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INTERIM PROJECT APPRAISAL REPORT

PDA 1 - Balance  
#5: 510011

Country: ROCAP - Central America Regional

Serial Number 76-2

Project: 596-11-140-064: Small Farm Cropping Systems

Initial FY of Obligations: FY 1975

Final FY of obligations: FY 1978

Total funds obligated as of February 25, 1976: \$446,125

Project Manager: Donald R. Fiester [Signature]

Evaluation Officer: Robert Hechtman [Signature]

Deputy Director: Barry Sidman [Signature]

Date Submitted: April 9 1976

*[Handwritten notes and signatures]*

REPORT OF INTERIM EVALUATION

SMALL FARM CROPPING SYSTEMS

ROCAP/CATIE CONTRACT No. 596-150

February 24-25, 1976

The informal evaluation was carried out at CATIE in Turrialba, Costa Rica on February 24 and 25, 1976.

Representing ROCAP were Deputy Director Barry Sidman, RRDO Donald R. Fiester, C. J. Murphrey and Lewis E. Clark. Representing CATIE were Acting Director Dr. Jorge Soria and Acting Head of the Department of Tropical Soils and Crops, Dr. Rufo Bazan, Sr. Jose Mendez, Chief of Accounting and Treasurer joined the group for a short time at the request of Dr. Soria and various CATIE staff members joined in to explain research plots and CATIE facilities. Dr. Damon Boynton project Senior Advisor was an active participant.

\* \* \* \* \*

... implementation of the project on a five  
... not achieved due to the failure of CATIE to  
... understanding with Guatemala and El Salva-  
... being pursued with vigor at CATIE and in  
... and Nicaragua. There are reasonable  
... Guatemala will join in the near future and El  
... to indicate interest.

... delays in recruiting personnel by CATIE  
... not unreasonable given the highly special-  
... positions. CATIE has recruited a highly  
... is working competently and is demonstrat-  
... enthusiasm to carry out the project purposes.  
... on the project and is dedicated to  
... and research experiments and satellite  
... progressing on schedule. Baseline  
... Honduras and Nicaragua are being com-  
... training materials were prepared on sche-  
... operating countries and planning is  
... for the research activities which will  
... countries. CATIE has good candidates  
... trician and Horticulturalist positions  
... to be filled.

... have been working closely to develop  
... tive procedures and eliminate delays.  
... dures to be used in preparing output  
... al reporting on an output basis and  
... have been clarified. The designation  
... wide ROCAP liaison with CATIE from  
... intended to facilitate communications  
... involving ROCAP/Guatemala. In addi-  
... the project Senior Advisor, Dr. Boynton,  
... is on guiding the technical aspects

... ded with the short-run problem of  
... inability to meet its full commit-  
... this is reflected by CATIE's request  
... of funding for one of the two  
... (in Nicaragua and one in El Salvador)

which CATIE is committed to provide. The magnitude of the problem, if in fact a problem exists, will not be known until a firm overhead rate is agreed to between ROCAP and CATIE.

During the period of incapacity of the CATIE Director, Dr. Elgueta, he has been replaced by Dr. Jorge Soria V., Head of the Tropical Crops and Soils Department. Dr. Soria will be acting director for the next three months and Dr. Rufo Bazan will be acting head of the Tropical Crops and Soils Department and project manager for SFCS. Dr. Soria has a strong interest in the SFCS project and will continue to play a key role. No vacuum in CATIE leadership of the SFCS project is anticipated.

### III. RELEVANT INFORMATION

Visits were made to view CATIE's installations which included laboratories, offices, livestock facilities and land devoted to the "central" and "satellite" experiments. The central experiment was designed to include 24 cropping systems in four replicates. The crops included in the systems are dry beans, corn, cassava and sweet potatoes. There are five satellite experiments which are designed to investigate variations which are prompted by observations and results from the central experiment. The satellite experiments are carried out by graduate students under the supervision of the CATIE resident staff. The plots looked to be well cared for. CATIE is also conducting three complementary experiments utilizing its greenhouses to test fertilizers on specific crops, etc.

In October 1975 CATIE held a workshop for specialists to help in designing the baseline survey and determining small farmer areas where research was to be done. Survey forms were drafted and reviewed with the MOA in Costa Rica. The form was subsequently tested in the Guayavo area of Costa Rica. The form was too long and complex so it was revised and retested in the same area. It proved satisfactory and is being used with good results in Costa Rica, Honduras and Nicaragua. The

PERT No.

Planned Action

129- 130

Recruit second U. S. project advisor  
(Jan. 1, 1976)

Not

AE:LEClark:adec

3/1/76

Situation	Comments
accomplished	ROCAP and CATIE are reviewing the need for this position and are also considering the desirability of moving it from a ROCAP direct personal services contract to a CATIE contract position via amendment of contract AID-596-153. The action relating to the status of this position will be taken in light of its probable impact on the project.

<u>PERT No.</u>	<u>Planned Action</u>	
5 - 99	Provide technical assistance for the formation and consolidation of National Committees and the Regional Advisory Committee (Dec. 1, 1975)	Acco cour
99 - 100	Hold annual Regional Advisory Committee meetings to determine policies on small farm cropping systems research (Jan. 1976)	Acco ing
4 - 120	Complete ongoing supportive experimentation on interdisciplinary cropping systems and analyze results for application to 1976 national research (Nov. 15, 1975).	Acco
120 - 121	Complete for the following year a work plan for CATIE supportive research to develop improved methodologies, experimental designs, data collection procedures and analytical interpretation methods for interdisciplinary research on cropping systems (Nov. 15, 1975).	Acco
2 - 129	Procure three vehicles and deliver them to CATIE (Oct. 30, 1975)	Two were 1976 and pare for

## Situation

## Comments

mplished for participating  
tries.

mplished for participat-  
countries.

mplished

mplished

ROCAP funded FY-75 vehicles  
received by CATIE in Jan.  
. Bids were opened on Feb. 20  
a purchase order is being pre-  
d for three FY 76 funded vehicles  
CATIE.

PERT No.	Planned Action
59 - 60	Conduct a baseline survey in a minimum of ten selected areas of C. A. (March 1, 1976)
60 - 61	Analyze baseline data using computer as appropriate, develop and publish conclusions and recommendations for use of the design of next crop years applied research.
61 - 70	Design preliminary field trials in cooperating countries including national supportive investigation based on baseline surveys (April 1, 1976)
4 - 92	Prepare training materials and basic procedures for conducting baseline surveys. Train the selected CATIE personnel on procedures for conducting baseline surveys (Jan. 1, 1976)
92 - 59	Train selected national counterparts on techniques for conducting the baseline survey (Jan. 15, 1976)
92 - 95	Prepare training materials for field trial techniques and management at national level (Jan. 15, 1976).
4 - 98	Complete informal evaluation of the program (Oct. 30, 1975).

Situation

Comments

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Baseline surveys have been completed in Costa Rica and are in process in Honduras and Nicaragua.

Data for Costa Rica is being analyzed and CATIE is prepared to analyze data for Honduras and Nicaragua as soon as surveys are completed.

Field trial design planning is in process for Costa Rica, Honduras and Nicaragua.

Accomplished

Accomplished.

Accomplished for participating countries.

postponed until Feb. 24/25/76

PERT No.Planned Action

6 - 16 Collaborate with M.A. and other host country institutions in the formation of a national committee (N.C.) including the nomination of the National Committee Leader (NCL) and the national representative (NR) to the Regional Advisory Committee (RAC) (Nov. 20, 1975)

7 - 17

8 - 18

10 - 20

16 - 21 Collaborate with NC as required in selecting and appointing the personnel to form the National Teams (NT) (Dec. 15, 1975)

17 - 22

18 - 23

19 - 24

20 - 25

21 - 26 Assist the National Teams (NT) in preparing detailed work plans for CY 1976 applied research. Submit to NAC. (March 15, 1976)

22 - 27

23 - 28

24 - 29

25 - 30

4 - 57 Develop a formal agreement with IICA on the use of the computer and computer technical assistance for this project. (Jan. 15, 1976)

4 - 58 Design and test "state of the art" baseline survey (December 15, 1975)

58 - 59 Secure and utilize national committee recommendations on procedures to be followed in implementing baseline surveys (Jan. 15 1976)

Situation

Comments

Accomplished by Honduras, Ni-  
caragua and Costa Rica. Not  
accomplished for Guatemala and  
El Salvador which have not  
executed an MOU.

Accomplished by Honduras, Ni-  
caragua and Costa Rica. Not  
accomplished for Guatemala and  
El Salvador.

In process with Honduras, Nica-  
ragua and Costa Rica. Not Ac-  
complished with Guatemala and  
El Salvador.

Accomplished

Accomplished

Accomplished for Honduras, Nica-  
ragua and Costa Rica.

PERT No.

Planned Action

6 - 11

Assist the N.C. in the development of national work plans, including budget details for CY 1976 presentation (Dec. 31, 1975)

Situation

Comments

Accomplished for Honduras, Nicaragua and Costa Rica.

Not accomplished for Guatemala and El Salvador which have not executed an MOU.

Involving the three countries which had previously signed. Efforts were continued to elicit participation by both Guatemala and El Salvador. On February a letter from ICDA/Guatemala was delivered to CARI. Based on preliminary analysis of ICDA's letter CARI believes that it will be possible to obtain a signed MOU. El Salvador has indicated a strong interest in project participation but in spite of this an MOU has not been executed. CARI will continue to press for the MOU with El Salvador. In the unlikely event that Guatemala and/or El Salvador should fail to join the project the impact would not be critical. The project can be successfully based on the participation of Costa Rica, Nicaragua and Honduras and the benefits to small farmers in these countries can be very large. Small farmers in the non-cooperating countries may also benefit but to a lesser extent than if formal country participation becomes a reality.

I. PROGRESS TO DATE vs

<u>PERT No.</u>	<u>Planned Action</u>
0 - 1	Prepare a contract with CATIE and obtain signatures of both parties (May 1, 1975)
1 - 2	Recruit the project senior advisor and locate at CATIE (July 1, 1975)
2 - 3	Analyze and modify the present efforts of CATIE's SFCS program in accordance to the agreed enlarged program including organization and continue supportive research at Turrialba, Costa Rica (July 15, 1975)
3 - 4	Prepare a general work plan (Oct. 1, 1975) (PERT and Implan)
4 - 5	Prepare memoranda of understanding approved by ROCAP with the national research institutions of C. A. countries.
5 - 6	Obtain signature to a basic memoranda of
5 - 7	understanding with the Minister of Agriculture (MA). All five countries
5 - 8	
5 - 9	(Oct. 31, 1975)
5 -10	

PLAN (comparison with PERT activities)

Situation	Comments
Contract signed June 10, 1975	
Contract signed June 19, 1975 with July 1, 1975 reporting date Guatemala	
Accomplished	
Accomplished	
Accomplished	
Guatemala not accomplished El Salvador not accomplished Honduras signed 12/10/75 Nicaragua signed 10/31/75 Costa Rica signed 9/17/75	Although CATIE and ROCAP made concerted efforts to obtain the needed MOU's from Guatemala and El Salvador the signatures were not obtained. Contract No. AID-596-153 was amended on Jan. 6/76 to authorize project activities

areas selected for the baseline surveys were as follows:

Costa Rica

1. Guapiles - Atlantic Coast  
Cariari and Guacimo - 65 farmers surveyed
2. Pacifico Sur -  
Pejibaye and Platanares - 40 farmers surveyed
3. Itiquis -  
Meseta Central - survey in process

Honduras

1. Guaymas - El Progreso - 19 Asentamientos with 1500 hectares total land and about 2 mz/farmer - survey in process.
2. Río Lean -
3. Lago Yoja - (possible as an area for individual farmers)

Nicaragua

(Drs. Burgos and Navarro and 10 local technicians)

1. Matagalpa area -  
La Trinidad - survey in process  
San Ramon - survey in process

Data from the baseline survey is to be published and will also be used by the National Committees in planning their research activities.

CATIE prepared a Guia summarizing available information which would be useful in guiding research activities. In January this Guia was used in conjunction with the conduct of a workshop for workers from the participating countries who would be involved in the baseline survey and related project research.

Strategy for making up for lost time in El Salvador and Guatemala

El Salvador - The alternatives can be studied now and advice can be given with respect to the testing of systems presently in use in El Salvador. CATIE is capable of starting ahead of the baseline survey and can catch up on the survey later. It is possible to do the survey on the cropping system being utilized during the second part of this year or to do the survey next year. The closer it gets to April and May before the country signs up the more difficult it will be. It will be up to the country to decide.

Guatemala - CATIE hopes that based on the February 24 ICTA proposal an agreement can be worked out soon. CATIE will have a revised draft of the MOU ready the week of March 1. It is likely that the highland research would have to be delayed a year due to the earthquake. Work plans will be needed for both Guatemala and El Salvador to show how the catching up will take place.

CATIE believes that it has been utilizing its best efforts to pursue project activities in the participating countries. ROCAP concurs in the opinion that CATIE has pressed hard to bring about full participation by El Salvador and Guatemala.

Project Senior Advisor, Dr. Boynton, expressed his desire to be relieved of the administrative role that he handled during the startup phase of the project in order to allow more time for the technical aspects. Since C. J. Murphy will be designated as ROCAP's coordinator in Costa Rica for the SFCS, Soil Fertility and the Agricultural Research and Information Systems projects this is deemed to be an appropriate time for the clarification of roles. It was agreed that action would be taken at a meeting of the concerned parties at CATIE the week of March 1.

CATIE reported that it appreciated the systems engineering recommendations provided by Dr. Wayne Wymore but that as of the present time, it had not had the opportunity

to adopt these recommendations particularly with respect to data handling. CATIE anticipates that when the services of a full time Biometrician become available that it will be able to progress in this important aspect of the program.

### Staffing Considerations

Positions to be filled:

1. Horticulturalist (long term) - qualified individuals are few. Dr. Miguel Holle O. is presently at CATIE on a six week assignment. CATIE considers Dr. Holle to be a highly qualified individual, and hope to recruit him. CATIE has approached CIAT and is investigating two possible candidates but these individuals do not appear to be as strong as Dr. Holle.
2. Biometrician (long term) - CATIE now has a list of four good candidates from the U.S. and one from Mexico and has written to them.
3. Consultants (pending) - Dr. Hardwood formerly with the IRRI and now in Florida is desired following the analysis of the baseline survey data. His expertise, CATIE believes, would be very helpful in planning future research based on the surveys. CATIE will prepare a memo covering this since Dr. Hardwood's area of specialization is not listed in the Illustrative Budget for Phase II.

CATIE will prepare a letter to ROCAP requesting a waiver to permit flexibility concerning the types of short term consultant expertise required. Possibly this can be done by an exchange of letters. ROCAP should have a project committee meeting to consider the appropriate approach.

The matter of the Cropping Systems Planner position was discussed. This position as originally conceived was

to have been a direct ROCAP personal services contract. Recently there has been thought given to shifting the position to the CATIE contract; this would require an amendment to the contract. The question was raised concerning whether or not there would be a need for the position in view of the talent CATIE has at its disposal. It was agreed that this issue would be considered on March 2.

The duty station of Resident Agronomist, Dr. Hart, was discussed. Honduras wishes to have Dr. Hart stationed there and they consider him to be highly qualified in relation to Honduran needs within the project. Since Dr. Hart was originally scheduled to be assigned to El Salvador and that country is not participating at present, ROCAP has cabled CATIE that it has no objection to stationing of Dr. Hart in Honduras. This reassignment will need to be reflected in the next CATIE contract amendment.

CATIE is employing Dr. Palencia who is presently located in Guatemala to be its resident Agronomist in Nicaragua. This position is to be funded by CATIE using funds at its disposal. It is unclear as to how the necessary funds will be provided. There is hope that a grant from BID will cover this expense over the longer run.

Mr. Fiester reported that the Technical Assistance Bureau is extremely interested in the SFCS project. It was pointed out that any personnel available thru TAB would have to be completely self contained financially including funding of backstopping by CATIE. Oregon State University representatives will be at CATIE the week of March 1 concerning possible weed control activities. The proposed Marketing Economist, David Johnson who previously had worked in El Salvador, would probably not be available for at least six months. Lee Fletcher handcarried to AID/W ROCAP's cable regarding the Marketing Economist position and AID/W will contact CATIE directly. The status of the NCSU-TAB Soils contract is in doubt. TAB is interested in cooperating

particularly from the point of view of providing short term consultants. Dr. Gates is planning to visit CATIE March 8-15.

### Relationships to Other Activities

Mr. Fiester reported that NCSU has packed its laboratory equipment and is awaiting the signing of the agreement after which it will be instructed to ship the equipment to CATIE.

Personnel from the Agricultural Research and Information project will meet with the CATIE staff on March 2 to facilitate coordination with the SFCS project.

Mr. Fiester requested that CATIE initiate its working relationship with INCAP in March 1976.

Mr. Sidman suggested that CATIE should maintain contact with SIECA and CABEI. He stressed that this was particularly important in view of SIECA's participation in meetings of the Ministers of Agriculture.

Dr. Soria reported that he had met with Dr. Emilio Araujo, Director of IICA in December and that IICA appears to be very cooperative and has offered to provide office space and supporting services for SFCS personnel who will be stationed in the countries. A draft agreement between CATIE and IICA is nearing. It was pointed out that it might not be necessary or desirable for personnel to be housed with IICA if office space is available with counterpart organizations.

The question of the future of the computer was discussed by Dr. Soria and Dr. Araujo. IICA owns a computer at Turrialba which by agreement with CATIE is available for project use. The present computer is a slow research type machine which IICA appears to feel is inadequate to meet its future needs. A new computer would probably be located in San Jose. The thought was expressed that a

computer terminal might be installed at Turrialba in the event that the computer is removed. Mr. Fiester suggested that any proposed terminal system should be carefully checked from a technical viewpoint and it would probably require a separate line to San Jose. Some arrangement might be possible whereby the present computer could be kept in Turrialba even though it obtains one for San Jose.

It was noted that the library should probably stay in Turrialba but that at present it is under-financed. Apparently very little money is available for new acquisitions. Dr. Boynton thought that \$15,000 would be needed to restore journals which have been given up due to financial constraints.

#### Miscellaneous

Mr. Fiester inquired as to how CATIE is handling the data which is being collected. He requested a report from CATIE concerning this.

CATIE expressed the opinion that there is a need for flexibility with respect to the activity dates contained in the PERT.

CATIE emphasized that the allocations shown in the output budgets are its best estimates. It hopes that these estimates can be improved based on operating experience but that the original assumptions can be somewhat confining. This information is expected to be useful for reprogramming from year to year.

#### IV. PROBLEM AREAS

##### A. Failure to Obtain a Memorandum of Understanding from El Salvador and Guatemala

CATIE, with assistance from ROCAP, has seriously pursued the matter of full participation by all five Central American countries. The fact that El Salvador and Guatemala

have not signed is not a reflection of lack of concern and effort by CATIE. The fact that ICTA/Guatemala presented by handcarried letter (Fiester to CATIE on February 24) its formal counterproposal for Guatemalan participation, indicates that Guatemala is interested. Preliminary review of the Guatemala proposal by CATIE did not reveal major differences. CATIE plans to respond promptly in the interest of consummating the agreement. With respect to El Salvador, the Minister of Agriculture and other concerned parties have indicated strong interest in the project. The fact that El Salvador has not signed poses an enigma but there have been no reasons put forth which give indication that El Salvador will chose not to become a full participant. CATIE plans to continue its followup with El Salvador. In the meantime, project activities are being expedited in the cooperating countries and CATIE is giving serious thought as to how activities may be scheduled in Guatemala and El Salvador so that their belated involvement will not seriously retard project progress due to the seasonality of cropping systems and other factors.

B. Salary problems CATIE faces in recruiting long term and short term consultant personnel -

Delays have taken place and there has been confusion concerning the salary levels which would be acceptable to the person being sought, to ROCAP and to CATIE. CATIE (outside of the project) follows the IICA and OAS system for salaries and benefits. CATIE indicated that it has attempted to maintain salary levels for its professional staff which reflect training and experience regardless of the nationality and salary history of the employee prior to employment by CATIE. The approach taken by ROCAP has been tied to the employees salary history among other factors. CATIE indicated that because of the wide range in salary conditions in the various Latin American countries the ROCAP salary history based approach makes it very difficult to hire Latin American professionals at salaries sufficiently high so that a rational structure can be maintained within CATIE. CATIE feels strongly about the necessity for this salary rationality. Under this approach, North Americans tend to be paid salaries somewhat lower

than their salary histories would justify and Latin Americans tend to be paid higher salaries than their salary histories would justify.

It was agreed that CATIE will furnish ROCAP with background relating to the IICA and OAS salary regulations. It was pointed out that ROCAP has flexibility to consider recruitment salary proposals on a case by case basis and that CATIE would need to provide detailed written justification for salary proposals which are not in line with the salary history based approach which ROCAP follows.

C. Failure to establish overhead rates for CATIE in accordance with the terms of Contract No. AID 596-153

Although ROCAP and CATIE have been working on the accounting background needed in order to establish an appropriate overhead rate, indications are that the rate may result in substantially less revenue for CATIE than had been anticipated. This is due to the magnitude of CATIE's contractual commitment to provide from its own financial resources professional personnel, supporting staff, institutional facilities and services as stated in Contract Annex III thus precluding these items from reimbursable overhead. In view of CATIE's limited financial resources a low level of overhead recovery may inhibit CATIE's ability to fulfill all of its commitments under the contract. ROCAP will review the overhead rate issue internally and determine what flexibility exists before resuming negotiations with CATIE. On its part CATIE will continue its long range efforts to obtain financial support from other international resources. Indications are that any substantial financial support is likely to be contingent on CATIE's ability to demonstrate its role as an international institution and to align its internal and management procedures with those of comparable international research institutions. CATIE does not anticipate that BID will act on its request until TAC approves it as a regional institution.

- D. CATIE indicated that it needs to have its \$25,000.00 revolving fund advance increased to \$40,000.00 in view of its projected level of monthly expenses -

CATIE will prepare a letter to ROCAP with financial projections and justifications substantiating the requested increase in the amount of the revolving fund advance.

- E. CATIE wants to have ROCAP finance nine months of the cost for the Resident Agronomist/El Salvador

CATIE proposes this as a bridging measure in the event that the overhead issue is not resolved in a manner which leaves CATIE with sufficient financial resources. CATIE hopes that action by its Board of Directors in June, 1976 will provide the basis for BID financing on a grant basis thus providing partial relief from the financial bind. The opinion was expressed that ROCAP would probably need to know what assurances can be had that CATIE can handle financing over the longer run. Dr. Soria indicated that only the CATIE Board of Directors could determine this and that the matter will be discussed with the Board.

## V. CONCLUSIONS

The evaluation team was favorably impressed with CATIE's interest in and dedication toward the successful execution of the Small Farm Cropping Systems project. The project requires the effective utilization of an interdisciplinary approach to cropping systems research together with innovative methodology. Previous experience with this approach has been limited throughout the world.

Although project staffing was delayed due to the scarcity of individuals having the requisite training and experience, CATIE has recruited a high caliber team of young and energetic professionals. The long term Biometrician and Horticulturalist positions remain to be filled and CATIE is pressing its recruiting efforts. The team members

have applied themselves to the accomplishment of planned project activities.

CATIE has had unexpected delays with respect to the execution of Memoranda of Understanding with El Salvador and Guatemala and these countries have not become project participants. Although CATIE is hopeful that these countries will decide to participate, the efforts involved in negotiations have placed added stress on CATIE during the early phase of the project. The potential for the success of the project is not contingent on the active participation of El Salvador and Guatemala, but their early involvement remains a desirable objective.

Both CATIE and ROCAP have frankly discussed project progress and problems. Problems encountered were being dealt with in a proper manner. Project progress was on schedule with regard to the three participating countries. CATIE has demonstrated the capacity to carryout the project and is sincerely interested in its success. Therefore, the evaluation team is satisfied with the progress to date.

AE:LEClark:adec  
March 1, 1976