate the progress of the Project through the use of the Project Implementation Reports. It is recommended that the preparation of these reports be accompanied by project review meetings involving the GOCV and the contractor technicians. Both AID/W and REDSO/WCA project staff review these reports as a means of monitoring project progress.

Provision has been made for a final evaluation and end-of-project audit (if required). Although funds have been reserved for both of these activities, it is recommended that the final evaluation be carried out by REDSO/WCA staff. The Mission will make its request for appropriate services at the appropriate Scheduling Conference (1989). The composition of the team should be as follows:

(1) Project Development Officer - 3 weeks
(2) Agricultural Officer - 2 weeks

The evaluation should focus on the accomplishments of the project in terms of developing INIA's capacity to carry out appropriate research and its accomplishments in terms of developing extendable technical packages to farmers for food crops, and the impact of these packages.

Continued limited support to INIA may be warranted and should be addressed as a component in the Mission strategy for agricultural sector support.

CAPE VERDE FOOD CROP RESEARCH PROJECT
(655-0011)
REVISED PROJECT LOGICAL FRAMEWORK

ANNEX A

LOP FUNDING $4.688 MILLION
PACD - JUNE 30, 1990

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
GOAL: To support GOCV development goals in food self-sufficiency, rural employment, rural income and nutrition	1. GDP increases 2. Agricultural production increases 3. Food imports decrease as percentage of consumption	National Statistics	1. Donor Financing Continues 2. Rainfall returns to normal patterns
PURPOSE: To assist the GOCV to develop an adaptive research capacity at the INIA	EOPS: 1. INIA has extendable technological packages in food crops for farmers 2. INIA staff carrying out laboratory and applied research in food crops (irrigated & rainfed) 3. Operational linkages exist between INIA and the National Extension System 4. Solid Relationships exist between INIA and counterpart institutions in Sahel Brazil and elsewhere (University of Arizona)	1. Project Evaluations 2. INIA Annual Reports 3. Ministry of Agriculture Reports	1. GOCV continues to support INIA 2. Sound technical packages exist for CV food crop varieties 3. Farmers have appropriate economic incentives for food crop production 4. INIA has appropriately-trained scientists 5. Farming Systems understood
OUTPUTS: 1. Trained Scientists 2. Equipped Research Station 3. Initial INIA Research Strategy Developed	Participants: 1. Eight M.S.-level 2. Four PhD - level Facilities: 1. Information/Communication Center 2. Management/Administrative Center 3. Soils Laboratory 4. Applied Plant Physiology Laboratory 5. Plant Protection Laboratory 6. Agronomy Field Laboratory 7. Housing (2 single units & 1 duplex) Rural Economic Survey Production Economics Cost Analysis	1. INIA Reports 2. Project Evaluation 3. AID Project Implementation Reports	1. Qualified participants are available and return to CV 2. GOCV re-employs returned participants 3. Technical Assistance is appropriate for Cape Verde
INPUTS: USAID - $4.688 million Technical Assistance Training Commodities	See Financial Plan		Inputs are available in a timely fashion by US & GOCV

ANNEX A.

CAPE VERDE FOOD CROP RESEARCH PROJECT
(655-0011)
REVISED PROJECT LOGICAL FRAMEWORK

LOP FUNDING $4.688 MILLION
PACD - JUNE 30, 1990

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
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OUTPUTS: 1. Trained Scientists 2. Equipped Research Station 3. Initial INIA Research Strategy Developed	Participants: 1. Eight M.S.-level 2. Four PhD - level Facilities: 1. Information/Communication Center 2. Management/Administrative Center 3. Soils Laboratory 4. Applied Plant Physiology Laboratory 5. Plant Protection Laboratory 6. Agronomy Field Laboratory 7. Housing (2 single units & 1 duplex) Rural Economic Survey Production Economics Cost Analysis	1. INIA Reports 2. Project Evaluation 3. AID Project Implementation Reports	1. Qualified participants are available and return to CV 2. GOCV re-employs returned participants 3. Technical Assistance is appropriate for Cape Verde
INPUTS: USAID - $4.688 million Technical Assistance Training Commodities Construction	See Financial Plan		Inputs are available in a timely fashion by US & GOCV

ANNEX B

ILLUSTRATIVE COMMODITY LIST
INIA

ITEM	ESTIMATED LIST PRICE ($000)
Almaco Research Plot Combine	30.0
Vogel Plant and Head Thresher	2.0
Air Blas Seed Cleaner	0.6
Ear Corn Sheller	12.9
Allen Thresher	25.0
Large Vogel Thresher	7.0
Drying Ovens	6.0
Germinators	12.0
Seed Blower	7.1
Seed Separator	5.4
Batch Lab Seed Treater	0.6
UDY Protein Analyzer	6.1
Seed Indicating Weather Station	5.0
Wiley Mills	2.0
Small Plot Corn Planters (2)	3.0
Clipper Seed Cleaners	10.0
Dakota Seed Blowers	2.5
Grain Moisture Meters	5.0
Seed Counters	6.0
Rototiller	2.5
HS Refrigerated Centrifuges	75.0
Laboratory Glassware	20.0
Thermal Differential/Gravimetric Analysis Equipment	50.0
Laminar Flow Hood	15.0
Microwave (4)	1.6
Air Conditioners	5.0
Air Compressor	1.0
Electrical Conductivity Units	1.5
PH Meters	2.0
Mettler Balance	5.0
Mounted Skill Saw	0.5
Nitrogen Analysis Apparatus (12.U)	6.0
Flask Shaking Unit (125 ml)	3.0
Magnetic Stirring/Heating Units	0.8
Infra-red Thermometer	4.5
Net Radiometer	5.0
Tractors (3)	30.0
Freeze Dryer	10.0
Lab carts	0.6
Plastic Labware	1.5
Spectrophotometer 20	2.0
Particle Analysis Sub-siever Sizer	2.0
Refractometer	2.5
Flexaframe Lab Supports	0.3
Mini-lab Lift	0.1
Spectral meo Micro-mesh Set	0.5
Low Speed Centrifuge	4.5
Titrimeter II - Automatic AEP Single Sample Systems	7.0
Programmable Calculators	2.0
Viscosimeter	3.0

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ANNEX C

LOCAL COST FINANCING DETERMINATION

In accordance with A.I.D. Handbook 1B, Chapter 18, the A.I.D. Representative/Praia hereby authorizes local cost financing for certain goods and services to be procured under the Food Crop Research Project (655-0011). The extent of this procurement is described in the project financial plan.

This determination is based upon a reasonable analysis of the supply and prices of indigenous and shelf item goods and services expected to be required, taking into account comparable delivery items and prices from eligible services and the implementation schedule of the project.

By: A V Hartman

August HARTMAN
Acting AID Representative
USAID/Praia

ANNEX D

NATIONAL INSTITUTE FOR AGRARIAN RESEARCH
WORKPLAN FOR 1987
DRAFT

1. Strategies

The program of work for 1987 is aimed at addressing the following problems and, with minor changes, it will constitute the program of work for the entire life of the Second National Plan of Development:

a. Urgent need for new orientation in national agriculture trying to improve utilization of soil and water resources, promoting their preservation and regulation;

b. Need to intensify rainfed and irrigated crop production to permit food self-sufficiency in locally grown food crops with the exception of grain;

c. Need to reinforce livestock activities;

d. Need to increase technical, scientific and professional capabilities of INIA, MDRP, and other institutions under the tutelage of the Minister of Rural Development and Fisheries;

e. Need to maintain and/or protect the environment;

f. Need to accelerate the dialogue with the rural populations.

Basic strategies for guidance of this plan of work are as presented below:

Strategy #1 - An improved knowledge of the natural resources (soil, water and vegetation) in terms of quality and quantity, including the characterization of their potential and limitations as the basis for further development in the agricultural, forestry and livestock sectors. Studies of the general character of soil and vegetation have been done, but for future planning purposes, it is necessary to have more detail. Thus, we shall continue in the preparation of the agro-climate maps for the islands of Brava, Main and Boa Vista, but we shall begin a well-detailed soil study of the Ribeira Seca watershed, in view of planning its best use.

The quantification of the erosion problem and the studies on underground water in sub-watersheds and/or hillsides would greatly assist in understanding the problems of infiltration of the rainfall and that of strengthening the aquifers and thus determine the amount of water they can furnish. Specific and general mapping covering the vegetation will permit us to follow the evolution of the ecosystem and the determination of the potential for pasture which are basically important in what concerns the protection of the environment and development of livestock. all the elements indicated, linked to the climate characterization and the hydrologic system of the watersheds will clarify about the primary production and the planning of resource utilization . There is a need to collect, classify and file the vegetal species existing in Cape Verde, maintaining a live collection of native and exotic specimens as a means of preservation. These elements, as well as others representing the geologic formations, the units of soil and the insect classes constitute a basic tool both for the teaching and tasks of identification of vegetal species, geological series, types of soil and insect classes, and it is the reason why they must be collected, classified and filed.

Strategy #2 - The intensification of agricultural production can only be reached through the improvement and/or the maintenance of soil fertility, study of the cultural know-how more adapted to the different ecological regions and types of culture, maximization of water use, utilization of species, varieties and/or cultivars more adapted to the environmental conditions, control and/or extermination of the pests and diseases affecting crop production, transforming and/or processing crop products, etc.

The knowledge of genetic potential of species and/or varieties traditionally yielded is an essential element not only for improvement of productivity but also for comparison of their productive potential with that of species and varieties imported. The soil/water/plant relationship constitutes a basic element in water economy and its interaction with productivity.

Strategy #3 - A serious study of traditional irrigation systems, their improvement, the introduction of new systems and comparison of their efficiency with the traditional systems will be a continuing concern.

Strategy #4 - The study of some diseases which affect livestock production will take place when the veterinary pathology facilities for the laboratory are completed.

Strategy #5 - Soils are already known whose special characteristics or their situation in areas of arid or semi-arid climates are not able to permit regular crop production. For these soils, there is a need to find a cultivar or cultivars capable of economically viable yields. On the other hand, it may be advisable to resort to spontaneous plants with other than food purposes in the interim.

Strategy #6 - The system of production with interaction between the variables and constraints seems to be an essential element regarding crop productivity. Studies to characterize the traditional systems of production will be carried out and pilot projects established to their improvement. At the same time, the necessary data will be gathered to define and characterize the socio-economic indicators and to test changes which occur in those systems.

Strategy #7 - The training of INIA's technical and scientific group will continue both locally, through the use of foreign technical assistance, and externally, through intensive coursework demanding more time (2-3 years).

Strategy #8 - Technical and/or professional training will continue at two levels:

- Training of basic technicians;
- Recycling courses and seminars for technicians within the MDRP.

Strategy #9 - The acceleration of dialogue with the rural populations will take place through training of teams for rural development and information/training of laborers either through short-term seminars or visits to areas of experimentation.

Strategy #10 - Contacts with similar organizations abroad with the scope of obtaining technical and scientific information, material for trials, exchange of experiences, and establishment of bilateral programs of interest to Cape Verde and training of INIA's personnel.

2. Objectives

Objective #1 - Development the means to characterize, regulate and preserve the soil and water resources to permit stable crop production.

Methodology 1.1 - Adapt and/or develop technologies permitting identification and predicting long-term changes in quantity and quality of available soil and water resources for crop production.

Methodology 1.2 - Make available the necessary technologies to improve, protect and restore the productive capacity of agricultural soils.

Methodology 1.3 - Develop improved systems of water utilization in order to obtain an efficient management of water resources.

Methodology 1.4 - Develop sub-systems integrating soil and water use to optimize the soils production.

Objective #2 - Develop the means to increase the productivity and quality of the plants grown.

Methodology 2.1 - Increase the resources in vegetal germoplasm in order to ensure major genetic diversity enabling an increase in productivity.

Methodology 2.2 - Select the vegetal germoplasm for a controlled genetic crossing.

Methodology 2.3 - Improve the existing agricultural techniques or introduce and adapt new technologies viewing an increase of productivity and lowering of production costs.

Methodology 2.4 - Develop and adapt new methods and improve the existing ones to reduce production losses resulted from insects, nematodes and other pests and diseases.

Objective #3 - Develop and/or adapt the means to permit maximum utilization of crop products.

Methodology 3.1 - Develop and/or adapt the means to increase the characteristics inherent to production materials.

Methodology 3.2 - Develop the means to reduce the post-harvest losses provoked by insects and micro-organisms.

Methodology 3.3 - Develop the means to transform and process crop products.

Objective #4 - Develop the means to improve nutritional status of population.

Methodology 4.1 - Improve the nutritional status of population by making available the means to utilize existing resources.

Methodology 4.2 - Determine the nutritive content of natural and processed crop products.

Objective #5 - Develop the means to increase the productivity of livestock and the quality of animal products.

Methodology 5.1 - Develop the forms and preventive means to control the diseases and pests which reduce animal production and the quality of products.

Methodology 5.2 - Develop the means to control the insects affecting animal production.

Objective #6 - Reinforce the scientific, technical and/or professional capacity.

Methodology 6.1 - Improve and/or diversify the scientific capacity of INIA's personnel at various levels.

Methodology 6.2 - Increase the technical and professional capacity within the different MDRP departments and institutions under its tutor.

Methodology 6.3 - Improve and diversify the technical and professional capacity of the personnel integrating the various MDRP departments and institutions under its tutor.

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CLASS: UNCLASSIFIED
CHRGE: AID 05/12/87
APPRV: REDSO:LWBOND
DRFTD: PDRI:MBAKER:AM
CLEAR: 1.ODD:HRHANDLER
2.PDRI:WKING
DISTR: REDSO CHRON

AIDAC

E.O. 12356 N/A
SUBJECT: CAPE VERDE FOOD CROP RESEARCH PROJECT
AMENDMENT: DOA 551 REDSO CONCURRENCE

REFS: (A) PRAIA 209, (B) ABIDJAN 7605, (C) STATE 6983
- (D) PRAIA 938

1. REDSO/WCA DIRECTOR, LAURANCE W. BOND CONCURS IN:

(A) PROPOSED AMENDMENT OF PROJECT AUTHORIZATION TO INCREASE LOP FUNDING BY U.S. DOLS. 1 MILLION FROM $3,688,000 TO $4,688,000 AND EXTENDING THE PACD BY 33 MONTHS FROM SEPTEMBER 30, 1987 TO JUNE 30, 1990; AND,

(B) THE EXECUTION OF THE PROPOSED FOURTH AMENDMENT T THE SUBJECT PROJECT GRANT AGREEMENT REFLECTING THE ABOVE NOTED FUNDING INCREASES AND PACD EXTENSION, ASSUMING 121(D) CLEARANCE IS OBTAINED.

2. REDSO CONCURRENCE PACKAGE CONSISTING OF:

- A) REDSO CONCURRENCE MEMO
- B) DRAFT OAR ACTION MEMO
- C) PP SUPPLEMENT
- D) DRAFT AUTHORIZATION AMENDMENT
- E) DRAFT PROJECT GRANT AGREEMENT AMENDMENT
- (INCLUDING REVISED ANNEX 1)

BEING SENT BY DHL FOR YOUR FURTHER ACTION. PLEASE INSURE COPIES OF EXECUTED DOCUMENTS ARE DISTRIBUTED T REDSO AND AFR/PD FOR THEIR RECORDS. KUX
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BT
UNCLAS ABIDJAN 11242

CLASS: UNCLASSIFIED
CHRGE: AID 05/11/87
APPRV: WAAC:JSTANFORD
DRFTD: WAAC:JSTANFORD
CLEAR: NONE
DISTR: REDSO WAAC CH
AMB

AIDAC

FOR AAC FROM CONTROLLER STANFORD

E.O. 12356: N/A
SUBJECT: CONTROLLER CONCURRENCE IN PROJECT PAPER AMENDMENT - FOOD CROP RESEARCH PROJECT - 655-0011

1. WAAC STAFF HAVE REVIEWED THE PROPOSED AMENDMENT TO THE PROJECT PAPER FOR SUBJECT PROJECT TO MAKE A DETERMINATION UNDER THE REQUIREMENTS OF THE PAYMENT VERIFICATION POLICY. THE FOLLOWING SUMMARIZES OUR FINDINGS:
METHODS OF IMPLEMENTATION AND FINANCING - THE METHODS OF IMPLEMENTATION AND FINANCING ARE APPROPRIATE AND ARE WITHIN THE PREFERRED METHODS AS DEFINED BY THE PAYMENT VERIFICATION POLICY.
HOST COUNTRY CONTRACTING - THE HOST COUNTRY CONTRACTING LISTED IN THE METHODS OF IMPLEMENTATION REFERS TO ACTIVITIES ALREADY COMPLETED UNDER THE PROJECT, AND THERE IS THEREFORE NO NEED TO PERFORM AN ASSESSMENT OF THE HOST GOVERNMENTS ABILITY TO AWARD AND ADMINISTER CONTRACTS.
HOST GOVERNMENT ACCOUNTING - FUNDS WILL BE RELEASED TO A HOST GOVERNMENT ORGANIZATION TO FINANCE LOCAL OPERATING COSTS. THE ABILITY OF THIS ORGANIZATION TO PROPERLY ACCOUNT FOR THESE FUNDS HAS BEEN ANALYZED IN ORDER TO MAKE A 121(D) CERTIFICATION. THIS ANALYSIS HAS INDICATED THE ORGANIZATION TO HAVE AN ACCEPTABLE ACCOUNTING SYSTEM AND AN ACCEPTABLE LEVEL OF ACCOUNTING CAPABILITY. THEREFORE, SUCH AN ASSESSMENT IS NOT REQUIRED UNDER THE PAYMENT VERIFICATION POLICY.
AUDIT - FUNDS ARE PROVIDED IN THE BUDGET TO FINANCE AUDIT THROUGH A CONTRACT FOR NON FEDERAL AUDIT.

. ON THE BASIS OF THE ABOVE, J. C. STANFORD, REDSO ONTROLLER CONCURS IN THE PROJECT PAPER AMENDMENT UNDER HE AUSPICES OF THE PAYMENT VERIFICATION POLICY. KUX
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