

A.I.D. EVALUATION SUMMARY PART I

(BEFORE FILLING OUT THIS FORM, READ THE ATTACHED INSTRUCTIONS)

PD-AAZ-898

A. REPORTING A.I.D. UNIT:

USAID Costa Rica

(Mission or AID/W Office)

(ES# 89-1)

B. WAS EVALUATION SCHEDULED IN CURRENT FY ANNUAL EVALUATION PLAN?

yes slipped ad hoc

Eval. Plan Submission Date: FY 89 Q 3

C. EVALUATION TIMING

62964

Interim final ex post other

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 #	Project/Program Title (or title & date of evaluation report)	First PROAG or equivalent (FY)	Most recent PACD (\$mo/yr)	Planned LOP Cost (\$000)	Amount Obligated to Date (\$000)
N/A	Nontraditional Agricultural Export Strategy				

(Mission Sector Strategy)

E. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

Action(s) Required

- The projects which comprise the strategy should continue to be closely coordinated with GOCR and private sector activities.
- The evolving strategy should keep its strong production activities, and as they mature, consider management and marketing improvements.
- The strategy should continue its emphasis on quality control and compliance with FDA pesticide regulations.

Name of officer responsible for Action

RDO

RDO

RDO

Date Action to be Completed

continuing

continuing

continuing

(Attach extra sheet if necessary)

F. DATE OF MISSION OR AID/W OFFICE REVIEW OF EVALUATION: mo 6 day 15 yr 89

G. APPROVALS OF EVALUATION SUMMARY AND ACTION DECISIONS:

Signature Typed Name	Project/Program Officer	Representative of Borrower/Grantee	Evaluation Officer	Mission or AID/W Office Director
	<u>Ross Wherry</u>	N/A	<u>James Van Den Bos</u>	<u>Carl H. Leonard</u>
	Date: <u>9/1/89</u>	Date: _____	Date: <u>9/5/89</u>	Date: <u>9/11/89</u>

H. EVALUATION ABSTRACT (do not exceed the space provided)

The evaluation was a scheduled mid-term evaluation of the strategy developed in 1987 for promotion of nontraditional agricultural exports (NTAE) as a means of diversifying sources of national income. The strategy included credit, production, marketing, and management improvement projects. The USAID/CR nontraditional agricultural export strategy achieved its start-up goals for export sales and employment generation, and has realistic expectations for the future. The consultants did not see the need for radical restructuring. The NTAE products exported to date have been ornamental plants, cut flowers, strawberry, ethnic root crops, melon, pineapple, and asparagus. The evaluation measured NTAE sales and employment generation of the USAID/CR NTAE strategy for 1987 and 1988 with projections through 1994. In 1987-88, incremental foreign exchange earnings reached \$5.3 million, against a goal of \$4.4 million. Direct employment generation was estimated at 1,500 jobs over the two years. It does not include indirect effects of non-directed lines of credit, or the macro-economic policies which have been stimulated by USAID.

Based on current trends, the 1990 NTAE earnings attributable to the program should reach \$18.8 million. The projections do not include the new initiatives, such as the tropical fruit juices, pulps and concentrates, industrial tomato, raspberry/blackberry and, most importantly, the drive for foreign investment in NTAE. Nor do they include benefits which may accrue to the Ministry of Agriculture's National Programs which are associated with the principal strategy implementing agent, CAAP. (The CAAP cocoa and ornamental plant managers are also managers of the national program.) Any slippage in the projections should be more than offset by these new programs.

The full impact of the later maturing products will not be felt until after 1994. An example is macadamia, which takes nine years to reach maturity. Export sales are projected at \$60,000,000 annually by the time the over 5,800 ha. assisted by AID reach this point in 1998. The Northern Zone Consolidation Project anticipates over 13,000 ha. planted in nontraditionals with direct and indirect USAID assistance. This can be expected to generate export sales in excess of \$40,000,000 annually at full maturity. Only a small portion of these exports would have come on stream by the 1994 cutoff used in this report.

The USAID/CR NTAE strategy benefitted from effective implementing organizations: CAAP, FEDECOOP/ACDI, AIFLD/Agrarian Union and the Northern Zone Consolidation Project. This work is a reflection of the high quality of the personnel involved, and the good judgement exhibited by the project management team.

I. EVALUATION COSTS

1. Evaluation Team Name	Affiliation	Contract Number OR TDY Person Days	Contract Cost OR TDY Cost (US\$)	Source of Funds
Harry Mannion	Checchi (consultant)	60 person days	\$54,709.00	FY 1989
William Bolton	Checchi (consultant)	515-0000-C-00-9035-00		PD&S, ARDN

2. Mission/Office Professional Staff Person-Days (estimate) 15

3. Borrower/Grantee Professional Staff Person-Days (estimate) 180

ABSTRACT

COSTS

D

A.I.D. EVALUATION SUMMARY PART II

J. SUMMARY OF EVALUATION FINDINGS, CONCLUSIONS AND RECOMMENDATIONS (Try not to exceed the 3 pages provided) Address the following items:

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

Mission or Office: USAID/Costa Rica

Date this summary prepared: 9/1/89

Title and Date of Full Evaluation Report: USAID/Costa Rica Nontraditional Agricultural Export Strategy-July, 1989

USAID Costa Rica has maintained a broad program of economic diversification in Costa Rica since 1984. Activity in light manufacturing as well as in agriculture has been supported by an innovative approach involving shared authority between private and public sector agencies. As Costa Rica recovered from the economic imbalances of the early 1980's, the diversification of the economy became a significant part of the new growth. Although AID established programs to promote Costa Rican and international investment in diversification, much investment took place without AID's urging.

In agriculture, USAID Costa Rica has pursued diversification from the four traditional exports (coffee, banana, sugar, beef) into a variety of perishable and semi-perishable products. A sub-sector strategy document was approved in 1987 to draw together the various diversification efforts. At present, four projects and three credit lines are related to the strategy, drawing on both dollar and local currency resources. Regular project evaluations have been conducted of the components of the strategy, assessing the success of these activities. USAID desired to make a sub-sectoral evaluation, examining the progress in the promotion of new agricultural export industries.

The evaluation determined the extent to which AID resources have increased nontraditional agricultural export (NTAE) industries, as well as the effects on exports from Costa Rica to the US, Europe, and Japan. The consultants will also suggest refinements of modifications to the Mission strategy to promote such exports.

The USAID/CR nontraditional agricultural export strategy has been a success to date. It achieved its start-up goals for export sales and employment generation, and has realistic expectations for the future. The strategy is moving forward effectively, and the consultants did not see the need for radical restructuring. The principal NTAE products exported to date have been ornamental, cut flowers, strawberry, ethnic root crops, melon, pineapple, and asparagus. The evaluation shows measurable impact on export sales and employment generation of the USAID/CR NTAE does not include indirect effects or non-directed lines of credit or of the various macro-economic policies of the C.R. government which may have been stimulated by USAID. The evaluation also shows the increase in export values from 1983 through 1987. This amounted to more than \$65,000,000 annually and was influenced significantly by credit and other USAID supported, macro-economic policies and initiatives.

Based on current trends, the 1990 NTAE earnings directly attributable to the Mission program should reach \$18.8 million. The projections are reasonably conservative, and do not include the impact of any new initiatives, such as the planned tropical fruit juices, pulps, and concentrates program the industrial tomato program, the raspberry/blackberry program and, most importantly, the drive for foreign investment in NTAE.

Nor do they include benefits which may accrue to Ministry of Agriculture's National Program which are associated with the principal implementing agent, with CAAP. (The CAAP cocoa and ornamental plant managers are also managers of the national program.) Any slippage in these projections should be more than offset by these new programs.

It is important to note that the full impact of the later maturing products will not be felt until after 1994. An example is macadamia, which takes nine years to reach full maturity. Export sales value is projected to be over \$60,000,000 annually by the time the over 5,800 ha. assisted by AID reach this point in 1998, with the nationwide industry exceeding \$100,000,000. The Northern Zone Consolidation Project anticipates over 13,000 ha. planted in nontraditionals with direct and indirect USAID assistance. This can be expected to generate export sales of excess of \$40,000,000 annually at full maturity. Only a small portion of these exports would have come on stream by the 1994 cutoff used in this evaluation.

The USAID/CR nontraditional export strategy benefitted from the effective work of the implementing organizations: CAAP, FEDECOOP/ACDI, AIFLD, Agrarian Union and the Northern Zone Consolidation Project. This work is a reflection of the unusually high quality of the personnel involved, and the good judgement consistently exhibited by their managers. Two Costa Rican government organizations are involved in supporting NTAE's. CENPRO has had an export-promotion program since the 1960's; the Ministry of Agriculture developed a new initiative in 1989 to assist in export-oriented crops.

Although there is a similarity in services provided by the various organizations, as well as in their focus crops, there was no evidence of wasteful duplication. Needs are too great compared with the resources being deployed. It would be a mistake to rigidly coordinate or reorganize these activities as central planning is more apt to weaken their overall effectiveness. However, it would be useful to have a forum where the managers of the projects could meet on a regular basis, discuss what they are doing, and exchange ideas.

The key problems facing the expansion of NTAE from Costa Rica are transportation, chemical residues, post-harvest handling and processing, export marketing management, and credit. Most of the NTAE growth through 1994 will be transport-sensitive perishables, using air or refrigerated sea freight. Control of chemical residues can be achieved through training and local testing, and is paramount to continued access to the U.S. market. Grading, cooling, and prompt arrivals are the main post harvest concerns, as well as the emergence of local value-added processing. New exporters don't understand how the export markets work, and can therefore benefit from information sharing and contacts with larger export houses and multinationals. Access to local credit is constrained by excessive paperwork and the banks' unfamiliarity with the new NTAE businesses. Social equity has not been a problem, with small and medium producers receiving the majority of the program assistance.

K. ATTACHMENTS (List attachments submitted with this Evaluation Summary, always attach copy of full evaluation report, even if one was submitted earlier)

Evaluation Report

ATTACHMENTS

L. COMMENTS BY MISSION, AID/W OFFICE AND BORROWER/GRANTEE

The evaluation was for internal Mission consumption, and cut across a variety of agriculture and finance projects, both public and private. No one organization had a lead role in the strategy implementation. Since recommendations are made to a non-project activity, no project counterpart signed the E.S.

MISSION COMMENTS ON FULL REPORT

2

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62965

EVALUATION OF USAID/COSTA RICA
NONTRADITIONAL AGRICULTURAL
EXPORT STRATEGY

(Contract No. 515-0000-C-00-9035-00)

William E. Bolton
Checchi and Company Consulting, Inc.

Harry Mannion
ATMA International, Inc.

July 1989

**EVALUATION OF USAID/CR NONTRADITIONAL
AGRICULTURAL EXPORT STRATEGY**

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I. EXECUTIVE SUMMARY

The USAID/CR nontraditional agricultural export strategy has been a success. It has achieved its start-up goals for export sales and employment generation, and has excellent, realistic expectations for the future. It is moving forward very effectively, and the consultants did not see the need for any radical restructuring.

Schedules I (P 3), and III (P 5) show the measurable impact on export sales and employment generation of the USAID/CR NTAE strategy for 1987 and 1988, with projections through 1994. It does not include indirect effects of non-directed lines of credit or of the various macro-economic policies of the C.R. government which may have been stimulated by USAID.

Schedule II (P 4) shows the increase in export values from 1983 through 1987. This amounted to more than \$65,000,000 annually and was influenced significantly by credit and other USAID macro-economic policies and initiatives.

Overall, the projections are reasonably conservative, and do not include the impact of any new initiatives, such as the planned topical fruit juices, pulps, and concentrates program, the industrial tomato program, the raspberry/blackberry program and, most importantly, the new PIE foreign investment drive. Nor do they include benefits which may accrue to MAG's National Program through those programs associated with CAAP. (The CAAP cocoa and ornamental plant managers are also managers of the national program.) Any slippage in these projections should be more than offset by these new programs.

It is important to note that the full impact of the Northern Zone Consolidation Project and of some of the later maturing

products will not be felt until after 1994.

An example is macadamia, which takes nine years to reach full maturity. Export sales value is projected to be over \$60,000,000 annually by the time the over 5,800 AID-assisted Ha. reach this point, with the nationwide industry exceeding \$100,000,000.

The Northern Zone Consolidation Project anticipates over 13,000 Ha. planted in nontraditional with direct and indirect USAID assistance. This can be expected to generate export sales of excess of \$40,000,000 annually at full maturity. Only a small portion of these exports would have come on stream by the 1994 cutoff used in this report.

A specific description of how the AID strategy impacted each crop and the basis for the projections follow.

SCHEDULE I
MEASURABLE COSTA RICAN NON-TRADITIONAL EXPORT
INCREASES AS THE DIRECT RESULT OF USAID/CR STRATEGY
(000 Omitted)

	1987	1988	1989	1990	1991	1992	1993	1994
Mangos	-	-	-	1,000	3,000	5,000	7,000	9,000
Ornamentals	1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000
Papaya	-	-	-	500	1,000	3,000	5,000	7,000
Cocoa	-	-	-	100	700	1,800	4,100	6,100
Asparagus	-	-	100	900	2,800	3,500	5,500	6,000
Flowers	300	2,000	2,900	3,400	4,000	4,600	5,300	5,900
Macadamia	-	-	200	400	700	1,300	2,600	5,100
Melons	-	100	800	3,000	3,200	3,400	3,600	3,800
Strawberries	500	1,000	2,900	2,900	3,100	3,300	3,500	3,700
Black Pepper	-	-	-	100	600	1,600	2,700	3,600
Roots & Tubers	100	200	800	1,500	2,200	2,300	2,400	2,500
Pineapples	<u>-</u>	<u>-</u>	<u>500</u>	<u>1,000</u>	<u>1,800</u>	<u>1,900</u>	<u>2,000</u>	<u>2,200</u>
Total	1,900	5,300	11,200	18,800	28,100	37,700	50,700	62,800

USAID/CR NTAE STRATEGY GOALS
\$3,500 1987
\$4,400 1988

SCHEDULE II

VALUE OF SELECTED* COSTA RICA NTAE'S TO THIRD MARKETS

	1983	1984	1985	(000 Omitted) 1986	1987	1988	INC (DEC) 1983/1988
Pineapple	1,200	4,900	6,400	14,900	21,500	31,200	30,000
Ornamentals	7,000	8,000	11,000	13,000	18,000	20,000	13,000
Flowers	6,700	4,500	6,700	5,800	7,400	8,600	10,900
Ferns/Plant Parts	(A)	(A)	(A)	4,900	6,500	9,000	(A)
Roots/Tubers	3,200	3,400	3,600	5,300	6,000	8,500	5,300
Prepared Veggies.	1,500	1,600	1,100	1,500	3,200	4,000	2,500
Macadamia	-	-	-	-	1,600	1,800	1,800
Papaya	-	-	-	400	900	1,500	1,500
Strawberries	-	-	-	200	700	1,200	1,200
Melons	400	400	300	300	500	1,500	1,100
Chayote	2,100	1,900	2,100	2,500	2,800	3,100	1,000
Cocoa	4,600	9,900	9,900	7,900	7,500	5,200	600
Fruit Prods.	4,700	800	1,000	4,700	5,000	4,800	100
Plantains	<u>4,600</u>	<u>1,900</u>	<u>1,300</u>	<u>1,300</u>	<u>1,800</u>	<u>1,400</u>	<u>(3,200)</u>
Total	36,000	37,300	43,400	62,700	83,400	101,800	65,800

*Selection limited to those crops with export values in excess of \$1,000,000 in 1988.

(A) Included with flowers.

Source: CENPRO/BCCR.

USAID/CR NTAE STRATEGY GOALS

1987

\$3,500

1988

\$4,400

SCHEDULE III

Estimated Employment Impact
of the USAID/CR NTAE Strategy

(Full Time Equivalent)

<u>CROP</u> (Projected)	<u>1987</u> (Est.)	<u>1988</u> (Est.)	<u>1994</u>
Mangoes	-	-	500
Ornamental Plants	300	600	2,500
Papaya	-	-	500
Cocoa	-	-	1,300
Asparagus			200
Flowers	100	400	1,600
Macadamia	-	-	1,500
Melons	-	-	100
Strawberries	-	100	200
Black Pepper	-	-	700
Roots and Tubers	-	-	500
Pineapples	<u>-</u>	<u>-</u>	<u>500</u>
Total	400	1,100	10,100

The USAID-CR nontraditional export strategy has been a success due to the solid, effective work of the implementing organizations: CAAP, FEDECOOP/ACDI, Agrarian Union and the Northern Zone Consolidation Project. And this effective work is a reflection of the unusually high quality of the personnel involved, and the good judgement consistently exhibited by their managers.

In addition to the USAID-supported organizations listed above, two Costa Rican government organizations are involved in supporting NTAE's. CENPRO has had an export-promotion program since the 1960's, and MAG has just developed a new initiative in 1989 to assist in export-oriented crops. During the last few days of our consultancy, CENPRO and CAAP reached an agreement for CAAP to absorb their agricultural export promotion activities, but the details of this agreement were not available.

Schedule IV (P 10) shows a list of the organizations involved in supporting NTAE in Costa Rica, and the services they provide. Schedule V (P 11) lists the products on which each of these organizations are focused.

Since CINDE/CAAP became operational in 1986 they have concentrated in crop research through UCR and CATIE and in production technical assistance. They have also done some excellent work in transportation. This year they have become more deeply involved in post harvest technical assistance, and are developing marketing and investment promotion programs.

Training is executed through CINDE's PROCAP section, and foreign investment promotion through CINDE/PIE.

The Northern Zone has supported pilot projects in cocoa, black pepper and ginger during Phase I. The major NTAE effort will be in phase II, starting later this year, which will bring close to another 4,600 Ha. under cultivation. The total project is expected to stimulate planting a total of 13,000 Ha. of NTAE crops, either directly or indirectly.

CENPRO's most effective capabilities are in organizing trade fairs and in accessing European technical assistance. They have a computerized library and information center, which AID is supporting with a 3,000,000 COL grant for upgrading. They provide exporters with one-stop shopping for information and access to ministries.

The U.S.-Israeli Cooperative Agreement is providing two technicians for work in industrial tomatoes, and in mangoes and avocados. They report to CAAP and MAG respectively.

The ACDI group is made up of the Coffee Diversification Project, managed by FEDECOOP and assisted by ACDI, which diversified over 1,100 Ha. of marginal coffee land into more suitable export crops. This was succeeded by the new CO-OP Organizational Strengthening Project which will assist in strengthening the management and marketing capability of both coops and producer organizations. They will continue the diversification effort.

ACDI also managed the very effective Farmer to Farmer Program which provides volunteer technical assistance.

The Agrarian Union has had a very successful program with yucca and other root crop exports, and is starting to diversify into other crop areas. In their technical assistance program, they function as intermediaries, locating the appropriate assistance for the task at hand. This assistance could be from CATIE, UCR, CAAP, expatriate, etc.

MAG is starting a new program establishing national priorities by crop, and are narrowing their activities to focus on these specific crops. This should enable them to have a greater impact. The identified NTAE crops are on Schedule V (P 11). They have established an office for external marketing assistance which will work closely with CENPRO and CAAP.

CATIE and the University of Costa Rica have assisted with research, and PROEXAG has worked very effectively with CAAP, providing valuable assistance in the asparagus, melon and raspberry/blackberry programs.

Although there is a similarity in services provided by these organizations, and in their focus crops, there was no evidence of wasteful duplication. Needs are too great compared with the resources being deployed. It would be a mistake to rigidly coordinate or reorganize these activities as central planning is more apt to weaken their overall effectiveness.

However, it would be useful to have a forum, where the managers of all the projects could meet on a regular basis, discuss what they are doing, and exchange ideas. This would tend to encourage cooperative efforts to evolve. This should include all groups involved in NTAE projects, whether USAID supported or not. As a result, consideration should be given to limiting it

to the Costa Rican managers of each project. This should be kept simple and could take the form of a coordinating committee, with the only staff required a full-time secretary.

SCHEDULE IV

Organizations Involved in Supporting NTAE's in Costa Rica

CINDE/CAAP

Crop Research
Technical Assistance
 - Production
 - Post Harvest
Marketing Assistance
Investment Promotion
Training

NORTHERN ZONE PROJECT

Producer Organization
Technical Assistance
 - Production
 - Post Harvest

MAG

Technical Assistance
 - Production
Marketing Assistance
Producer Organization

U.S.-ISRAELI Cooperative Agreement

Crop Research
Technical Assistance
 - Production

ACDI GROUP

Crop Research
Credit
Technical Assistance
 - Production
 - Post Harvest
Marketing Assistance
Producer Organization
Training

AGRARIAN UNION

Technical Assistance
 - Production
 - Post Harvest
Grower Organization
Marketing Assistance

CENPRO

Technical Assistance *
 - Production
 - Post Harvest
 - Marketing
Marketing Assistance

Support is also received from research activity at CATIE and the University of Costa Rica, and assistance from PROEXAG, ROCAP Regional Agricultural Export Promotion Project.

* CENPRO has access to European technical assistance through arrangements with the United Nations and CCI.

SCHEDULE V

CAAP

Macadamia
Ornamental Plants
Blackberry-Raspberry
Asparagus
Strawberry
Flowers
Mango
Cocoa
Papaya
Melon
Industrial Tomatoes
Black Pepper

AIFLD

Roots and Tubers
Pineapple
Melon
Tropical Fruit Juices, Pulps and
Concentrates
Raspberry-Blackberry Pulp
Jalapeno Peppers

MAG

Mango
Black Pepper
Naranjo
Roots and Tubers
Cocoa
Pineapple
Macadamia
Heart of Palm
Oil Palm
Aquaculture
Ornamental Plants

U.S.-Israeli Cooperative Agreement

Industrial Tomatoes
Mango
Avocado

ACDI

Macadamia
Cocoa
Black Pepper
Tropical Fruit Juices, Pulps and
Concentrates

Northern Zone

Cocoa
Black Pepper
Ornamental Plants
Macadamia
Star Fruit
Passion Fruit
Vanilla
Palm Heart

CENPRO

Flowers
Palm Heart
Chayote
Roots and Tubers
Tropical Fruit Juices, Pulps and
Concentrates
Pineapple
Mango
Naranjo
Other Citrus
Macadamia
Strawberry
Melon
Papaya
Black Pepper
Cardamom
Asparagus
Mushrooms
Achiote
Squash
Cucumber
Cashew
Ginger

NEW INITIATIVES

Major new initiatives, within the strategy, now coming onstream, include a revitalized foreign and domestic investment promotion program; an export promotion and marketing assistance program; a producer organization strengthening project; and Phase II of the Northern Zone Consolidation Project.

The revitalized investment promotion program, particularly for foreign investors, has exciting potential.

In the United States there has been a sea change in the attitude of the agribusiness community towards Central America. Five years ago, mainstream agricultural companies (outside of the fruit companies) exhibited no interest in the Caribbean region. Today, some of these same companies look towards Central America as the wave of the future, particularly for perishables. Each year, larger numbers of agribusiness representatives are crisscrossing the region, in search of opportunities. This is particularly true of those based in Florida and California.

PIE's European office has already discovered a very strong interest in Costa Rica and, under the previous program had organized 25 agribusiness itineraries. (See Appendix C.) A major constraint for these Europeans has been transport, which will be discussed later.

Another source of considerable investment may be Colombia. Ecuador's recent growth in flower exports has been fueled by solid, experienced growers who wanted to escape the turmoil and danger of Colombia. These growers have also evidenced interest in Costa Rica and have already made investments in three firms.

Costa Rica has a lot to sell. The comfort investors feel due to the political stability, democracy and literacy will more than justify the higher labor costs.

As part of this program, PIE will be hiring an additional representative, with agribusiness experience, to be based in Miami, and to be responsible for the southeast U.S. Their other regional reps have been committed to dedicating 20% of their time to agribusiness. PIE is adjusting their Bonus Compensation Formula to make agribusiness more attractive.

The previous attempt at promoting foreign agribusiness investment failed for a variety of reasons. But, the managers of CAAP and PIE are now determined to make it work and have agreed to a sound program.

However, this program involves split responsibility between CAAP and PIE, and with split responsibility, it becomes difficult to hold managers accountable. And without accountability, programs tend to falter. This program will require a substantial amount of teamwork and cooperation. The PIE reps cannot operate effectively without support and direction from CAAP; and CAAP can find itself continuously frustrated by a lack of responsiveness on the part of the PIE representatives. They have addressed this concern by designating a full-time coordinator between CAAP and PIE. However, there is no one in authority with personal responsibility for the success of the project to whom the two units are answerable. It is important that even though part of the work is delegated, CAAP should still have primary responsibility for foreign investment. This means that they would have the full responsibility, in the event that the PIE program isn't working, to take action to correct the problem.

The Export Promotion and Marketing Assistance Program is a major initiative now being both designed and implemented, concurrently, by CAAP, and as a result the details are in constant flux.

This type of program can also make a significant contribution to Costa Rica's future. However, in our review of the plan that has been developed to date, and in interviews with the various CAAP executives, we have come to the conclusion that the Export Promotion Program has not been adequately thought through. It is the subject of a substantial amount of confusion, and has had an unsettling effect within CAAP.

While the Export Promotion Program is a valuable, long-term project, there is no crisis that requires its immediate implementation. There is the time available to design and slowly implement a meaningful program in response to real needs.

The danger is not just the waste of money on ineffective programs, but also the distraction of management away from more important issues, the unsettling influence on the rest of the organization and, most important, the loss of respect and credibility with CAAP's potential clients, that a poor program can engender.

KEY CONSTRAINTS

Some of the key problems facing the expansion of NTAE exports include:

- Transportation
- Chemical Residues
- Post-Harvest Handling and Processing
- Export Marketing Management
- Credit

Transportation

Over 70% of the projected NTAE growth for 1994 and 90% of the projected growth for 1990 are in transportation-sensitive perishables. And if the foreign investment promotion program is as successful as it is expected it to be, these projections may be significantly understated. CAAP has led the way in a very aggressive program in air transport. Cargo flights per week increased from nine in 1986 to 28 currently. CAAP is now in the process of instituting a maritime program.

In air transport, despite CAAP's success, exporters are straining capacity levels to the U.S.; and the lack of additional capacity is a primary constraint to the expansion of exports to Europe. PIE reported losing some excellent potential European investment, explicitly for this reason. Additionally, a team from the Miami airport reviewing the situation in San Jose, predicted total gridlock before the completion of a cargo terminal complex being considered for five to six years from now.

The solution is not easily arrived at. There are serious cost problems when expanding service forces cargo planes to dead-head back to Costa Rica. This becomes particularly prohibitive for European flights. Transfers in Miami for transport to Europe do not seem to work well. Products miss planes, or are abused during the transfer process.

Public refrigerated maritime service for the entire region is at capacity during the principal shipping season, (January-March) and rates are becoming unsustainable. CAAP is participating in a newly-formed effort with ROCAP to solve the problem on a regional basis. However, it is important that concurrent with this, a local effort be continued. There are good possibilities developing. Del Monte is to begin service

this summer to Philadelphia, Savannah and Los Angeles with three much larger ships. They will have substantial excess capacity, and are considering taking outside cargo. However, even if they do decide to take outside cargo, they may be unwilling to supply the refrigerated containers.

Again, as with air transport, the lack of direct maritime service to Europe is a serious constraint. The ornamental plant business in Jamaica, for example, is starting to take off, specifically due to having this direct access.

CAAP is beginning its approach to the maritime problem in an intelligent and orderly manner. It is currently conducting a study to determine projected reefer container availability and needs, and will develop its strategy once that has been determined.

In summary, the resolution of the transportation constraint is central to the expansion of NTAE's, and there is a great deal of work to be done, from the expediting and reorganization of the air cargo terminal complex; to working towards strengthening the transfer of Costa Rican product at the Miami airport; to exploring the modified atmosphere possibilities; to generally explore possibilities for expanded air and maritime service. Mario Guzman is in charge of this sector, part time, for CAAP. He has done an excellent job. However, it is important that he be given the resources to properly address the problem. Without resolution of this issue, many of the other programs become pointless.

Chemical Residues

As we are all aware, chemical residues have become a serious issue for food products. Testing of imports by the FDA has

increased dramatically over the past two years, and a problem with residues on Costa Rican mangoes could be disastrous.

In addition, the Del Monte program, as well as possible programs with Chiquita and Dole, to buy and/or market produce from independent growers are very significant in size and are an extremely healthy development for Costa Rican agriculture. These companies are acutely aware of the potential damage to their images in the event some of these growers illegally use chemicals, and this fear could easily result in the fruit companies limiting or discontinuing their involvement with independents.

The chemicals problem is a complicated one, involving not only which chemicals are used, but when and under what conditions. There is substantial work being done in the U.S. in this area, and new technologies and options will be evolving rapidly over the next few years. ROCAP, through the PRO-EXAG Project, is taking the lead as representative for the region and in disseminating technology and information. PRO-EXAG is an experienced, competent group and CAAP has worked well with them in the past.

CAAP's role would be in the dissemination of information within Costa Rica; in the training of growers; and in devising and instituting good testing and control procedures. Incidentally, we have discussed the U.S. here. We can fully expect the Europeans to follow the U.S. lead in this matter, if indeed they haven't already.

Post-Harvest Handling and Processing

Serious post-harvest handling and processing problems have been reported for macadamia, cocoa, flowers, ornamental plants

and produce.

Macadamia is being solved through a gradual learning experience by the processor, but he is still not up to Hawaiian standards. This processing knowledge is the key to the success of any additional plants that come on stream.

Quality improvements for cocoa producers is an important focus of the USAID strategy, through both the CAAP and FEDECOOP programs. The San Carlos Coop now has a modern processing facility in operation as a demonstration project, but has had difficulty organizing the demonstration properly.

Problems with poor arrivals, which has been at the heart of the shakeout in the flower and ornamental plant sectors, has been generally attributed to poor harvest handling. CAAP is focusing on that issue in their 1989 program. Generally, CAAP is attempting to identify any infrastructural weaknesses that may be a contributing factor and to provide training in proper techniques.

Problems in the produce area are thought to be behind us. However, with the advent of a totally new crop, asparagus, with an extremely high respiration rate, it is important that post-harvest problems be identified and addressed in advance.

Export Marketing Assistance

New Costa Rican exporters often lack an understanding of how the export markets work, and often can use assistance in establishing contact with customers and marketing agents.

CAAP has addressed the problem of understanding the markets, through sponsorship of a series of seminars by PROCAP. This is

an effective approach, which can be expanded to accommodate need.

In 1989, CAAP, in cooperation with CENPRO, will begin a program of assisting exporters with contacts, through promotional efforts centered around trade shows. This also can be extremely effective. For the PMA convention this fall, CAAP is using an experienced retired Dole executive, as an advisor. Working a trade show seems simple on the surface, but there is more to effectively using them than meets the eye. The use of the experienced advisors at first is to be commended.

Both of these approaches have the added benefit of providing valuable assistance, without getting too involved with the exporters operation.

In addition, as was discussed earlier, a major new export promotion and marketing assistance program is being designed by CAAP.

Credit

There is difficulty in getting credit for the small and medium-size growers, but it seems to have more to do with the approval process, than with availability. The process is seen to be excessively complicated, and the problem root is generally believed to be the bankers unfamiliarity with the nontraditionals. The BNCR has requested training from CAAP, and CAAP is including this in their marketing program design.

A useful activity for CAAP would be to review the entire process and lobby for its simplification.

The excessively high market interest rates are having a particularly serious impact on the flower sector, where tight

margins make it economically unfeasible to expand with borrowed money. Although it does not seem too have become a problem yet in some of the other sectors, it will as the markets becomes more competitive, and the cost structure of the Costa Rican producer versus his competition becomes critical.. This will particularly impact the smaller growers.

There are two excellent lines of credit that are not being fully utilized. LINE 4 is for \$10,000,000, and is restricted to small, nontraditional export farming. It is available at 15%. The problem is that the definition of a small farmer is obsolete, making it difficult for any one attempting to farm on a commercial scale to qualify. Rationalizing this definition should be part of the proposed review by CAAP.

The second line, the AIR line is a dollar line for \$20,000,000 at 11% to 12%. There has been little interest in it and USAID is deobligating it by \$12,000,000. The reasons given for a lack of interest were again systemic difficulties in accessing it, and in the Costa Rican exporters reluctance to borrow in dollars.

In our interviews, we found a willingness to borrow in dollars on the part of experienced exporters (note that the LAAD dollar line is fully subscribed) but a reluctance on the part of less experienced exporters.

As one Costa Rican put it, he made his living domestically in COL. He sees some interesting possibilities in exporting, but he also considers it high risk. If it should fail, he could wind up paying off dollars, while earning colones which, in the event of a devaluation, could be disastrous.

Access to the AIR line is not restricted by nationality and interest in it may pick up as part of the impending foreign investment program.

* * *

In summary, the above review suggests the importance over the near term of solving infrastructure support problems, and in extensive training programs.

Social Equity

The USAID/CR-NTAE policy has, in implementation, been focused to a remarkable degree on small and medium-size farmers. This was through design with the Agrarian Union, FEDECOOP, Farmer to Farmer, and the Northern Zone projects. However, even the CAAP program has evolved into working largely, though not exclusively, with small and medium size growers. This is particularly true of the ornamental, flower, and strawberry programs. Even in the case of papaya and mangoes, where the assistance was given to a large, multinational company, the end results of the assistance will benefit thousands of small growers.

The strategy goal for employment generation for 1987 and 1988 was 780 and 1,070, respectively. Estimated full-time equivalent employment actually generated for these two years amounted to 400 and 1,000. Projections are for 10,100 jobs by 1994. (See SCHEDULE III, P 5)

II. INTRODUCTION

A. SCOPE OF WORK

The consultants were asked to:

1. determine the extent to which AID resources have increased Costa Rican nontraditional agricultural export industries (NTAE),
2. determine the effects of USAID resources on exports from Costa Rica to the U.S., Europe and Japan and
3. suggest refinements or modifications to the mission strategy to promote such exports.

In making this determination, the consultants were to review the following projects for their effects, and their potential for increasing nontraditional agricultural exports (NTAE);

CINDE/CAAP (Private Agriculture and Agroindustry Council)

FEDECOOP

Agrarian Unions

Northern Zone Development Project

Farmer to Farmer

Section 108

Credit line #3

Agribusiness credit line

Verbal briefings emphasized that this review was not meant to be an evaluation of these projects.

The following research questions were to be answered as part of this review.

1. Market access
 - Does the mission program develop Costa Rican ability to access long-term market opportunities, and to identify and quantify the constraints to exploitation of these opportunities?

- Does the mission program promote dialogue among public and private decision makers which affect access to foreign markets?
- Does the mission program promote acquisition and dissemination of information required to make marketing decisions in the short and medium term?

2. Investment Promotion

- Does the mission program successfully promote investment by large and small Costa Rican investors (either proprietors or financial investors) in NTAE?
- Does the mission program successfully promote investment from financial marketing partners? Does this investment spread beyond a limited group of financially privileged persons?
- Does the mission program successfully analyze and assess the risk and return on U.S. government funds invested in NTAE promotion?

3. Agricultural Business Development

- Does the mission program promote agricultural industries which are positioned for medium-term success in export markets? For long-term success?
- Does the mission program adequately provide for strengthening of policy-making apparatus, financial services, production support, and transportation services needed by the emerging export industries?
- Does the mission program adequately promote management development in emerging export industries, so that managerial skills keep pace with export expansion?

- Does the mission program adequately address the effects of NTAE expansion on local markets for labor and marketable seconds?
- Is the program concentrating wealth or authority to an unwise degree?

In determining the extent to which AID resources have increased nontraditional agricultural export industries, the consultants were asked to compare the aggregated data from the project reviews mentioned above, with data on exports received from the Central Bank. From these comparisons, the consultants were asked to determine the amount of NTAE growth for which a direct link (if any) can be made to the USAID strategy, as well as any indirect effects on private investment.

In addition, the consultants were asked to recommend improvements to the management information system in NTAE, which AID now uses, and to suggest options for the mission in the evolution of its NTAE strategy, outlining the particular constraints or advantages which might exist.

B. OVERVIEW OF THE USAID COSTA RICA NONTRADITIONAL AGRICULTURAL EXPORT STRATEGY 1986-1990

The following excerpts key aspects of the USAID strategy, from the Strategy Paper, published in January, 1987.

The mission strategy for NTAE expansion is to promote investment in Costa Rican agriculture for diversification into intensively produced crops with the potential for high economic return, and to assist these emerging agroindustries at critical points in the development of export markets in the U.S. and elsewhere. The stimulation of investment which this strategy was

designed to produce is expected to contribute to the generation of new jobs and foreign exchange earnings.

For the purposes of this strategy, nontraditional agricultural exports are defined as any agricultural product except bananas, unrefined sugar, raw coffee and beef.

1. Key strategy elements are:

- it is designed to be a continuing process of study, decision and evaluation in a risk-tolerant framework
- the mission will determine, on a case-by-case basis, what role it might have as constraints and opportunities are identified, and are addressed by the private sector. The implementation plan was designed to be flexible, taking advantage of existing NTAE products for which secure markets can be demonstrated; but it also seeks to identify NTAE products which are not presently produced in Costa Rica, but for which Costa Rica has some competitive advantage. A balance will be struck between programs which have short term results (under two years) and long term projects having significant market potential but for which results will not be achieved for up to five years.
- Anticipated areas of assistance are; determination of market trends; flow of information to the exporters from the foreign buyers; identification of export opportunities; identification of plant varieties suitable to the export market; pest and disease identification; quality control measures; storage and package methods; structuring of projects; strengthening of producer groups and transfer of technology.

- The implementation of this program must work towards coordination with the existing investment promotion programs of CINDE/PIE, CINDE/CAAP, CENPRO, the Ministry of Exports and the related commercial chambers in the mobilization of investment.
- Policy dialogue is to be used to encourage the establishment of forward looking policies for land and water use, production and marketing support services, banking, and approved export coordination to support the expansion of nontraditional exports.
- The mission strategy is designed to complement the efforts of other bilateral and multilateral donors in their efforts to expand NTAE production and marketing.
- The mission will address its assistance to relief of constraints at the sector and industry levels. The mission will assist in reducing the risks associated with the industry as a whole. The mission will not provide assistance to enterprises in a manner which subsidizes their continuing operating expenses, nor will the mission assume moral obligations for long-term support.
- The evaluation of individual enterprises for investment financing and for economic viability will continue to be made by private financial institutions from which the enterprises normally draw credit.
- Where constraints to export expansion are sector wide, the mission will seek dialogue with appropriate GOCR and private institutions to relieve them, and will act through Costa Rican advocacy groups such as CAAP and

selected producer associations. These intermediaries would also be the implementing agents for the technical assistance programs which might be initiated to relieve sector constraints.

- Constraints affecting individual commodities, or which affect several commodities but cannot be easily generalized over the group, will be addressed through assistance to individual products. Technical assistance, policy dialogue and training programs will address clearly defined problems affecting the growth of the target product.
- The mission, through its agents, will address constraints to increased exports by defining the constraint and identifying its causes, e.g., political, technical or social reasons. A decision will be reached regarding the appropriateness of AID's involvement in the resolution of the constraint, and how AID's involvement would complement the activities of the other donors also addressing the matter. The constraint will also be evaluated in the light of the present and anticipated mission resources. These factors will place the constraint in priority relative to the others and form a basis for whatever action the mission might propose.
- The mission is working with CAAP as the prime implementing agency. CAAP will be the organization primarily responsible for policy dialogue. In addition, CAAP will promote domestic investment in Costa Rican agriculture and assist in defining needs for joint-venture partners. These sector programs will be carried out by CAAP staff with mission counterparts as appropriate. CAAP has the responsibility, with

mission guidance, for the development and monitoring of assistance programs for individual products, with a CAAP staff member working directly with representatives of the producer groups. It will be the responsibility of the CAAP staff manager to develop and supervise a production plan which will include: the requirements, scope and timing of studies, definition of needs and technical assistance required, provision of that assistance, training, market research and establishing market contacts.

- Research priorities are expected to be jointly determined by the producers and the research personnel, with the producers eventually carrying the majority if not all of the expense. The mission will monitor the determination of research priorities and will support cooperative research and extension activities driven by demands from export business. The mission does not expect to finance long-term, basic research products under this strategy. As the industry benefits directly from the research, the mission will accord preferential support to research which provides for cost sharing by the beneficiaries. In order to preserve the responsiveness of research institutions to industry, the mission will support extension systems operated by processors, exporters and producer organizations.

2. Criteria for Supporting Specific NTAE Products and Activities

- Mission funds will be employed in activities which are expected to generate a new foreign exchange equivalent of at least 500% of the mission contribution to the project when the export sales reach maturity.

- The mission will not support production of agricultural commodities for export that are likely to have a significant impact on competing U.S. exports.
- Products selected for promotion under the strategy will be identified by a market-led approach. That is, the prospect of commercial success in some foreign market will be the dominant criteria for selection of a product.
- A determination of an assured accessible market: a market where Costa Rican exports have already established, or could establish, a stable share at prevailing prices, without immediate predatory pricing by market leaders. The market must have an identifiable size and season, and product specifications known.
- Air and sea cargo space must exist or can be arranged in sufficient volume to accept seasonal increases in shipments. Transport can deliver the product to the port of entry in the targeted market at quality levels acceptable to that market, and at a cost which permits a reasonable export profit margin.
- Successful production: adequate agronomic conditions, credit availability, labor, production inputs, and post-harvest handling facilities exist or could be arranged for production in Costa Rica. A significant export volume of the product exists or has been demonstrated to be a reasonable expectation at prevailing prices.

- The existence of one or more major marketers with established links to a stable market; the existence in any form of a stable producer or exporter organization with the ability to standardize and inform the industry; the existence of one or more established opinion leaders in the industry about whom a program of improved production, handling, marketing could coalesce.
- Credit must be available from nonconcessionary sources sufficient to finance the additional operating costs required for industry expansion.
- Industry expansion must create a demand for skilled and semi skilled as well as unskilled labor in excess of any reduction obtained through the use of improved production or handling technology.

3. Specific Targets

The mission projected an increase of \$3,500,000 in 1987 from nontraditional agricultural export projects, with \$4,400,000 from NTAE products projected for 1988. These will all be the result of direct AID strategy assistance.

Based on estimates from presently identified industries, up to 780 jobs were expected to be created in 1987 and over 1,070 in 1988.

Investment goals are as follows:

Foreign investment 1987, \$2,000,000, 1988, \$1,000,000

New domestic investment \$7,200,000 in 1987, \$7,600,000 in 1988.

4. Program Evaluation

The program will be reviewed quarterly against the implementation targets with monthly progress summaries for routine monitoring of activity. The program reviews will seek to quantify contribution of the program to the mission's overall goals. These reviews will also verify that mission assistance remains allocated according to the existence of export markets and that target industries are still viable.

III. MEASURED STRATEGY IMPACT AND PROJECTIONS

The USAID/CR nontraditional agricultural export strategy has been a success. It has achieved its start-up goals for export sales and employment generation, and has excellent, realistic expectations for the future. It is moving forward very effectively, and the consultants did not see the need for any radical restructuring.

Schedules I (P 34), and III (P 36) show the measurable impact on export sales and employment generation of the USAID/CR NTAE strategy for 1987 and 1988, with projections through 1994. It does not include indirect effects of non-directed lines of credit or of the various macro-economic policies of the C.R. government which may have been stimulated by USAID.

Schedule II (P 35) shows the increase in export values from 1983 through 1987. This amounted to more than \$65,000,000 annually and was influenced significantly by credit and other USAID macro-economic policies and initiatives.

Overall, the projections are reasonably conservative, and do not include the impact of any new initiatives, such as the planned topical fruit juices, pulps, and concentrates program, the industrial tomato program, the raspberry/blackberry program and, most importantly, the new PIE foreign investment drive. Nor do they include benefits which may accrue to MAG's National Program through those programs associated with CAAP. (The CAAP cocoa and ornamental plant managers are also managers of the national program.) Any slippage in these projections should be more than offset by these new programs.

It is important to note that the full impact of the Northern Zone Consolidation Project and of some of the later maturing

products will not be felt until after 1994.

An example is macadamia, which takes nine years to reach full maturity. Export sales value is projected to be over \$60,000,000 annually by the time the over 5,800 AID-assisted Ha. reach this point, with the nationwide industry exceeding \$100,000,000.

The Northern Zone Consolidation Project anticipates over 13,000 Ha. planted in nontraditional with direct and indirect USAID assistance. This can be expected to generate export sales of excess of \$40,000,000 annually at full maturity. Only a small portion of these exports would have come on stream by the 1994 cutoff used in this report.

A specific description of how the AID strategy impacted each crop and the basis for the projections follow.

SCHEDULE I
**MEASURABLE COSTA RICAN NON-TRADITIONAL EXPORT
 INCREASES AS THE DIRECT RESULT OF USAID/CR STRATEGY**
 (000 Omitted)

	1987	1988	1989	1990	1991	1992	1993	1994
Mangos	-	-	-	1,000	3,000	5,000	7,000	9,000
Ornamentals	1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000
Papaya	-	-	-	500	1,000	3,000	5,000	7,000
Cocoa	-	-	-	100	700	1,800	4,100	6,100
Asparagus	-	-	100	900	2,800	3,500	5,500	6,000
Flowers	300	2,000	2,900	3,400	4,000	4,600	5,300	5,900
Macadamia	-	-	200	400	700	1,300	2,600	5,100
Melons	-	100	800	3,000	3,200	3,400	3,600	3,800
Strawberries	500	1,000	2,900	2,900	3,100	3,300	3,500	3,700
Black Pepper	-	-	-	100	600	1,600	2,700	3,600
Roots & Tubers	100	200	800	1,500	2,200	2,300	2,400	2,500
Pineapples	<u>-</u>	<u>-</u>	<u>500</u>	<u>1,000</u>	<u>1,800</u>	<u>1,900</u>	<u>2,000</u>	<u>2,100</u>
Total	1,900	5,300	11,200	18,800	28,100	37,700	50,700	62,800

USAID/CR NTAE STRATEGY GOALS
 \$3,500 1987
 \$4,400 1988

SCHEDULE II

VALUE OF SELECTED* COSTA RICA NTAE'S TO THIRD MARKETS
(000 Omitted)

	1983	1984	1985	1986	1987	1988	INC (DEC) 1983/1988
Pineapple	1,200	4,900	6,400	14,900	21,500	31,200	30,000
Ornamentals	7,000	8,000	11,000	13,000	18,000	20,000	13,000
Flowers	6,700	4,500	6,700	5,800	7,400	8,600	10,900
Ferns/Plant Parts	(A)	(A)	(A)	4,900	6,500	9,000	(A)
Roots/Tubers	3,200	3,400	3,600	5,300	6,000	8,500	5,300
Prepared Veggies.	1,500	1,600	1,100	1,500	3,200	4,000	2,500
Macadamia	-	-	-	-	1,600	1,800	1,800
Papaya	-	-	-	400	900	1,500	1,500
Strawberries	-	-	-	200	700	1,200	1,200
Melons	400	400	300	300	500	1,500	1,100
Chayote	2,100	1,900	2,100	2,500	2,800	3,100	1,000
Cocoa	4,600	9,900	9,900	7,900	7,500	5,200	600
Fruit Prods.	4,700	800	1,000	4,700	5,000	4,800	100
Plantains	<u>4,600</u>	<u>1,900</u>	<u>1,300</u>	<u>1,300</u>	<u>1,800</u>	<u>1,400</u>	<u>(3,200)</u>
Total	36,000	37,300	43,400	62,700	83,400	101,800	65,800

*Selection limited to those crops with export values in excess of \$1,000,000 in 1988.

(A) Included with flowers.

Source: CENPRO/BCCR.

SCHEDULE III

Estimated Employment Impact
of the USAID/CR NTAE Strategy

(Full Time Equivalent)

<u>CROP</u>	<u>1987</u> (Est.)	<u>1988</u> (Est.)	<u>1994</u> (Projected)
Mangoes	-	-	500
Ornamental Plants	300	600	2,500
Papaya	-	-	500
Cocoa	-	-	1,300
Asparagus			200
Flowers	100	400	1,600
Macadamia	-	-	1,500
Melons	-	-	100
Strawberries	-	100	200
Black Pepper	-	-	700
Roots and Tubers	-	-	500
Pineapples	-	-	500
Total	400	1,100	10,100

A. MANGOES

Mangoes sell in good volumes in the United States (over 4,000 tons a week during the peak season) and they are gaining increasing consumer acceptance.

Imports into Europe have also been growing rapidly. 1986 volume reached a total of 24,000 tons, up from 10,000 tons as recently as 1982. 1986 is the last available published figure, but imports have been estimated to have increased significantly since then.

Mango production in the United States is minor, and has been declining in recent years. Mexico has historically been the principal supplier, with a season that runs from May through September. Haiti is the second largest supplier, with year around production, but with seasonal increases starting in February.

A long list of suppliers now service Europe, including Jamaica, Brazil and several African countries. Brazil is probably the dominant supplier, particularly in the "off" season. The United Kingdom and France are the principal importers.

Access to the United States market is contingent upon country-specific approval of a decontamination process. Costa Rica has begun the procedure to get this approval, which will be discussed later. In addition, Jamaica, Guatemala, Peru and Brazil have made application for approval. The U.S. Department of Agriculture now is considering giving across the board approval, as apposed to the current country-specific approval, to anyone who uses the generally approved process.

The Costa Rican growing season parallels the Mexican season of May through September. The area planted to mangoes in Costa Rica has grown significantly during the last several years. These plantings are comprised primarily of small holdings by a great many growers, using a wide assortment of varieties. Estimates are that there are 4,000 Ha. planted, with more than half of it with varieties not suitable to the export market.

In 1988, PINDECO (a Del Mote subsidiary) began trial shipments to Europe of the most prevalent type of mango available in Costa Rica. This is called a Haden locally, but it is not a true Haden. PINDECO was supplied by approximately 150 small growers, and one large grower. This mango was not well accepted in Europe, and it has been determined that is not the right variety for the United States.

To date, USAID has worked through CAAP and the US/Israeli cooperative agreement to assist in the development of the mango industry.

CAAP's principal program is a cooperative agreement with PINDECO for a two-year research program to establish a new hot water quarantine method for the treatment of mangoes. The establishment and approval of such a treatment by the USDA will allow Costa Rica to export the fresh mangoes to the United States. This project is being paid for 65% by CAAP and 35% by PINDECO. The total CAAP budget was \$1,300 US and 14,028,000 in colones. The benefits of this approval will assist not only PINDECO but thousands of small growers in Costa Rica, and will pave the way for independent exporters of mangoes to the United States. In the consultant's opinion, this was an excellent arrangement. PINDECO has the responsibility for managing the project.

In addition, CAAP is planning to commission a survey of the mango situation in Costa Rica. This will determine exactly how many Ha. of mango have been planted, by variety and by age. Further assistance by CAAP to the small mango growers is going to become necessary, and it is essential that a clear determination of the existing situation be made before any further programs can be developed.

The U.S./Israeli cooperative agreement involves the AID financing of one Israeli production expert, working in mangoes and avocados. The contract is for two years. This technician started work five months ago and reports to the Ministry of Agriculture. He has completed an evaluation of the needs, and has put together a work plan. The work plan has been submitted to MAG and to USAID. Essentially, his observations are that the mangoes are in very poor condition, with a minimum of 50% in a variety that is not exportable.

In addition to the AID-supported activities, there are two other major initiatives, one by MAG and the other by PINDECO, involved in the development of the mangoes.

MAG has identified this as a priority crop, which means it is one of a limited number of crops behind which MAG resources will be concentrated. These resources will involve production assistance through extension, post-harvest assistance, and marketing assistance. MAG will rely on European consultants for outside technical assistance, working through the United Nations and CCI.

PINDECO sees Costa Rican mangoes as a major addition to their product line, and are bringing substantial resources into their development. As stated earlier, they are now working with approximately 150 small growers and one large grower, and are

planning to lease a farm to act as a demonstration area. They are providing technical assistance and plant stock to growers, in a program aimed at grafting the proper varieties onto the existing tree stock.

CAAP estimates a total export market for Costa Rican mangoes at \$20,000,000 a year. The following are projected mango export sales from Costa Rica:

	000 Omitted		
	Direct USAID Assisted	Other	Total
1987	-	-	-
1988	-	-	-
1989	-	-	-
1990	\$1,000	\$1,000	\$ 2,000
1991	3,000	3,000	6,000
1992	5,000	5,000	10,000
1993	7,000	8,000	15,000
1994	9,000	11,000	20,000

The delay in the development sales to the later years reflects the time delay before the new, grafted varieties can begin to bear.

The \$20,000,000 in projected total export sales, and the \$9,000,000 in projected direct USAID-assisted sales is a very aggressive target. But it is possible and consistent with industry-wide projections for increased consumption in the United States and Europe. However, though these projections do seem attainable, there is a question whether they can be accomplished

within the time frame projected. There is a good chance of some slippage.

To achieve the \$9,000,000 in USAID direct assisted annual sales, substantial further involvement by USAID will be required, either through CAAP, or other implementing agencies. This is particularly true due to the involvement of large numbers of small growers. Some of the constraints and problems that the development of this industry will face are:

Product Development - As stated above, less than half the planted area of mangoes are of exportable varieties. Cultural practices are generally poor, resulting in low yields and poor quality.

Seasonality - Costa Rica's growing season now corresponds to the growing season in Mexico and throughout the rest of Central America and the Caribbean Islands. CAAP has reported that the technology exists to force the growing season outside the normal pattern. This has to be followed through on to determine whether it does in fact really work and whether it's economical. (i.e., yields are often seriously affected under forced growing conditions.) If so, this technology has to be disseminated among the Costa Rican growers. Obviously, if it works in Costa Rica, it will work in the competing countries as well.

Transportation - The principal mango season now comes at a time of low demand for refrigerated maritime containers. This should result in adequate transportation capacity on existing routes, and possibly at a discount. However, the existing routes all go to Miami, from which distributors service the east coast of the United States and Canada. The east coast is also within easy reach of Mexico, as well as all the other Central American and the Caribbean countries. CAAP should take a

look at the feasibility of developing service into California and into Europe during this period of time (California , though, would still be served over the road by both Guatemala and Mexico).

Chemical Residues - As we are all aware, chemical residues have become a serious issue for food products. Testing of imports by the FDA has increased dramatically over the past two years, and a problem with residues on Costa Rican mangoes could be disastrous.

In addition, the Del Monte program, as well as possible programs with Chiquita and Dole, to buy and/or market mangoes from independent growers are very significant in size and are an extremely healthy development for Costa Rican agriculture. These companies are acutely aware of the potential damage to their images in the event some of these growers illegally use chemicals, and this fear could easily result in the fruit companies limiting or discontinuing their involvement with independents.

The chemicals problem is a complicated one, involving not only which chemicals are used, but when and under what conditions. There is substantial work being done in the U.S. in this area, and new technologies and options will be evolving rapidly over the next few years. ROCAP, through the PRO-EXAG Project, is taking the lead as representative for the region and in disseminating technology and information. PRO-EXAG is an experienced, competent group and CAAP has worked well with them in the past.

CAAP's role would be in the dissemination of information within Costa Rica, in the training of growers, and in devising and instituting good testing and control procedures.

Incidentally, we have discussed the U.S. here. We can fully expect the Europeans to follow the U.S. lead in this matter, if indeed they haven't already.

Marketing - As stated above, half the developing countries in the world are going to be taking a shot at exporting mangoes. In order to survive and prosper, Costa Rica will have to do something special. It will have to have good organization and thoughtful programs. This will start with good post harvest, and real quality assurance programs, supported by strong, product-specific promotional activities. These activities can be self-sustaining but, given the large number of independents who are apt to be in the business, they will require leadership. This would be an ideal role for CAAP.

Organization - With the possibility of hundreds of growers involved in the mango export program, and with the discipline that will be required to overcome the constraints discussed above, it becomes imperative that strong producer organizations are formed. USAID has addressed this through the signing of a Producer Organization Strengthening Project with ACDI. Considering the potential for mangoes, this should be a priority area for this project.

We have just discussed fresh mango exports. Later we will be discussing tropical fruit processing, with an emphasis on passion fruit and soursop. The tropical fruit industry, not including pineapple or citrus, amounts to about 100,000 metric tons annually. Of this, two thirds are made up of passion fruit and mango. There were no individual statistics available to the consultants on mango alone. Recent pricing for mango pulp has been extremely poor, but this is traditionally a cyclical item and will indubitably rise in the future. There is now new interest in frozen, sliced mango. Processing capability would

provide excellent support to the fresh industry. The development of the fresh mango industry should be coordinated, with AIDS assistance, with the development of the processed sector.

It is clear that, in light of the complications that are involved in the development of this export business, that very little export product would be developed over and above the Del Monte project, without USAID assistance.

We will have to wait for the CAAP survey to be completed before we will know the number of growers involved. However, for the targeted \$20,000,000 in sales, seasonal farm and packing shed employment will amount to over 2,500 on a seasonal basis, which will translate into well over 1,000 on a full-time equivalency basis. Conservatively, then, the USAID impacted share would be 1,300 and 500 respectively.

The total mango quarantine budget, as amended on August 17, 1988, amounted to \$1,300 U.S. and 14,820,766 COL. (\$185,000) No design or budget has been developed as yet for a follow-on project.

B. ORNAMENTAL PLANTS

Ornamental plants are in a highly competitive marketing situation. The unit volume sales on world markets continues to expand, but with prices falling, as production increases outstrip rising consumption. However, pricing and profitability vary from species to species (with some species enjoying excellent returns) and the markets are in constant flux, with frequent changes in demand and profitability for the various species. As with flowers, ornamentals can still be profitable, but require the continuous shipping of only excellent quality.

The total export market for ornamental plants is estimated to have grown to over 2.0 \$ billion in 1989. The last published figures for 1987 (see SCHEDULE VII, P 50) showed sales of over 1.8 \$ billion. Most of this, though, represents intra-European trade, with European countries accounting for 85% of both the exports and the imports.

Costa Rica is the largest exporter outside of Europe, with a 1.3% market share in 1987. Costa Rican shipments of ornamentals are primarily by air, with 3/4 going to the U.S. and 1/4 to Europe. Expansion of U.S. and European sales are limited by the lack of air space availability, and an undependable and unsafe transfer situation in Miami for the European shipments. Certain ornamentals can be sent to Europe by ship, and inauguration of direct sea service would provide a significant boost. Transportation is the only real constraint to expansion of this sector in the near and medium term.

In Costa Rica, there are approximately 40 medium sized growers (one+ Ha.) and 80 small growers (less than one Ha.) of ornamental plants, exclusive of Cana Indias and ferns. This is

up from 30 and 50 respectively in 1986/87. This growth is directly attributable to CAAP assistance, which is described below. (Cana Indias has 1,400 mostly very small growers, of less than 1/2 Ha.)

Ornamentals are marketed:

- 1) Direct
- 2) Through exporters (many of whom are producers themselves)
- 3) Through the cooperative, Coope-plant

Coope-plant came into existence 18 months ago and is now handling sales volume of \$70,000 a month, for its 70 members. Most of its members market both through the co-op and through a second method. The co-op is basically a pickup operation with part-time management and few resources.

Costa Rican export sales of ornamental plants through 1988 and projections through 1994 appear on SCHEDULE VI, P 49.

Only modest export sales increases have been projected beyond what is specifically targeted for 1989. All projected increases have been attributed to USAID assistance, since these increases are dependent upon the resolution of the transport constraint. The direction of the resolution of this constraint is now entirely the responsibility of CAAP. The projections are extremely conservative, and increased export sales will directly parallel the increase in affordable cargo space.

CAAP has contributed to the growth of ornamentals through its work in transportation and through providing critical technical assistance to the small and medium size growers.

CAAP's successful program has increased the air cargo space available to both the U.S. and Europe since 1986. Cargo flights

to the U.S. increased from nine to 28, and new service was inaugurated to Europe. However, air service is now bumping full capacity, and the future ornamental plant growth anticipated will require expansion of existing service and/or being able to develop alternative shipping possibilities, such as modified atmosphere containers and/or direct surface service to Europe. CAAP has a continuing transport program but it is an area where even greater emphasis is merited.

In addition to its support work with transportation, CAAP has had a technical assistance program in operation since 1987. This program consists of three main components:

- transfer of technology
- extension
- investigation

The program does not include a marketing, financing or industry promotion component. It currently emphasizes assisting the grower in moving into the more profitable species, (each species tending to have entirely different technical requirements) and in strengthening the post-harvest procedures. Poor post-harvest handling has been determined to be at the root of the failures to date.

The extension components consist of the information and data generated from the other components of the program being properly dispersed among producers. Presently in Costa Rica there is no other extension program operative. However, in a recent reorganization, ornamental plants have been designated as a national priority crop by MAG. This means it will be one of a limited number of crops on which MAG will concentrate its resources. Sr. Jose Roberto Calvo, the CAAP Program Manager, has been appointed National Program Coordinator. This, hopefully, will allow for more effective coordination of resources.

Workshops, field days and farmer visits are carried out through this extension program.

Research activities and transfer of technology involve accessing technology from other areas and adapting it to Costa Rican conditions. It is designed to improve crop practices and pest control procedures, and involves substantial amounts of on-farm research.

CAAP's technical assistance reaches most of the small and medium sized producers, who account for 55% to 60% of the exports. The other 40% to 45% is done by four large producers which do not use CAAP's services but, rather, are sources of information for CAAP. The cooperation CAAP has received from these producers has been excellent.

In summary, USAID directly supports export sales amounting to about \$3,000,000 currently, with a technical assistance budget of \$277,000 U.S. dollars (equivalent). Sales are projected to increase to \$8,000,000 by 1994. This will result in 2,400 full-time equivalent additional jobs, since land being converted is now mostly marginally-utilized.

SCHEDULE VI
EXPORT SALES OF ORNAMENTAL PLANTS
(INCLUDING CANA INDIAS, NOT INCLUDING FERNS)

	<u>TOTAL</u>	<u>AID ASSISTED</u>
1983	\$ 7,000,000	---
1984	8,000,000	---
1985	11,000,000	---
1986	13,000,000	---
1987	18,000,000	\$ 1,000,000 (CAAP-TA program began)
1988	20,000,000 *	2,000,000
1989 **	19,000,000 *	3,000,000
1990 **	20,000,000	4,000,000
1991 **	21,000,000	5,000,000
1992 **	22,000,000	6,000,000
1993 **	23,000,000	7,000,000
1994 **	24,000,000	8,000,000

BREAKDOWN BETWEEN ORNAMENTALS AND CANA INDIAS

	1988	1989
Ornamentals	\$14,000,000	\$15,000,000
Cana Indias	<u>6,000,000</u>	<u>4,000,000</u>
TOTAL	\$20,000,000	\$19,000,000

** Projected

NOTE: The large increase in sales registered in 1987, as well as the increase subsequent to that have all been in ornamentals. Cana Indias growth has peaked, and is now in decline, as a result of over production and lower prices.

SCHEDULE VII

World trade in live plants^{a/}, by value, 1981-1987
(in millions of United States dollars)

SITC 1: 292.69

Importing/exporting countries/areas	1981	%	1982	1983	1984	1985	1986	1987	%
World imports (c.i.f.)	843.22	100.0	880.63	896.95	922.72	1,035.41	1,479.76	1,882.11	100.0
of which:									
EEC (10, as of 31.12.85)									
Germany, Fed. Rep.	205.54	24.4	222.25	235.74	234.85	244.80	381.50	486.68	25.9
France	107.54	12.8	110.14	111.98	112.99	138.34	212.05	271.61	14.4
Italy	46.00	5.5	50.18	49.97	53.49	86.06	110.40	149.25	7.9
United Kingdom	69.35	8.2	75.73	79.87	86.00	89.07	115.44	147.04	7.8
Netherlands	46.51	5.8	48.29	47.06	51.05	60.03	90.21	119.58	6.4
Belgium-Luxembourg	43.27	5.1	42.46	39.80	38.34	44.71	66.31	90.48	4.8
Denmark	11.26	1.3	11.75	13.12	15.36	18.21	30.18	41.89	2.2
Greece	3.83	0.5	4.29	4.72	4.05	4.93	5.17	9.51	0.5
Ireland	4.52	0.5	4.16	3.32	3.71	4.25	7.08	8.48	0.5
United States	29.71	3.5	31.16	32.94	45.39	49.16	56.48	60.09	3.2
Canada	42.51	5.0	41.46	42.91	44.62	46.93	49.76	58.00	3.1
Japan	4.27	0.5	6.88	8.16	8.11	8.34	14.74	20.68	1.1
Sweden	69.24	8.2	62.46	57.04	54.81	56.61	80.70	102.25	5.4
Switzerland	38.48	4.6	40.86	41.19	41.40	47.63	69.69	87.58	4.7
Austria	19.89	2.4	20.62	21.43	20.59	22.40	33.24	44.75	2.4
Spain	16.10	1.9	17.47	15.27	14.65	19.09	27.96	39.94	2.1
Finland	12.82	1.5	13.09	14.36	14.49	15.60	23.73	32.39	1.7
USSR	19.11 ^{b/}	2.3	25.21 ^{b/}	23.86 ^{b/}	21.38 ^{b/}	19.98 ^{b/}	16.00 ^{b/}	27.73 ^{b/}	1.5
Norway	12.48	1.5	12.89	12.06	11.62	12.13	19.08	23.90	1.3
Colombia	2.22	0.3	3.13	3.27	6.06	6.42	10.94	8.00 ^{c/}	0.4
Saudi Arabia	7.38	0.9	6.68	8.50 ^{c/}	8.30 ^{c/}	7.40 ^{c/}	5.40 ^{c/}	5.00 ^{c/}	0.3
Algeria	1.20	0.1	1.26	1.63	4.03	3.01	5.78	5.00 ^{c/}	0.3
Singapore	0.94	0.1	1.36	1.74	2.24	2.82	3.14	3.68	0.2
Hong Kong	2.10	0.2	2.47	2.95	3.14	3.15	3.38	3.26	0.2
World exports (f.o.b.)	820.60	100.0	847.47	859.46	891.66	989.28	1,415.88	1,811.35	100.0
of which:									
Netherlands	353.34	43.1	371.21	382.02	393.92	448.01	675.01	894.05	49.4
Denmark	117.87	14.4	121.47	122.19	122.57	134.75	192.00	249.32	13.8
Belgium-Luxembourg	90.70	11.1	87.72	86.70	91.20	106.80	151.01	189.51	10.5
Germany, Fed. Rep.	49.81	6.1	50.43	50.54	51.05	57.46	85.68	106.96	5.9
France	40.29	4.9	37.56	35.11	34.63	38.85	53.98	64.77	3.6
Italy	24.47	3.0	25.19	25.32	30.82	28.92	47.47	61.26	3.4
United States	35.35	4.3	35.61	36.26	31.21	29.77	33.73	33.72	1.9
Canada	12.65 ^{d/}	1.5	14.20 ^{d/}	16.69 ^{d/}	22.75 ^{d/}	24.49 ^{d/}	29.50 ^{d/}	32.74 ^{d/}	1.8
Spain	15.70	1.9	16.36	13.83	16.94	17.55	26.06	31.64	1.7
Yugoslavia	19.42	2.4	25.90	24.43	21.98	20.23	16.37	24.54	1.4
Costa Rica	5.00 ^{d/}	0.6	5.80 ^{d/}	8.70 ^{d/}	9.50 ^{d/}	12.40 ^{d/}	18.80 ^{d/}	24.33 ^{d/}	1.3
Guatemala	9.30 ^{d/}	1.1	7.90 ^{d/}	8.50 ^{d/}	11.50 ^{d/}	12.60 ^{d/}	12.00 ^{d/}	15.50 ^{d/}	0.9
Israel	3.44	0.4	4.39	5.61	6.51	6.63	15.26	13.24 ^{d/}	0.7
United Kingdom	3.86	0.5	2.99	4.41	4.67	6.04	8.73	10.74	0.6
Japan	6.46	0.8	5.85	5.93	5.61	7.15	6.71	6.16	0.3
Honduras	4.46 ^{d/}	0.5	3.89 ^{d/}	2.79 ^{d/}	2.74 ^{d/}	2.93 ^{d/}	2.63 ^{d/}	5.23 ^{d/}	0.3
Côte d'Ivoire	5.30	0.6	4.33	3.82	3.32 ^{d/}	3.99	4.16	5.00 ^{d/}	0.3
Hungary	1.50 ^{d/}	0.2	1.90 ^{d/}	1.79 ^{d/}	1.67 ^{d/}	2.50 ^{d/}	3.70 ^{d/}	4.20 ^{d/}	0.2
Singapore	1.97	0.2	1.79	2.10	2.37	2.17	2.23	3.86	0.2
New Zealand	2.03	0.2	2.06	2.44	2.76	3.18	2.82	3.58	0.2
Brazil	1.91	0.2	1.44	1.60	2.82	2.51	2.51 ^{d/}	3.15 ^{d/}	0.2
Malaysia	0.37	-	0.62	0.63	0.64	1.01	1.18	2.69 ^{d/}	0.1
Turkey	0.12	-	0.22	0.66	2.15	-	1.70	1.28	0.1
Thailand	0.38	-	0.61	0.92	0.90	1.11	0.76	1.00 ^{c/}	0.1
Jamaica	0.53	0.1	0.99	1.25 ^{d/}	1.27	1.19 ^{d/}	1.34 ^{d/}	0.90 ^{d/}	0.1
Colombia	2.21	0.3	1.96	1.29	1.26	0.98	0.54	0.40 ^{d/}	-
Egypt	0.64	0.1	1.24	2.09	1.81	1.25	0.84	0.10 ^{d/}	-

Source: UNSO/ITC Comtrade Data Base System.

a/ Excluding bulbs, tubers, tuberous roots, corms, crowns and rhizomes, dormant, in growth or in flower.

b/ Based on export figures of major world suppliers.

c/ ITC estimate.

d/ Based on import figures of major world importers.

C. PAPAYA

Hawaii, the principal fresh producer for the U.S. and Canadian markets, shipped 56,000,000 pounds in 1987, and somewhat less in 1988. This would put the market in the range of some \$30,000,000 annually. In Europe, the last figures available were from 1986, when consumption amounted to about 7,000,000 pounds. The European market was virtually created by the Brazilians, and they totally dominate it. Rough estimates of papaya sales in Europe now are at about the 10,000,000 lb. level.

Other competition includes Mexico and the Dominican Republic. Mexico is the primary non-Hawaiian supplier. The Dominican Republic dominates in the sale of the ethnic variety of papaya, but also provides some of the more popular Solo varieties. However, their quality is perceived as not being as good as Hawaii's, and their product sells at a discount. Jamaica has been trying to export papaya in recent years, and has become successful in selling into the U.K. Their attempts to enter the U.S. market have not worked out in the past, but they are reportedly about to try again. Growers in Belize have also been trying to export papaya over the past few years, but they have been plagued with disease and other cultural problems.

Papaya is not now allowed into the U.S. from Costa Rica without an approved disinfection process. From a competitive standpoint, the Dominican Republic, and Jamaica as well as the other islands are fruit-fly free and do not have to have the papaya processed before shipping into the United States. This may make it easier for them to ship a quality product.

Currently, 150 to 200 acres of the export (Solo) variety are under cultivation in Costa Rica, all by PINDECO. They do not

plan to use contract growers due to the difficulties in producing this product.

These production difficulties will restrict the product to larger, more sophisticated growers. Even then, to reach its potential among independent Costa Rican growers, it will require a follow-on extension project by CAAP.

This product will most likely be transported by both sea and air. Initially, the independent growers will ship entirely by air. This again focuses attention upon the transportation constraints. Lack of air cargo space generally, and the lack of reefer containers during the January-March period, which tends to be the most profitable for papayas.

Currently, USAID assistance involves supporting a joint venture between PINDECO and CAAP. PINDECO and CAAP have been developing a disinfection process since October 1986. The project has had the assistance of Dr. Milton Ouye, Director of Post-Harvest Research for the Agriculture Research Service-USDA. This program is managed by PINDECO and includes the following steps:

- Field trapping
- Natural infestation
- Field forced infestation
- Laboratory forced infestation

Research results from the PINDECO research team have shown that in the Buenos Aires areas, the medfly and other species of insects do not attack the Sunrise Solo variety of papaya. Dr. Ouye recommended that PINDECO make a formal proposal to the USDA to permit exports from that area without any need for a quarantine treatment. This has now been done.

Research results have also determined that a single hot water dip for the Sunrise Solo variety will eliminate any flies or larva that might be present. Approval of this procedure is expected by the end of 1989.

This program was budgeted in local currency at the equivalent of \$113,000 to be granted to PINDECO through CAAP. It was complemented by \$27,000 in personnel and materials, which PINDECO has provided. A further \$142,000 from CAAP's PD&S has been provided to USDA/APHIS/ARS to cover the cost of USDA supervision.

CAAP estimates the export potential for Costa Rica's fresh papaya at \$15,000,000 per year. This is a very aggressive target. The projection (see SCHEDULE I, P 34) anticipates reaching a \$7,000,000 sales level, or approximately one half of the target of \$15,00,000 in export sales, within the 1989/1994 time frame.

The entire \$7,000,000 is due to CAAP assistance. In the case of the quarantine program, although Del Monte may have decided to proceed unilaterally in the absence of CAAP assistance, there is no assurance that this would have taken place in Costa Rica. Development in one of the fruit fly-free areas would certainly have seemed more attractive. In addition, any expansion outside the fruit companies is contingent upon CAAP solving the transport constraints. And, finally, due to production difficulties, any significant expansion by independent growers will require extension support which, again, CAAP is in the best position to provide.

No estimates of employment impact were made by CAAP. Hawaii's estimated \$30,000,000 in sales is based on approximately 1,600 to 1,800 Ha. planted and 800 to 1,000 Ha. being harvested

at any given time. Harvesting is year round, with seasonal peaks.

Based on this, we would anticipate the sales of \$7,000,000 annually will require approximately 400 Ha.

For purposes of this report, we are estimating that this will require 500 employees, without any assurance that this is correct. However, we do not believe that the margin of error will materially effect the conclusions reached in this evaluation.

Prices for processed papaya do not provide an encouraging avenue for development, at this time.

D. COCOA

Cocoa is a long-lived native tree of the American tropics which can be effectively managed by the small farmer. In fact, it appears that the small-scale grower can outperform large mechanized operations in cost of production. This may be possible due to the external labor costs of plantations and more efficient application of inputs on small farms.

Given proper conditions, newly-established cocoa becomes productive within three to four years, matures at ten years, and remains economically productive for up to 40 years.

World cocoa production for the 1988-1989 season has been forecasted at 2.29 million MT, up 7% from the 1987-1988 season. Cote d'Ivoire is by far the largest producer at 700,000 MT, with Brazil second at 400,000 MT. (See SCHEDULE VIII, P 62) The growth of cocoa production over the past several years has been fueled by substantial rehabilitation efforts in many countries, and the use of new varieties that allow denser plantings and higher yields. This was made attractive by changes in government policies in some key producing countries and has resulted in production levels in excess of consumption.

Due to this international overproduction, the market price for cocoa has been declining over the past several years. It has gone from \$3,400 a metric ton in 1978 to \$1,300 a metric ton in May of 1989. There have been recent rumors of a serious outbreak of "witch's broom" disease in Brazil, which may tend to strengthen prices.

Costa Rica (along with Ecuador) is capable of producing a special quality of cocoa, prized by candy makers, which is often blended with products from other countries. Costa Rica exports

presently in the form of cocoa butter and liquor plus a small quantity in bean form.

Production in Costa Rica peaked in 1978 and 1979 at over 10,000 metric tons. Prior to this, it had run at about 6,000 metric tons per year. It declined to 5,000 metric tons in 1980 and 1981, then dipped to about 2,000 metric tons in 1983. Since then it has stabilized at about 4,000 metric tons.

Cocoa Exports from Costa Rica:

Year	M/T (exported)	Price per M/T
1978	10,400	\$3,400
1979	10,300	3,290
* * *	* * *	* * *
1983	2,161	2,120
1984	4,138	2,400
1985	4,400	2,260
1986	3,857	2,204
1987	3,592	2,100
1988	3,976	1,300
1989 Est.	4,000	1,300 *

* Price on 5/89 was \$1,330.

In Costa Rica, in 1988 there was:

- 30,000 Ha. planted to cocoa
- 15,000 Ha. in production
- 7,000 Ha. in recent plantings
- 8,000 Ha. abandoned

The abandoned area was due to the low prices, disease and excessively old plantings.

Over the past years, support for the planting or rehabilitation of cocoa farms had been borne by the IBRD, IDB and EEC in several bilateral projects. In addition sufficient

credit existed then, given proper management, that cocoa production should have increased. However, the investment projects did not address the lack of technical extension services to producers, nor did they deal with the processing required to provide good quality beans to the market.

The USAID strategy has addressed these issues and has supported the expansion of Costa Rican cocoa programs through FEDECOOP, the NZCP, and CAAP.

With FEDECOOP, they have supported a program of planned rehabilitation of approximately 600 Ha. of cocoa a year. The San Carlos Coop, a FEDECOOP program participant, has built a new, first class processing facility (for fermenting and drying) to act as a model to demonstrate the economic advantages of producing high-quality cocoa. In the Northern Zone Project, there are plans to plant over 5,000 Ha. with 1,000 Ha. already in the ground, and the balance to be planted over the next four years. 2,800 Ha. of this is with direct project assistance, 2,200 Ha. indirect. In addition to USAID, the Ministry of Agriculture has designated cocoa as a high priority crop, one of a handful on which they are going to concentrate their resources. Sidney Paris, the CAAP project manager, has also recently been appointed as the Director of the National Cocoa Program. It is hoped that this will provide for more effective use of the various resources being expended in this area.

The CAAP program was approved in October, 1988. Its objective is to provide technical assistance in production, processing and marketing to small and medium sized cocoa producers. A study by CAAP of the Costa Rican cocoa industry indicated cocoa yields are abnormally low; 250 kg of dried cocoa per Ha., compared to a potential conservatively estimated figure of 1,200 kg per Ha.

Principle causes:

- Genetics
- Poor agronomic practices, management, post-harvest handling.

The CAAP cocoa program is divided into three zones: North, South and Atlantic. In each zone, there is a crew consisting of one agronomist and three assistants, for a total of 12 technical people plus the manager.

CAAP's three year program will:

- Support the creation of a national entity that groups and represents the growers.
- Improve product quality.
- Improve the marketing process.
- Rehabilitate unproductive areas and introduce a new mixed cropping system.

Specific goals for the 1989 program are to:

- Integrate a Program Committee
- Evaluate the present agronomic status of at least 50% of the current cocoa areas of Costa Rica.
- Initiate the crop rehabilitation (transfer of technology, management, new/approved crop practices, etc.) for at least 500 Ha., involving 60 growers.
- Establish at least 10/1 Ha. demonstration parcels.
- Introduce a "unified" technological package.
- Integrate a crop institutional coordination system that coordinates research and technology transfer.

As stated above, the 1989 cocoa program will involve 500 Ha., and some 60 producers. For 1990, the program will undertake an additional 1,000 to 1,200 Ha. A major portion of technical

assistance will be in agronomic practices; how to properly prune, control diseases, improve drainage, plus post-harvest practices. The main thrust will be to increase yields and quality.

In 1986, the USAID/CR NTAE strategy envisaged that technical extension to the producers could raise the yield of traditional cocoa from 300 kg/Ha. to 500 kg/Ha., and of hybrid cocoa from 500 kg/Ha. to 1,000 kg/Ha, and an increase of 10% to 25% in the price could be achieved by the improvement of the fermenting and drying process.

Estimating a project area of 5,000 Ha. at the end of the project and an undiscounted farmgate price of C110/kg, the strategy paper estimated that the annual return to such a program could reach \$5,500,000.

The total budget for the three-year CAAP program approved last October was:

- | | |
|---|------------|
| - U.S. \$31,200 | NETS |
| - COL 33,271,000 (\$415,000 equivalent) | CINDE/CAAP |

The budget for 1989 is:

- | | |
|--|------------|
| - U.S. 13,400 | NETS |
| - COL. 10,715,000 (\$134,000 equivalent) | CINDE/CAAP |

However, the situation regarding cocoa in Costa Rica has become confused. The FEDECOOP Project began using CATIE-supplied cocoa clones. These clones turned out to be 60% sterile. There was disagreement about whether this was caused by the plant stock provided by CATIE or by poor cultural practices by the coop. As a result FEDECOOP has put their entire cocoa project on hold. Meanwhile, the San Carlos coop, who have the new processing facility, buys their cocoa on a dried-weight basis. They cover their costs by paying on a fixed yield, that understates the true

yield. They also buy dried cocoa that has been processed on-farm with few deductions for quality gradations. Farm yields, using primitive processing, exceed the fixed yield payment basis of the coop. This, together with the lack of good quality gradation payment for dried cocoa, tends to encourage lower quality on-farm processing, which works against the purposes of having the San Carlos facility. In addition, because of the low prices, the banks have discontinued the financing of any new plantings, and will provide funds for only a limited amount of rehabilitation. This will impact the plans of the Northern Zone Development Project as well. All this is working at cross purposes with the USAID strategy, and it is impossible at this point to tell where it will come out. Cocoa has traditionally been highly cyclical. If recent events foreshadow a bottoming out, rising prices could quickly reinvigorate the entire sector.

Meanwhile, however, it is important that this whole situation be rationalized. Officials at the San Carlos coop, as well as a private grower, had cost figures showing that a good, well-managed cocoa plantation would generate an adequate return at current market prices. If this is correct, the banks and FEDECOOP must be lobbied to be brought back in support of the program. And the question must be asked as to whether the economic benefits of high quality cocoa are real or theoretical. If they are real, the San Carlos facility must be given some assistance to reorganize their cocoa buying and processing operations so that they do, in fact, demonstrate this.

If the bank's position is correct, and cocoa is an unreasonably risky financial proposition, then, consistent with the USAID/CR NTAE stated strategy, USAID, CAAP and the NZCP should reconsider their support of this product.

The projections for export sales as a result of USAID assistance are as follows:

1989	-
1990	\$ 100,000
1991	100,000
1992	1,800,000
1993	4,100,000
1994	6,100,000

The projection assumes a total of 8,000 Ha. of rehabilitated and new plantations of cocoa assisted by USAID. It is estimated that one worker can properly handle 6 Ha. of cocoa. This will result in a full-equivalent employment impact of some 1,300 farmers.

SCHEDULE VIII

**Cocoa Production for Major Countries and Regions During
the October-September Crop Year, Estimated in 1,000 Tons**

Country/Region	1987/88	1988/89 forecast
Africa:		
Cote d'Ivoire *	650.0	700.0
Ghana	180.0	225.0
Nigeria **	145.0	160.0
Cameroon	128.9	125.0
Other	50.3	50.4
Total	1,154.3	1,260.4
South America:		
Brazil	400.0	400.0
Ecuador	71.0	80.0
Colombia	53.8	55.0
Other	26.7	28.1
Total	551.5	563.1
Central America/Caribbean:		
Mexico	49.5	50.0
Dominican Republic	49.0	50.0
Other	20.0	19.0
Total	118.5	119.0
Asia/Oceania:		
Indonesia	45.0	50.0
Malaysia	220.0	245.0
Papua-New Guinea	35.0	35.0
Other	18.8	19.0
Total	318.8	349.0
World Total	2,143.2	2,291.5

* Includes marketing from Ghana

** Includes cocoa marketed through Benin

E. ASPARAGUS

Asparagus production in the United States starts in the Imperial Valley about the first of February, and winds up in Washington State in July. Demand tends to be flat during the summer months and starts to pick up again in September.

The main exporters to the U.S. are Mexico and Chile. The main Mexican season starts at the end of January, peaks in March and winds up at the end of April. They have a second season that starts in August, works through September and winds up about the first of November. Chilean asparagus starts at the end of September, peaks in October, and winds down in November. In recent years, they have been extending their season and small quantities have been coming through in December through January.

The above has resulted in extremely small amounts of asparagus being on the market from the middle of November to the end of January, a period when there has been relatively heavy demand. And, this has resulted in extraordinary prices: from \$40 to \$60 for a 12 pound box, compared with \$12 to \$18 for a 30 pound box during the spring glut.

The European market is also very strong, with a pattern similar to the U.S. There is very little competition from other countries in that hemisphere with, at last knowledge, South Africa being the only country shipping fresh product. The asparagus used in Europe is either white or green depending upon the country importing and pricing is surprisingly close to that in the United States.

Many countries have begun to target this window. Guatemala has been moving ahead aggressively in asparagus, with rumors of 1,000 to 2,000 Ha. being planned. Ecuador has 400 Ha.

in the ground with another 600 planned. At last count, Peru had 6,500 Ha. planted, with 10,000 being planned. Chile is continuously moving toward extending their season, and their volume increases each year during Costa Rica's targeted period. All in all, there are over 13,000 Ha. of asparagus planned in Latin America targeted for this 11/15 -1/31 period. To put this in perspective, California, the predominant fresh market producing state, has 16,000 Ha. under cultivation.

In Costa Rica, in 1988, there was a total of 25 Ha. under cultivation by 15 producers.

CAAP has targeted asparagus as a priority product for development. Working with PRO-EXAG, CNAAC and the University of Costa Rica, CAAP has begun an in-country promotional effort. They are developing a technological package for cultivation, will provide post-harvest technical assistance, and have sponsored a field trip to California for five producers.

The following Ha. have been planted in 1989:

Hacienda de Ojo de Agua (Herrero family)	80 Ha.
4 other producers	30 Ha.
Small groups	<u>10 Ha.</u>
Total	120 Ha.

In addition, the ACA/PIPASA joint venture is planning 70 Ha. in 1990, and Dole has made some experimental plantations. The total CAAP target is 500 Ha. in production by 1994, with an export value of \$6,000,000.

A critical element in the development of this product is the increased air transportation capability being developed by CAAP. This will be particularly important during the first few years

before there is sufficient volume to use surface containers. Eventually, shipments will be made with mixed surface and air carriers. With the current transportation situation, the European market cannot be accessed, and expansion into the U.S. is limited.

PROJECTED EXPORT SALES ARE:

1983	0
1988	0
1989	\$ 100,000
1990	\$ 900,000
1991	\$2,800,000
1992	\$3,500,000
1993	\$5,500,000
1994	\$6,000,000

Total CAAP product budget is \$11,800 through NETS, and Col. 9,994,000 (\$125,000) local currency.

The 500 Ha. will directly employ approximately 600 people, including harvesting, which will convert to a full-time equivalency of about 200 to 225.

It should be noted that the possibilities for successfully and economically growing asparagus in Central America during the targeted window period is based on the opinion of competent experts, and some experience with "garden" and test plots. There has been no experience with commercial production over a period of years, any where in Central America.

F. FLOWERS

Cut flowers amount to an over two billion dollar annual export market. The Netherlands dominates this world export trade with a share of over 68% in 1987, the year of the last detailed published figures. And their domination has been increasing with market share going from 64% in 1981 to 68% in 1987. This includes a small amount, less than 5%, of re-exports. Colombia follows, with 8.1% of the market, down from 10% in 1981, and Israel is third with 5.6%, down from 7.7% in 1981. The three main types of flowers exported are carnations, roses and chrysanthemums

Of the importing countries, the Federal Republic of Germany is the largest, at \$834,000,000 a year, followed by the United States, importing \$321,000,000 a year and, finally, France, at \$211,000,000 per year. (All 1987 figures, see SCHEDULE IX, P 72.)

The standards for production and post-harvest handling among the successful exporting countries is extremely high. Both Colombia and Israel have constructed modern flower terminals at their airports, which has enabled their producers to operate a full, temperature-controlled distribution system from farm to airport, known as a "cold chain."

In Costa Rica, cut flowers have grown from a \$1,000,000 export industry in 1983 to \$8,000,000 in 1988. Even so, Costa Rica is a relatively insignificant factor in the international flower export business, with a market share of about .4%

In Costa Rica, there are 224 Ha. under cultivation, employing over 2,200 people. The forecast is for a jump from \$8,000,000 to \$9,000,000 in 1989, and then for continuous growth

at a rate of about 6% annually. However, these projections are extremely modest. With the resolution of the transportation bottleneck, combined with the excellent support work being provided by CAAP and expected the success of the reinvigorated PIE Foreign Investment Promotion Program, growth in this area could dwarf current estimates. Of particular interest is the movement of established, successful Colombian flower growers out of Colombia, escaping the turmoil there.

USAID/CR, through their lines of credit and the CAAP program, were central to this past growth; as are its current activities, through CAAP, essential to any further growth.

Costa Rican flower exporters can be divided into three groups:

Group 1. American Flowers. American Flowers is in a class by itself. They accounted for virtually all of the \$1,000,000 exports in 1983, and 50% of the \$8,000,00 exports in 1988 (or \$3,000,000 of the \$7,000,000 increase experienced to date). This growth was made possible to a very large extent by CAAP's successful efforts in expanding air transport service.

Due to lower pricing in a more competitive flower market, they will not be able to expand using borrowed money at the current level of commercial interest rates. Their future expansion will be limited to self-generated funds.

Group 2. The second tier is made up 14 companies which account for approximately \$2,000,000 in sales per year. They are primarily foreign firms (eight U.S./Costa Rican joint ventures, one U.S./German joint venture, three Colombians, and two Costa Rican) and are self sufficient in technology and financing. We do not know the expansion plans of those currently in country, but there seems to be substantial interest on the part of

investors from Colombia and Holland.

An important contribution to this group's past growth has been CAAP's success in expanding air cargo service; and the limiting factor to new investment will be the degree of success of CAAP's program to continue to expand air cargo service.

Group 3. The third tier is approximately 80 small growers, which account for the remaining \$2,000,000 in sales. This is down from a peak of 115 growers two years ago. These are CAAP's core clients and are the principal beneficiaries of AID's credit line. They are made up primarily of small farmers (85%) with the other 15% being nonfarmer investors. The fall out, from 115 to 80, was due to the lower prices and a more competitive market, that squeezed out the poorer quality and less efficient producers. The quality problem was particularly serious in the area of post-harvest handling. This profit squeeze was further aggravated by the loss of CATS on some of the more popular flowers. These CATS represented the entire margin of profit for many of the inefficient farmers. It is anticipated that there will be further consolidations within this group of 80 small growers but with overall sales increasing and the surviving growers becoming stronger.

CAAP has had a direct impact on this growth through providing an excellent technology production package and effective extension work. Flowers were one of the original CAAP programs, with work starting as early as 1986, with the mission funding studies of production and post-harvest handling in response to requests by producers through CAAP. These studies plus two more specific works done by CAAP formed the bases of the technical assistance program.

This technical assistance plan was based on the express needs of the producers for assistance with production and post-harvest problems. The program included control of genetic materials for quality, fertilizer use, irrigation, and precooling as a post-harvest technique.

\$47,000 in PD&S funds were budgeted for overview studies and \$139,000 in ESF and PL480 were budgeted for 1987 and 1988 activities.

The 1989 activities are basically a continuation of this program. It consists of:

- research/investigation
- transfer of technology
- extension

The research/investigation is mainly on-farm, applied research, and its purpose is to avoid some of the serious mistakes that have affected the Costa Rican flower industry in the last few years. The research program will also introduce new varieties, i.e., freesia, liliun, and liatris to the local environment and determine their agronomic behavior.

In the transfer of technology, there will be three main topics addressed during 1989: cut flower post-harvest management, a technology package development for the tropical flower, and the sea transport possibilities.

The extension program sees that the information and data generated from the foreign technical assistance component and from on-farm experimentation are properly disbursed among the producers by CAAP's flower program personnel. Presently, there is no other extension program in Costa Rica covering flower horticulture. This leaves the flower producer in a position

where production information and techniques for local conditions are very difficult and expensive to obtain. Workshops, field days and farmer visits are carried out through this extension program.

The 1989 budget is \$75,000 (NETS) and 9,200,000 COL (CINDE/CAAP). This amounts to a total of \$190,000 equivalent.

Future CAAP programs will assist in the expansion of this program through an intensified post-harvest technical assistance program and through leading the way into new less competitive products, such as the current program for expanding tropical flower production.

The profit margins on flowers are now tight, and expansion at market interest rates is not feasible. Access to the USAID lines of credit, at lower rates, is blocked by the unrealistic criteria used to define an eligible small grower.

See Appendix A for a description of CAAP's air transport program.

USAID/CR NTAE's strategy directly impacted export sales projections are as follows:

- 1987 \$ 300,000
- 1988 2,000,000
- 1989 2,900,000
- 1990 3,400,000
- 1991 4,000,000
- 1992 4,600,000
- 1993 5,300,000
- 1994 5,900,000

This will result in a full-time employment impact in 1994 of over 1,600 workers.

SCHEDULE IX
World trade in cut flowers^{a/}, by value, 1981-1987
(In millions of United States dollars)

SITC 1: 292.71

Importing/exporting countries/areas	1981	%	1982	1983	1984	1985	1986	1987	%
World imports (c.i.f.)	1,180.59	100.0	1,188.10	1,236.55	1,291.63	1,297.29	1,739.99	2,218.00	100.0
of which:									
EEC (10, as of 31.12.85)									
Germany, Fed. Rep.	596.02	50.5	553.90	544.41	516.04	467.35	655.11	834.58	37.6
France	79.39	6.7	85.31	84.34	83.22	95.47	150.36	210.75	9.5
United Kingdom	59.03	5.0	59.73	67.91	73.65	91.03	122.96	176.59	8.0
Netherlands	51.38	4.4	52.72	51.66	61.84	51.50	85.40	113.59	5.1
Italy	19.83	1.7	23.52	23.50	22.91	37.69	47.66	67.39	3.0
Belgium-Luxembourg	33.72	2.9	31.59	28.08	27.12	26.15	34.67	48.18	2.2
Denmark	8.32	0.7	9.27	10.83	12.54	15.45	25.78	36.28	1.6
Ireland	3.38	0.3	3.30	3.44	3.27	4.01	6.49	8.37	0.4
Greece	0.18	-	0.02	0.47	0.65	0.72	1.14	2.08	0.1
United States	128.58	10.9	158.77	196.85	266.66	283.64	301.18	321.08	14.5
Japan	17.72	1.5	14.74	16.65	18.81	22.50	37.47	57.65	2.6
Canada	18.37	1.6	20.80	26.14	30.10	25.43	29.44	31.31	1.4
Switzerland	59.34	5.0	63.26	66.08	63.34	63.70	92.56	120.72	5.4
Austria	38.21	3.2	38.43	39.85	35.96	36.58	49.20	65.85	3.0
Sweden	31.67	2.7	30.75	29.80	29.10	29.65	41.16	52.97	2.4
Norway	11.19	0.9	11.81	12.48	12.31	12.44	20.52	26.62	1.2
Finland	6.19	0.5	6.17	6.39	6.88	6.28	8.60	11.00	0.5
Hong Kong	3.24	0.3	4.65	6.04	5.87	6.24	7.37	8.29	0.4
Singapore	2.55	0.2	4.51	5.23	5.94	7.12	6.47	6.48	0.3
Spain	0.49	-	0.52	0.46	0.52	0.79	2.13	5.19	0.2
Saudi Arabia	2.90	0.2	3.20	5.00 ^{b/}	3.40 ^{b/}	3.40 ^{b/}	3.30 ^{b/}	2.70 ^{b/}	0.1
Australia	1.67	0.1	2.66	2.52	3.24	3.16	2.77	2.29	0.1
Kuwait	0.75 ^{c/}	0.1	1.11 ^{c/}	1.24 ^{c/}	1.41 ^{c/}	1.47 ^{c/}	1.50 ^{c/}	1.57 ^{c/}	0.1
United Arab Emirates	0.91 ^{c/}	0.1	1.17 ^{c/}	1.10 ^{c/}	0.91 ^{c/}	0.95 ^{c/}	0.80 ^{c/}	0.66 ^{c/}	-
World exports (f.o.b.)	1,061.72	100.0	1,068.93	1,105.05	1,117.66	1,143.31	1,534.78	1,978.42	100.0
of which:									
Netherlands	681.86	64.2	682.07	697.76	701.52	744.35	1,037.69	1,354.24	68.5
Colombia	108.57	10.2	111.48	120.55	129.49	132.05	148.54	160.00 ^{b/}	8.1
Israel	81.64	7.7	81.29	73.16	65.08	65.37	95.10	110.00 ^{b/}	5.6
Italy	70.87	6.7	74.78	85.34	78.02	57.75	71.44	95.75	4.8
Spain	11.99	1.1	15.05	18.29	22.24	22.22	35.42	65.69	3.3
Thailand	18.51	1.7	14.58	15.46	16.60	18.08	14.70	26.00 ^{b/}	1.3
France	14.85	1.4	14.16	13.90	15.16	12.09	15.10	18.85	1.0
Kenya	6.14	0.6	5.99	8.37	8.70 ^{b/}	8.80 ^{b/}	13.40 ^{b/}	17.00 ^{b/}	0.9
Germany, Fed. Rep.	4.65	0.4	4.69	5.31	6.82	6.50	9.84	14.84	0.8
Taiwan Province (China)	6.17 ^{d/}	0.6	5.46 ^{d/}	6.44 ^{d/}	6.67 ^{d/}	6.65 ^{d/}	6.72 ^{d/}	11.06 ^{d/}	0.6
United Kingdom	4.45	0.4	3.73	3.98	4.46	5.20	6.28	9.21	0.5
South Africa	6.89	0.6	5.94	6.20 ^{b/}	5.70 ^{b/}	6.10 ^{b/}	7.50 ^{b/}	8.50 ^{b/}	0.4
New Zealand	1.61	0.2	2.07	2.87	3.87	4.74	7.10	7.91	0.4
United States	10.80	1.0	11.05	11.11	10.49	6.14	6.60	7.10	0.4
Costa Rica	0.35 ^{d/}	-	0.72 ^{d/}	0.92 ^{d/}	1.25 ^{d/}	2.61 ^{d/}	4.91 ^{d/}	6.40 ^{d/}	0.3
Mexico	0.66	0.1	1.06	2.10	3.14	3.98	6.71 ^{d/}	6.31 ^{d/}	0.3
Singapore	7.79	0.7	7.19	6.57	7.15	5.46	5.11	6.10	0.3
Morocco	0.37	-	0.60	1.28	1.11	2.21	3.00	5.00 ^{b/}	0.3
Peru	2.16	0.2	2.33	2.63	3.56	5.20 ^{b/}	4.40 ^{b/}	3.80 ^{b/}	0.2
Ethiopia	- ^{d/}	-	0.33 ^{d/}	0.20 ^{d/}	0.67 ^{d/}	2.25 ^{b/}	3.71 ^{b/}	3.10 ^{b/}	0.2
Malaysia	1.13	0.1	1.20	1.42	1.46	1.56	2.20	3.00 ^{b/}	0.2
Brazil	3.30	0.3	2.26	1.87	1.98	2.36	2.10 ^{b/}	2.30 ^{b/}	0.1
Mauritius	0.37	-	0.54	0.62	0.67 ^{d/}	1.28 ^{d/}	1.91 ^{d/}	2.09 ^{d/}	0.1

Source: UNSO/ITC Comtrade Data Base System.

- a/ Cut flowers and flower buds of a kind suitable for bouquets or for ornamental purposes, fresh, dried, dyed, bleached, impregnated or otherwise prepared.
b/ ITC estimate.
c/ Based on export figures of major world suppliers.
d/ Based on import figures of major world importers.

G. MACADAMIA

Hawaii has the largest acreage of macadamia in the world, with Costa Rica second. Production of Hawaiian macadamia in 1988 reached a record 47,000,000 pounds on an in-shell basis, 10% higher than 1987. Bearing acreage increased 1,000 acres to 16,600, continuing its upward trend. Total planted acreage for the 87/88 crop year was 21,500, of which 15,600 were of bearing age. Harvested acreage will continue to increase in the next several years. 1988 also saw a record grower price at \$.92 per pound, compared with \$.84 in 1987 and \$.657 as recently as 1983.

Australia is also an important growing area. There are reports of recent advances there in macadamia genetics, improved yields, shape of trees, clusters and different shaped varieties.

There are very few statistics on acreage outside of Hawaii and Costa Rica. An earlier consultancy, which provided the design paper for the Costa Rican NTAE project, stated that there are a number of countries throughout the world that have substantial acreage coming into production in 1990. He predicted a world surplus of macadamia nuts for marketing at that time, but also predicted that the demand for the nuts would outgrow the supply by the end of the decade. He pointed to a similar situation that occurred in the early 1970's and early 1980's.

In Costa Rica, of all the NTAE's, macadamia has been identified as having the greatest long-term export potential. At the end of 1988, 545 growers had planted 5,679 Ha., 4,189 in the last four years. Macadamia takes about four years before the first light harvest begins and nine years before it reaches maturity.

Macadamia studies started in Costa Rica in 1966, near Turrialba, with help from ICCA/CATIE, the University of California, the United Nations, U.K. the University of Hawaii and others.

The first significant exports were reached in 1987, valued at \$1,600,000. Export value in 1988 was about \$1,800,000 and 1989 is projected to be about \$2,800,000. Without further USAID/CR assistance, CAAP estimates export sales from existing Ha. to reach \$11,500,000 by 1994, and over \$40,000,000 when the trees reach full maturity.

The existing processing facility at Turrialba is reportedly designed for 2,000 MT per year. They are now processing 1,000 MT annually. Yield at maturity is 5 MT per Ha. With planted Ha. at 5,679, there is going to rather quickly be substantial demand for increased processing capacity. The existing facility will no doubt expand, but there also has been talk of a group of investors putting a processing plant in Guanacaste and FEDECOOP has commissioned a feasibility study, toward the possibility of establishing three plants, in different parts of the country.

Processing macadamia is tricky, and the current processor had an extremely difficult time getting technical information. Currently the quality of production is below standard, requiring them to sell their product at a 25% discount. They do not plan to start marketing under their own label until they can achieve Hawaiian standards of quality. This technical knowledge will be a problem with any new plants coming onstream if they are not allied with an experienced processor.

This is an excellent area for CAAP/PIE to get behind private sector investment promotion for both local and/or overseas investors.

USAID has been significantly involved since the inception of the macadamia program, and is the main force behind its recent expansion. One could reasonably attribute the entire growth of this industry to USAID policy.

In 1982, AID first assisted in the development of the macadamia industry with a grant for the creation of Centro Agricola Cantonal de Turrialba, a non profit organization. Improved macadamia nursery stock resulted. Since 1985, USAID supported FEDECOOP and ICAFE in the conversion of 900 Ha. of marginal coffee lands into macadamia production, through the coffee-diversification project. 1,500 additional Ha. will be converted over the next three years. In January of 1989, CAAP began its macadamia support program, with AID's backing, to improve cultural practices and improve yields of existing plantings, and promote the planting of 4,000 additional Ha. (including the 1,500 with FEDECOOP). And by 1990 the Northern Zone Project will begin planting a planned 500 Ha. of macadamia. In addition, the infrastructure in the Northern Zone, developed with USAID support, encouraged the planting of 450 Ha. and it anticipates an additional 1,000 Ha. will be planted over the next four years.

In addition to AID, MAG has made macadamia a high-priority crop and it will be one of several on which they will be focusing their resources in cooperation with the AID-backed programs.

The 1989 CAAP macadamia program will be developed in cooperation with ICAFE and MAG. ICAFE will provide two researchers, two vehicles and vehicle maintenance and operation expenses. MAG will provide one full-time researcher, one vehicle and vehicle expenses, and three regional offices for the program extension agents. CAAP will provide three extension agents who will be sustained in the three main production regions;

- Region Atlantica: Turrialba, Siquirres, Pococi, Guacimo
- Region Norte: San Carlos, Tilaran
- Region Sur: Perez Zeledon, Coto Brus

The main function of the three extension agents is to work with potential local and foreign investors in macadamia to identify suitable land for cultivation of macadamia and to determine which are the recommended varieties for planting in the specific area under consideration. Extension agents will also be working with existing producers to improve agricultural practices.

The research and extension agents will focus their joint efforts to provide new producers with the information they need to maximize production. The existing technological package will also be refined as new information is developed. Improvement of production and processing yields are also important objectives of the program.

The 1989 budget is for \$18,000 U.S., in NETS funds, and 6,143,000 COL (\$77,000 equivalent) in local currency.

Although there will be similarity in the services supplied by CAAP, FEDECOOP and the Northern Zone Project, there is no evidence of wasteful duplication. However, it is important that cooperation be maintained, and information shared. This can be facilitated through the producers association.

Projected direct USAID assisted export sales are as follows:

1988	-
1989	200,000
1990	400,000
1991	700,000
1992	1,300,000
1993	2,600,000
1994	5,100,000

There will be a planned 5,850 Ha. planted under direct assistance from the various projects. This will result in a full-time labor equivalent impact of 1,500 workers and an ultimate export sales value, at today's prices, of over \$60,000,000 at full maturity.

H. MELONS

The export market is primarily concerned with cantaloupes, honey dews and some watermelons.

Total consumption in the U.S. and Canada amounted to 845,000 MT of cantaloupe and 280,000 MT of honey dews in 1987. This has been increasing at the rate of 6% to 9% annually. Production in the United States starts in May, peaks around June, and tails off in December. Domestic production is virtually nonexistent from January through April. California is the largest domestic producer of melons with about 70% of the fresh market, followed by Texas and Arizona.

158,000 MT of cantaloupe and 76,000 MT of honey dews were imported in 1988. Mexico supplies about 70% of the cantaloupe and half of the honey dew melons. Most of the balance comes from the Dominican Republic and Central America. Most melons in Mexico are grown in the Apatzingan by small growers with little irrigation infrastructure. They have recently been troubled by serious disease problems which have affected their production levels, but new areas are opening up in other parts of the country. Among the other countries, Honduras and the Dominican Republic are the leading shippers of cantaloupes, and Honduras and Panama are the leading shippers of honey dews.

Costa Rica has been exporting small quantities of melons with mixed results since 1983. Production is primarily in honey dew melons (70%), with the balance in cantaloupe and a few watermelons. Production is centered in Filadelfia and Poas and is by the larger land owners. A small amount has been begun by small farmers in Parrita, assisted by the Agrarian Union project, under contract to Del Monte. The Agrarian Union is also beginning a new project in Guanacaste for the 1989/1990 season.

The makeup of the production in Ha. is as follows:

<u>Groups:</u>	<u>1988-89</u>	<u>1989-90</u> <u>(Projected)</u>
Del Monte	600	941
Pipasa/ACA	200	260
Exporkpack (Orlich)	230	320
CAAP group (7) through Chiquita	130	450
New producers (4), CAAP assist.	0	150
Parrita, Guanacaste (Agrarian Union)	<u>15</u>	<u>55</u>
Total	1,175	2,166

The melon area for the crop year 1987/1988 was 460 Ha.

Other than a small amount from the Agrarian Union, Del Monte markets only their own presently, but may in the future buy from more small producers or sell for them on a consignment basis. Pipasa is selling through ACA on a consignment basis and received some financing, boxes and advances from them. EXPORPACK works with Central American Produce, on consignment.

CAAP's assistance is directed at a group of seven growers, who sold to Chiquita brand under a fixed-price contract in 1988-89. This group will renegotiate the contract this year and expects to switch to a consignment basis. CAAP also assists the Pipasa group, but to a lesser degree. They anticipate extending assistance to four more growers who will be starting up this season.

The CAAP program was initiated in 1987 when they hired Mr. John Guy Smith, a PROEXAG consultant, to study the technical and economic feasibility of producing melons in Costa Rica. As

you'll note on the export chart, up until that time, only relatively small quantities had been shipped. Mr. Smith suggested the establishment of a pilot project to stimulate melon production among a group of medium sized farmers in the Guanacaste Province. The rationale supporting this recommendation was that even though melon exportation in the CBI countries was entering a highly competitive phase, melons produced in the Guanacaste Province could be exported through the fruit companies under comparatively advantageous terms. And also, that the Guanacaste Province has a land-base supported by irrigation that could support substantial future expansion of melon production. The lack of irrigation has been a serious problem in Mexico and the Central American countries growing melons.

CAAP provides an extension program assisting in all production aspects, post-harvest management and quality control. This includes disease and insect control activities, including training courses, and has also included some marketing assistance. The program was initiated during the 1987-88 season, with a small pilot project covering 11.5 Ha. With that experience behind them, they went to 130 Ha. for the 1988-89 season. Again, although there were some problems, the growers were generally satisfied with their results, and the plan is to expand to 450 Ha. for the coming 1989-90 season. The project anticipates that only minor expansions on the order of 6% after the 1989-90 season. However, with the growers excellent relationships with the fruit companies, these projections could prove to be very modest.

All programs being managed by the Agrarian Union are aimed at smaller farmers. They were successfully able to work out startup problems in their 1988-89 program, with a pilot project of 14 Ha. in Parrita. This is scheduled to expand to 40 Ha. for

the coming season. This product is marketed through Del Monte. In addition to the work in Parrita, they're starting up a new project with 15 Ha. in Guanacaste for the coming season. The plan is to market the Guanacaste product through either Chiquita or Del Monte.

As mentioned earlier, transportation has not been a problem with those growers working with the fruit companies. However, for independents during this shipping period, there is often an inadequate supply of refrigerated containers. This will provide a serious constraint for the expansion of the independent portion of the melon export effort. It will require work on the part of CAAP to resolve this transportation problem. As good and effective as working with the fruit companies is, it is important for the future health of the industry that some balance be maintained.

Projected Sales as a Direct Result of USAID Project Assistance

1987	-
1988 (actual)	100,000
1989	800,000
1990	3,000,000
1991	3,200,000
1992	3,400,000
1993	3,600,000
1994	3,800,000

Employment impact is estimated at 900 workers, 400 on a full time equivalency basis.

The 1989 CAAP budget is \$24,150 in U.S. funds and 3,000,000COL (\$37,500 equivalent) in local currency.

I. STRAWBERRIES

In the United States and Canada, there is a very pronounced window for strawberries from early November through the week before Christmas. California dominates the business, accounting for approximately 85% of the volume sold. Their shipments are negligible during this period. Florida also produces negligible quantities during this November-December period, with light shipments starting in January, then peaking in March and April.

The largest quantity of U.S. imports over the past couple of years have been from Mexico. Mexico has an enormous strawberry industry, centered in Michoacan and Guanajuato, totaling 12,500 acres. This compares with 16,000 acres in California and 5,000 acres in Florida. The fresh strawberry production in Mexico has traditionally been focused on a domestic market but, in recent years, foreign exchange problems and currency devaluations have caused an expansion of exports.

The Mexican strawberry industry consists of a great many small growers supported by substantial freezing capacity in the hands of private owners, as well as a recently built cooperative freezer. Over the past two years, Mexico has shipped small quantities of fresh berries to the U.S. during November and December, with their shipments peaking in the March-May period. The quality of the Mexican berry is good, and one has to assume that there are production constraints which keep them from exploiting this November-December window.

Growers in Guatemala are also focusing on this November-December window, as well as shipping during the January and February period (at which time the prices, although lower, are normally still high enough for them to ship profitably). Guatemala growers have been shipping at the same level as Costa

Rican growers but have been experiencing substantial production and quality problems, particularly during the November-December period. This has been attributed largely to the lack of adequate transport. There have been some recent experiments in Guatemala in modified atmosphere shipping, with some indications of success. If this proves to be economically sound, it will enable Guatemalan shippers to go via ship and will open up Guatemala as a major competitor.

In addition, very small quantities come from Chile; a small strawberry operation started this season in the Dominican Republic; and there is a freezing operation in Honduras that ships some product to the fresh market.

Europe also has a market window which roughly parallels that in the United States. Israel, Kenya and Mexico are now the off-season suppliers, but prices are very strong. Some Costa Rican growers have already begun shipments. Europe would provide an excellent opportunity if the transportation constraint can be solved.

The industry in Costa Rica is made up of about 90 small growers with a total of 120 Ha. Most farms run from 1/10 to 1/4 Ha. The growing regions are principally the in Fraijanes-Poasito area. There are two large producers, the largest being Del Monte (J. Nichols), with 17 Ha.

Marketing is done in a variety of ways. Some of the growers ship on a consignment basis to brokers in the United States. Others have fixed-price contracts with exporters in Costa Rica and many of the growers do not have contracts at all but sell on the spot market to exporters for cash.

Financing does not seem to be a constraint. Most of the producers, being small, were able to access the small-farmer line of credit for 15% to 18%. Also, they have had excellent cooperation with the bank, and the loans are processed expeditiously. This is attributed, to some extent, to the belief that the local bank branch manager really understands the strawberry business. In addition, the growers who ship through brokers in Miami, often receive some financing in the way of advances, inputs or boxes.

The quality of the Costa Rican berries arriving in south Florida over the past few years has been poor to mixed. However, last season, the Costa Rican berries emerged as a first class product and, as a result, commanded top prices in the market.

The future sales projections reflect the actual planned hectareage for 1989/90 with only modest increases beyond that.

The principle constraint is transportation. Strawberries are shipped by air, and air capacity is pushing its limits. If the work done in Guatemala on modified atmosphere shipping proves to be technically and economically feasible, this may open new possibilities for Costa Rica.

It should be remembered that the \$3,000,000 in sales projected is going to be over a relatively short period of time, about ten weeks, with the bulk of it actually being shipped in a five to six week period. With the other competition beginning, its really not known what will happen to prices during that period of time with this amount of volume entering the country. It behooves Costa Rican growers to be cost effective and to organize an intelligent marketing support program.

AID assistance, through CAAP and through the line of credit, has been central to the growth of the strawberry industry in Costa Rica. Even in the case of Del Monte, their expansion could not have taken place without the work that CAAP has done in expanding air cargo service.

The CAAP program, with USAID assistance, started in 1986. It was designed to assist the producers by providing technical assistance to the industry in production, post-harvest handling and marketing. When CAAP began to assist the strawberry industry, there were reportedly less than 20 Ha. in production in the country. They found the following problems:

- production was during February through April, which is much later than the high-price November/December period
- higher yielding and better quality varieties were needed
- productivity per Ha. was low
- there was no field selection for quality
- post-harvest handling was extremely poor
- the organization of the sector was very weak

CAAP helped to form COOPFRESA as the lead producer organization with which they would work, although it did not represent the majority of growers. COOPFRESA eventually failed, and in 1989 the program was opened to all growers. Assistance was provided through a consultant to start the importation and testing of a range of new varieties for production and quality. A post-harvest specialist was brought in to analyze the harvest methods. Growers were handling the fruit several times before it left the country, thus decreasing its quality and greatly increasing its losses. This assistance was reported to have dramatically changed the system of harvest, reduced the losses of fruit and increased harvest efficiency by an estimated 300% on some farms.

The growers have still not been able to get the strawberries to peak during the best window. CAAP's program for 1989 includes continuing work in this area, as well as continuing work on improving crop yields in general, post-harvest handling and other quality considerations.

The 1989 budget was \$34,750, through NETS and \$183,000 (equivalent) in local currency.

Forecasted sales directly attributable to USAID (CAAP) assistance is as follows:

1987	500,000	actual
1988	1,000,000	actual
1989	2,900,000	
1990	2,900,000	
1991	3,100,000	
1992	3,300,000	
1993	3,500,000	
1994	3,700,000	

The estimated labor impact would be 600 workers, with a full time equivalent of 200.

The planned growth reflected in the projections is internal. It involves the consolidation of growers and all increased Ha. would be from existing growers. The large jump in sales from 1988 to 1989 reflects hard estimates of increased production. But this increase may run into problems with the air transport space availability. Only modest growth levels were forecasted beyond 1989, although CAAP and Costa Rican industry participants expect much sharper increases.

In the meantime, as part of CAAP's marketing plan, they are planning to make a drive for strawberry investment among local

and foreign investors. No additional sales have been included to reflect the potential success of that program.

Strawberry processing (freezing) is a very useful adjunct to a fresh-market operation, and there is interest in it on the part of the growers. There is already a small amount of bulk freezing taking place. The international markets are normally very competitive, with prices under pressure. So, although useful, the sale of frozen berries can only be expected to provide marginal income assistance to the grower. MAG will rely on European consultants for outside technical assistance, working through the United Nations and CCI.

J. BLACK PEPPER

The international outlook for black pepper is reported to be very positive, with current world supply not sufficient to satisfy market demand. According to FAO, this demand is increasing at a yearly rate of 1.7%. And, according to the World Bank, U.S. demand has doubled over the past seven years. The principal suppliers historically have been Brazil, India and Indonesia. Central America and the Caribbean have never been significant producers, although they have very suitable growing conditions.

Costa Rica and other Central American countries are net importers of pepper. The use of black pepper in Costa Rica has increased due primarily to its industrial use as the chief ingredient in processing meats such as sausage, etc. Costa Rica now imports some \$250,000 worth of black pepper annually, mostly from Brazil. The large, 24 Ha. project in the San Carlos/Sarapiquí region has proven the suitability of growing conditions in Costa Rica as well as Costa Rican competitiveness with producers abroad.

Black pepper requires expensive trellising, plant materials and labor. Total cost is estimated at \$2,500 per acre to establish. It takes two to three years before production. However, no expensive machinery or sophisticated technology is needed in the post-harvest processing. Direct labor requirements are approximately one worker per 2 Ha.

USAID is supporting black pepper development through programs at CAAP and the Northern Zone Consolidation Project. In addition, black pepper has been identified as a national priority crop by MAG, where it will be one of several crops on which MAG will focus its resources.

CAAP's black pepper program was initiated in January, 1989. Its main objectives for 1989 are to:

- Promote the development of new planting areas considering the best technological alternatives given certain levels of crop productivity and quality.
- Increase current planting area up to 100 Ha. in 1989 (toward a targeting objective of 1,000 Ha. by 1993).
- Develop an entity (association) that groups growers, processing plant representatives and exporters.
- Establish an extension and training program.
- Support the creation of a specific credit plan for the development of this new activity supported by the national banking system or the private sector.
- Provide the required collaboration to growers in dealing with the international market regulations/mechanisms.

The 1989 CAAP budget for black pepper development is COL. 10,000,000 (\$125,000 equivalent).

CAAP will train IDA, MAG and Co-op personnel to provide technical assistance to the small producers. Direct technical assistance will be provided to the large producers. There are currently 200 Ha. of black pepper under cultivation by 120 producers in the northern zone. Fifteen of these producers have 8 Ha. or more, and 100 have 1/2 Ha. or less. There are also about 15 or 16 producers in the Atlantic zone, a number of small producers in the Pacific Central zone and a few producers in the Pacific Southern zone. As can be seen, production is concentrated in the north.

At the completion of the program in 1993, there will be 1,000 of CAAP assisted/promoted Ha. under cultivation, with a projected export sales value of \$6,000,000 at maturity. This will employ 720 people.

During Phase I of the NZCP, a pilot project was started of 30 Ha., with direct assistance from the project. In addition, as a result of the access created by the infrastructure improvements, an additional 25 Ha. in plantings was stimulated. During Phase II of the project, from 1989 through 1993, the project plans to assist growers in planting another 100 Ha. It is anticipated that another 100 Ha. will be indirectly stimulated.

The following are export sales stimulated by USAID project assistance:

	CAAP	NORTHERN ZONE
1989	-	-
1990	-	\$ 100,000
1991	\$ 400,000	200,000
1992	1,200,000	400,000
1993	2,300,000	400,000
1994	3,200,000	400,000
1997	6,000,000	1,600,000

K. ROOTS AND TUBERS

These products, primarily yucca and malanga, are aimed at the ethnic market in the United States and Canada, and statistics on these markets are not available. Costa Rica seems to be a major supplier, if not the major supplier, with the Dominican Republic also being a significant shipper targeting the Hispanic market.

There are two major shippers in Costa Rica, Tico brands and Del Monte. Tico has been in it a number of years and has established excellent brand recognition. Del Monte has entered the business recently, but shipments have already reached the level of five tons per week of yucca alone. This is proving to be an excellent business for them.

Export sales from Costa Rica totaled \$8,500,000 in 1988, up from \$3,200,000 in 1983.

USAID assistance has been through the Agrarian Union. This program was organized in 1986, and started operation in 1987. The largest operation is now in Pital, where a packing plant was established in early 1988. It now receives, washes, peels, selects and packs yucca and other root products. It both freezes and vacuum packs. Sales are made through an experienced local exporter, Nicoa, who has loaned them some of the processing line equipment.

They currently have programs in Pocosol and Sarapiquí, as well as Pital. The program has worked so well that a group of growers in Upala have approached them to assist in a program there. Farmgate sales value in 1987 was \$50,000, grew to \$150,000 in 1988 and is anticipated to reach \$625,000 in 1989. Employment generation at the farm level in 1989 was 500, and at

the plant level, 125. By 1991, this is expected to grow to \$1,750,000 in sales and total employment to 1,750. A rough conversion of full-time equivalency might be 500 people.

The product has met very good market acceptance and the project is looking for additional distributors as part of an expansion program. They're currently negotiating with Del Monte to become an alternative customer.

The project provides technical assistance with the aim of providing farmer groups and farmer affiliates with resources that will help them to graduate from subsistence and/or production level economy to a market-oriented economy.

This technical assistance is provided in cooperation with the various institutions and agricultural inputs distributors through formal and/or informal arrangements. The program acts only to locate and coordinate the provision of this assistance. For example, they will:

- cooperate with research organizations and distributors for on-farm demonstration plots and visitation programs.
- coordinate collaborative studies between the University of Costa Rica, MAG, and CATIE and faculty and project site areas.
- coordinate research, thesis and scholarship programs for students with specific crops.
- provide local and overseas training in cooperation with CINDE/CAAP and other USAID programs.
- obtain access to foreign publications regarding cultural practices for specific commodities.

The technical assistance program is run by an agronomist, with one paratechnician.

Projected export sales generated by USAID assistance:

1986	-
1987	\$ 50,000
1988	150,000
1989	625,000
1990	1,187,000
1991	1,750,000
1992	1,838,000
1993	1,929,000
1994	2,026,000

L. PINEAPPLES

During 1988, Hawaii shipped over 100,000 metric tons of pineapples. Costa Rica, Honduras and the Dominican Republic together shipped 83,000 metric tons to the U.S., and Mexico, 19,000 metric tons. This accounted for more than 99% of pineapple shipments to U.S. markets during the year. The dominant variety was smooth Cayenne.

The European market is supplied almost entirely from the Cote d'Ivoire.

The marketing of pineapples out of Honduras, Costa Rica and the Dominican Republic is almost totally controlled by the large fruit companies (Del Monte, Chiquita and Dole). There are some independent shippers in the Dominican Republic, but the bulk of the independent pineapple shipments come from Mexico.

Mexican pineapples are harvested and shipped the year around, with peak volume from late March to the end of May, and the heaviest shipments normally around Easter. The production is located in southern Mexico in the state of Oaxaca, with some acreage in Tamaulipas and Vera Cruz. They are trucked to the United States in bulk loads, and packed in south Texas.

Market prices are stratified. Mexican quality is considered to be poor and their pineapples command the lowest price. Unit volume has been decreasing in recent years.

The independent shippers in the Dominican Republic will normally get \$1 to \$2 more per box, and the fruit companies importing from the Caribbean are able to get a further premium over the independents for their branded products. The Hawaiian pineapple commands the highest price.

Costa Rica is the largest shipper from the Caribbean, at over 42,000 MT in 1988. From 1983 through 1988, pineapples led the increase of nontraditional agricultural exports, having risen from \$1,200,000 to \$31,200,000. This increase was virtually all accounted for by Del Monte. Del Monte now has 6,200 acres under cultivation producing 4,500,000 boxes, and they anticipate an increase of 20% to 30% over the next few years. As part of this expansion program, they have initiated a program with outgrowers. They have signed contracts with the growers in the northern (San Carlos) area to put 1,200 acres in cycle (a three year cycle), to produce 1,000,000 boxes a year.

There has been some recent activity with Chiquita, working with the Agrarian Unions, experimenting with the local "Montelirio Verde" variety of pineapple in Europe, where they reported a good reception. And, there have been some independent exporters starting shipments of Smooth Cayenne pineapple to the U.S.

The independents will find a very difficult marketing situation, as discussed above.

On the positive side, their primary competitors will be Mexico and the poor Mexican reputation for quality may allow for some market penetration. Also, the per capita consumption of pineapple on the east coast of the U.S. is much lower than on the west coast, and the fruit companies have been predicting a very large gain in sales as they promote the product. This growth on the part of the fruit companies should allow some spill-over of growth for the independents.

However, the higher transportation and marketing costs incurred by independents, together with lower sales price they can expect to receive, makes this an economically difficult

product.

AID's policies are to help the smaller, independent growers. AID started in 1986 with their first pineapple export project through CAAP. This was designed to set up a co-op that would grow and sell pineapples to PINDECO. This did not come together for a number of reasons and pineapples were abandoned as a priority crop. In 1989, AIFLD, which had worked experimentally with modest amounts of pineapple in the past, launched a major pineapple production and sales project with AID support.

They are working with Chiquita, in a pilot program to sell the local variety, "Montelirio Verde," in Europe. However, their primary program is in contracting with local exporters for the principal export variety, Smooth Cayenne.

As with their successful roots and tubers program, they will not become directly involved in exports until they have gained sufficient experience, and have an understanding of the market. Even then, it will, at first, be only as an alternative for a small portion of their product.

In addition, the CAAP marketing man in Miami has helped a Costa Rican exporter with quality and packaging advice, which enabled him to resolve early startup problems. This man has started exporting in early 1989 and is now on track to export a product value of approximately \$800,000 per year. In CAAP's view, this would not have been possible without this assistance.

Our projections for USAID assisted export sales include only this \$800,000 plus \$1,000,000 in sales expected by the AIFLD project, plus modest increases over succeeding years.

Projected USAID-assisted sales:

1988	-
1989	\$ 500,000
1990	1,000,000
1991	1,800,000
1992	1,900,000
1993	2,000,000
1994	2,100,000

Full time employment is difficult to arrive at due to the many small growers involved part time, particularly in the Agrarian Union project. A very rough estimate is 500.

M. OTHER PRODUCTS

1. JUICES, PULPS AND CONCENTRATES

CAAP, the Northern Zone Consolidation Project, FEDECOOP and the Agrarian Unions have recently begun exploring possibilities in processed tropical juices, pulps and concentrates. This is a business with very interesting possibilities for Costa Ricans.

The principal tropical fruit juice in world trade is pineapple juice. Trade in it has grown substantially, from an estimated \$70,000,000 in 1981, to an estimated \$140,000,000 in 1988. 1985 market share figures showed the Philippines as the main supplier, with one third of the total world trade, followed by Thailand, Brazil, Kenya and South Africa. Brazil had been increasing its market share rapidly prior to 1985 and is believed to have continued this increase since then.

The world market for all tropical fruit juices (with the exception of pineapple) is now estimated to be approximately 100,000 metric tons annually, in single strength equivalents, with a value of about \$125,000,000. (This does not include citrus.) This has grown from about 10,000 metric tons in 1978. Industry sources expect that it will continue to grow at about the same rate of 10,000 tons annually for the next 10 years. This is considered insignificant by juice industry standards, but is an interesting level for Costa Rica. The major markets are Europe, the Middle East (particularly Saudi Arabia and the United Arab Emirates), and the United States. Per capita consumption in the Middle East is the highest in the world. Japan is beginning to open its market and should prove to be a good outlet in the future.

The greatest constraint in the growth of the industry is the inconsistency of supply, both in terms of quality and quantity. There is reluctance on the part of the major juice companies to use these tropicals in formulas due to this undependability.

The trade in these products is primarily in various forms of bulk pack. Pricing tends to be highly cyclical, with wide price swings. Passion fruit sales and particularly guava sales now are very strong and mango and papaya depressed. The supply is produced by small manufacturers in a number of countries. Brazil seems to be the most important factor. However there seems to be no obvious reason why Costa Rica can't compete on the open market.

Other than pineapple, passion fruit is the most promising item in terms of volume. Mango, although in oversupply on the market now, could prove to be a valuable support to the fresh industry over a period of time.

World wide, mango and passion fruit now account for two thirds of the 100,000 MT of sales volume.

Tropical fruits other than pineapple lend themselves to small grower participation.

CAAP has recently completed a study which has identified soursop as having high potential. They are in the process of designing a support project.

The Northern Zone Development project plans to directly support 500 Ha. of passion fruit to be grown under contract to nearby processing plants, Tico Fruit and Fruta y Sabores. Another 1,000 Ha. of passion fruit is expected to be planted, indirectly supported by the project. In addition, a pilot

project of 100 Ha. of soursop is planned.

FEDECOOP has supported a trial planting of 15 Ha. of soursop in 1988 as part of its coffee diversification project, and is exploring support for the contracting of passion fruit to the two commercial processors.

The two commercial processing plants are new and modern. They have both been built to process citrus, but projected citrus availability will be well under their capacity levels for the foreseeable future. Both plants are interested in passion fruit concentrate.

Tico Fruit is now processing Passion fruit on a trial basis, and had 400 Ha. under contract with IDA growers. Fruta y Sabores has had startup problems, and is not yet in regular production. Their noncitrus interest is now primarily passion fruit juice, but they plan to eventually expand into mango, pineapple and other tropical juices.

A concern that arises is that the commercial processing interest is focused on passion fruit, while project interest, particularly CAAP, is focused on soursop. Although the project's focus may be correct, perhaps it would be wise to reassess it in light of what is happening in the commercial area.

The AIFLD program initially involved growing blackberries, raspberries and other pulp fruit in the Perez Zeledon area, to be pulped, bulk frozen and sold on the local market. Based on this experience, a decision will be made at a later date as to exports.

2. INDUSTRIAL TOMATOES

This is a CAAP project that was designed in support of a proposed tomato processing plant in Guanacaste, planned by a group of Italian investors. CAAP is being assisted by an Israel technician as part of the US/Israeli Cooperative Agreement.

It involves research on the appropriate growing areas, varieties and cultural practices.

The past season was the first for any commercial size production, with one producer of ten Ha. and fifteen small producers of less than 1 Ha. each, for a total of 20 Ha. The yields of 30 to 40 MT per Ha. were in line with reported yields in many other tropical locations, but about half of what is normally expected for a good commercial operation.

Costa Rica now imports \$2,000,000 of tomato paste, and has several small plants, as well as the Gerber plant, capable of processing tomatoes. There may be an opportunity for at least partial import substitution. But unless the yields can be improved, given the ferociously competitive nature of the international tomato market, this should be reassessed as an export project.

3. OTHER

CAAP is experimenting with fresh raspberries and blackberries, with assistance from PROEXAG. This is designed to be an additional crop for the strawberry growers.

In addition, they are experimenting with hot peppers for processing.

IV. REVIEW OF IMPLEMENTATION PROJECTS

The USAID-CR nontraditional export strategy has been a success due to the solid, effective work of the implementing organizations; CAAP, FEDECOOP/ACDI, Agrarian Union and the Northern Zone Consolidation Project. And this effective work is a reflection of the unusually high quality of the personnel involved, and the good judgement consistently exhibited by their managers.

In addition to the USAID-supported organizations listed above, two Costa Rican government organizations are involved in supporting NTAE's. CENPRO has had an export-promotion program since the 1960's, and MAG has just developed a new initiative in 1989 to assist in export-oriented crops. During the last few days of our consultancy, CENPRO and CAAP reached an agreement for CAAP to absorb their agricultural export promotion activities, but the details of this agreement were not available.

Schedule IV (P 106) shows a list of the organizations involved in supporting NTAE in Costa Rica, and the services they provide. Schedule V (P 107) lists the products on which each of these organizations are focused.

Since CINDE/CAAP became operational in 1986 they have concentrated in crop research through UCR and CATIE and in production technical assistance. They've also done some excellent work in transportation. This year they have become more deeply involved in post harvest technical assistance, and are developing marketing and investment promotion programs.

Training is executed through CINDE's PROCAP section, and foreign investment promotion through CINDE/PIE.

The Northern Zone has supported pilot projects in cocoa, black pepper and ginger during Phase I. The major NTAE effort will be in phase II, starting later this year, which will bring close to another 4,600 Ha. under cultivation. The total project is expected to stimulate planting a total of 13,000 Ha. of NTAE crops, either directly or indirectly.

Cenpro's most effective capabilities are in organizing trade fairs and in accessing European technical assistance. They have a computerized library and information center, which AID is supporting with a 3,000,000 COL grant for upgrading. They provide exporters with one-stop shopping for information and access to ministries.

The U.S.-Israeli Cooperative Agreement is providing two technicians for work in industrial tomatoes, and in mangoes and avocados. They report to CAAP and MAG respectively.

The ACDI group is made up of the Coffee Diversification Project, managed by FEDECOOP and assisted by ACDI, which diversified over 1,100 Ha. of marginal coffee land into more suitable export crops. This was succeeded by the new CO-OP Organizational Strengthening Project which will assist in strengthening the management and marketing capability of both coops and producer organizations. They will continue the diversification effort.

ACDI also managed the very effective Farmer to Farmer Program which provides volunteer technical assistance.

The Agrarian Union has had a very successful program with yucca and other root crop exports, and is starting to diversify into other crop areas. In their technical assistance program

they function as intermediaries, locating the appropriate assistance for the task at hand. This could be from CATIE, UCR, CAAP, expatriate, etc.

MAG is starting a new program establishing national priorities by crop, and are narrowing their activities to focus on these specific crops. This should enable them to have a greater impact. The identified NTAE crops are on Schedule V, P 107. They have established an office for external marketing assistance which will work closely with CENPRO and CAAP.

CATIE and the University of Costa Rica have assisted with research, and PROEXAG has worked very effectively with CAAP, providing valuable assistance in the asparagus, melon and raspberry/blackberry programs.

Although there is a similarity in services provided by these organizations, and in their focus crops, there was no evidence of wasteful duplication. Needs are too great compared with the resources being deployed. It would be a mistake to rigidly coordinate or reorganize these activities as central planning is more apt to weaken their overall effectiveness.

However, it would be useful to have a forum, where the managers of all the projects could meet on a regular basis, discuss what they are doing, and exchange ideas. This would tend to encourage cooperative efforts to evolve. This should include all groups involved in NTAE projects, whether USAID supported or not. As a result, consideration should be given to limiting it to the Tico managers of each project. This should be kept simple and could take the form of a coordinating committee, with the only staff required a full-time secretary.

SCHEDULE IV

Organizations Involved in Supporting NTAE's in Costa Rica

CINDE/CAAP

Crop Research
Technical Assistance
 - Production
 - Post Harvest
Marketing Assistance
Investment Promotion
Training

NORTHERN ZONE PROJECT

Producer Organization
Technical Assistance
 - Production
 - Post Harvest

MAG

Technical Assistance
 - Production
Marketing Assistance
Producer Organization

U.S.-ISRAELI Cooperative Agreement

Crop Research
Technical Assistance
 - Production

ACDI GROUP

Crop Research
Credit
Technical Assistance
 - Production
 - Post Harvest
Marketing Assistance
Producer Organization
Training

AGRARIAN UNION

Technical Assistance
 - Production
 - Post Harvest
Grower Organization
Marketing Assistance

CENPRO

Technical Assistance *
 - Production
 - Post Harvest
 - Marketing
Marketing Assistance

Support is also received from research activity at CATIE and the University of Costa Rica, and assistance from PROEXAG, ROCAP Regional Agricultural Export Promotion Project.

* CENPRO has access to European technical assistance through arrangements with the United Nations and CCI.

SCHEDULE V

CAAP

Macadamia
Ornamental Plants
Blackberry-Raspberry
Asparagus
Strawberry
Flowers
Mango
Cocoa
Papaya
Melon
Industrial Tomatoes
Black Pepper

AIFLD

Roots and Tubers
Pineapple
Melon
Tropical Fruit Juices, Pulps and
Concentrates
Raspberry-Blackberry Pulp
Jalapeno Peppers

MAG

Mango
Black Pepper
Naranja
Roots and Tubers
Cocoa
Pineapple
Macadamia
Heart of Palm
Oil Palm
Aquaculture
Ornamental Plants

U.S.-Israeli Cooperative Agreement

Industrial Tomatoes
Mango
Avocado

ACDI

Macadamia
Cocoa
Black Pepper
Tropical Fruit Juices, Pulps and
Concentrates

Northern Zone

Cocoa
Black Pepper
Ornamental Plants
Macadamia
Star Fruit
Passion Fruit
Vanilla
Palm Heart

CENPRO

Flowers
Palm Heart
Chayote
Roots and Tubers
Tropical Fruit Juices, Pulps and
Concentrates
Pineapple
Mango
Naranja
Other Citrus
Macadamia
Strawberry
Melon
Papaya
Black Pepper
Cardamom
Asparagus
Mushrooms
Achiote
Squash
Cucumber
Cashew
Ginger

A. CINDE/CAAP

CAAP is the primary implementing agency for USAID/CR's nontraditional agriculture export assistance. CAAP was created as a subdivision of CINDE in August, 1985. In November, 1985, a full board began meetings and in May of 1986, CAAP began functioning as an institution. The idea behind CAAP's programs was to become a technical, catalytic base from which specific, focused programs could grow and mature. CAAP, in itself, did not intend to ever be self sustaining but, rather, aspired to build self-sustaining programs and economic ventures.

It was established with four basic goals:

1. To conduct policy dialogue between the public and private sectors on agricultural issues
2. To promote the export marketing of nontraditional crops
3. To promote the investment in horticultural crop exports
4. To administer a small fund for pilot projects

Until CAAP was founded, there had not been a concerted focus on the nontraditional agricultural export commodity potential of the country, although some work in this area had been done at a technical level, including that of ICAFE and the University of Costa Rica on cocoa, strawberries and several other crops. Consequently, CAAP started its efforts in three main areas. These were:

1. developing a policy dialogue to improve the comparative advantage of nontraditional crops
2. developing a sound basis for each commodity area in technical, processing and marketing terms.
3. providing support for potential investors, both national and foreign, that wish to invest in nontraditional crops.

CAAP began its work by drawing up a list of some 130 crops suggested by a broad cross section of experienced Costa Rican agriculturists. This list was later reduced to 21, after preliminary staff work on potential market demand, the possibility of their being grown successfully, and an estimate of

Costa Rica's comparative advantage in their production. International Research Institute, a consulting company was contracted in 1986, for further evaluation of both the appropriateness and the market potential for these products in the U.S., Europe and Japan.

In mid-1987, using the information that IRI provided, CAAP selected an initial list of six commodities for further in-depth study by the staff and other outside experts. Agreements were made with the National Chamber of Agriculture and Agroindustry (CNNA), the Coffee Institute (ICAFE) and CATIE, a regional research institute, to collect technical and market data on the products selected. From this short list, three products, flowers, ornamental plants and strawberries, were selected by CAAP to comprise the first operational programs of the organization.

As stated, in designing its program, CAAP began a series of meetings with a wide range of producers/processors/exporter groups in late 1985 and early 1986. The purpose of these meetings was to determine the potential commodities that it should sponsor, and to identify any operational problems that they might encounter. These meetings included the National Agricultural Chamber, large and small producers, the formal associations of producers. Among those were ACOFLOR, representing the cut flower producers, COOPE-PLANT, the association of ornamental plant growers, ICAFE, which had been conducting studies on the production of strawberries and macadamia, COOPEFRESA, the association of producers of strawberries, the University of Costa Rica, etc.

These initial discussions pinpointed various problems or issues that were potential deterrents to the expanded investment and production of the identified commodities. Using this preliminary information, coupled with their own personal experiences, the CAAP board established a set of priority issues for immediate attention. They then requested that in-depth studies be developed by their technical staff in cooperation with

the producers, the CNNA, and outside experts.

Concurrently, using both its staff and outside experts, CAAP began to study a group of constraints that were identified as obstacles to the development of perishable, nontraditional crops. Several of these problem areas involved specific laws, that were evaluated in terms of their impact on exports. At an early date, it was determined that the National Chamber of Agriculture would be the most effective lead institution for assisting CAAP in lobbying the government of Costa Rica, and especially Congress, to make the required changes in these laws. This was to be supported with the establishment of a data bank within the Chamber and funded through CINDE.

There are two major kinds of constraints that CAP addressed in order to serve its agricultural clientele. The first type of constraint is considered a general constraint. This is one which effects, in a very real manner, the comparative advantage or investment climate of producers, processors or exporters, individually or as a group, for a group of commodities. An example of this type of general constraint could be a tax on exports, a transport problem, cumbersome export documentation procedures that delay the export of products, importing country regulations, credit availability, etc. This type of constraint generally requires changes in public policies, laws, regulations or systems. These, in turn, require lobbying, changing public opinion, Congressional action, etc.

The second type of problem that CAAP addresses in promoting exports are specific constraints. These usually effect the comparative advantage of a specific commodity in production terms. They might include a problem such as the lack of knowledge as to the best commercial variety of the crop, a disease problem or lack of packing facilities, or inadequate market information concerning the importing country. Normally, the specific constraints are dealt with through adaptive research or through the advice gained by the use of outside consultants.

One of the most successful lobbying attempts was CAAP's work on the air transport problem, in collaboration with other agencies and groups in the private sector. In their initial studies, it had quickly become apparent, that in order to increase exports of ornamentals, strawberries and other perishable crops, that LACSA, the national airline, would have to increase its number of daily flights. In 1985, LACSA had only two daily flights on which cargo could be transported. At times, they would even cancel these without notice. Frequently, the perishables would remain on the runway, in the hot sun, for several hours. This led to a high degree of losses. The industry felt that the existing situation was a major bottleneck in expanding exports and requested the assistance of CAAP.

CAAP determined that they did not have adequate technical expertise on their staff to undertake an analysis of the problem. They contracted the assistance of the Senior Executive Corps to identify a specialist in the air transport field to assist them in analyzing the situation and in making the appropriate recommendations. A Mr. Stevens, having many years of experience with Pan American Airlines (retired), came to Costa Rica in late 1986, reviewed the situation, and made a series of recommendations to the council. They reviewed his suggestions and developed an approach for addressing the deficiencies that had been identified.

Meetings were held in mid-1986 between CAAP and the Chamber, where a joint strategy was developed. This included informing the public of the effects of the lack of air cargo space on production, the potential for expanding the number of rural jobs that might be generated, and its effects on the balance of payments if the situation were to be corrected. It also included meetings with the President, Congressional representatives, officials of LACSA, board members of the Civil Aviation Administration, the Minister of Agriculture, the Minister of Trade, the affected producer groups, and other influential individuals. As a result of these events, a number of improvements in the situation have been achieved. The number

of cargo flights has increased from two to 28 per week, the Congress has passed an Open Sky policy, resulting in there being two new airlines offering scheduled service to the country. The Ministry of Trade has opened an air shipment office at the airport. The documentation to export perishables has also been streamlined.

The work in air transport, however, was not completed. The amount of cargo space was still inadequate and the airlines, at times, still canceled flights, leaving produce to rot or significantly deteriorate. There was inadequate infrastructure at the airport to handle the volume of produce that moves by air and there was almost no cold storage facilities to hold produce until it could be loaded onto airplanes. As a result, CAAP undertook an additional study, using an outside expert, and developed a plan for further improvement of the cargo terminal at the San Jose airport. This was done at the request of the Civil Aeronautics Administration. This plan, approved in 1988, has two main goals to be completed before the end of 1989.

1. Completion of the infrastructure construction work programmed in the agreement and

2. Improvement and reorganization of the cargo terminal administration.

(See Appendix A for further details.)

Other CAAP activities in the generation of exports have been through building the structural basis for exports through crop research studies, formation of product steering committees, specific lobbying projects, technical field assistance, and specific product research.

The focus has been on the technical side of production. Improvement in yields and the identification of adaptive varieties in key areas in which they had worked. The reasoning was that , unless these production issues are resolved, it would be very risky to make recommendations for domestic and foreign investors.

From CAAP's inception, they have been reluctant to promote investment in new, nontraditional products without knowing clearly the ramifications of their recommendations. They realize that very few of the products with market potential have been grown for any extended period, and there were few practical recommendations that could be provided to potential investors. They did not want to make recommendations on the basis of experience in other countries because of different conditions, limited Costa Rican labor experiences with these crops, different pest problems and the different cost and transport situations that might exist. To make recommendations and have investors fail, they felt would seriously decrease the credibility of CAAP in the future, and reduce other investment possibilities and be counterproductive to their goals.

CAAP determines the type and importance of specific problems as a result of the studies that are carried out on each commodity that they consider supporting. These studies, in turn, identify the major constraints on the basis of the market requirements needed to compete (eg., quality of the product, form in terms of size, shape and color); on the basis of profitability to the producer and processor; on the basis of the value added that may accrue from processing the product into another form, and the status of the producers organization. This is important in order to provide technical assistance and to build a base for those involved in carrying on after the CAAP terminates.

All of the in-depth studies done so far have had the assistance of commodity experts from the U.S. This assistance has permitted the staff to identify constraints in terms of both U.S. trade and competition from other producing countries, as well as the internal problems facing producers. These studies also summarize the major constraints in terms of their impact on the ability of the producers to meet market conditions in the importing country as well as the problems that must be addressed to make the product competitive and profitable for the grower, processor and exporter.

With the report of the CAAP staff or consultant already prepared, CAAP determines the best procedure to follow in order to overcome the major constraints identified. Often this involves applied research.

The applied research is carried out by signing cooperative contracts with an appropriate national institution or producer group. In most cases, this will involve the University of Costa Rica, the ICAFE and, in some cases, CATIE.

The strawberry program is illustrative of a case in which CAAP has served in a unique and catalytic role. Four organizations joined CAAP in its leadership of a program which has so far served as a catalyst in the successful development of this industry. They started by generating a technical study by U.S. specialists. This study, and the field trips by the specialists, were instrumental in providing focused technical approach to be carried out by the strawberry committee's technical and investigative people.

Training is primarily done through CINDE/PROCAP, and a recent agreement has been reached with CINDE/PIE on their role in foreign investment promotion. PROCAP often works independently of CAAP and there is a need for better coordination between the two units. The PIE foreign investment promotion program will be discussed further later in this report;

Although CAAP has been in operation for less than three years, it has developed a reputation for being able to pinpoint constraints to the expansion of nontraditional exports. CAAP has been extremely effective in developing sound strategies for addressing each issue under which it has worked. It has mobilized the public sector, promoted farmer pressure groups and has drawn national agricultural and agroindustrial chamber into the dialogue. Due to their effectiveness, CAAP is now sought out by other groups to lend credibility to other issues that agricultural sector groups are facing.

CAAP has become a major spokesman for the nontraditional agricultural sector of the country. In this it is fulfilling an important role and there is no other agency in the country in a position to take its place.

Major new initiatives now coming on stream include a revitalized foreign and domestic investment promotion program and an export promotion and marketing assistance program.

The revitalized investment promotion program, particularly for foreign investors, has exciting potential.

In the United States there has been a sea change in the attitude of the agribusiness community towards Central America. Five years ago, mainstream agricultural companies (outside of the fruit companies) exhibited no interest in the Caribbean region. Today, some of these same companies look towards Central America as the wave of the future, particularly for perishables. Each year, larger numbers of agribusiness representatives are criss-crossing the region, in search of opportunities. This is particularly true of those based in Florida and California.

PIE's European office has already discovered a very strong interest in Costa Rica and, under the previous program had organized 25 agribusiness itineraries. (See Appendix C) A major constraint for these Europeans has been transport, which will be discussed later.

Another source of considerable investment may be Colombia. Ecuador's recent growth in flower exports has been fueled by solid, experienced growers who wanted to escape the turmoil and danger of Colombia. These growers have also evidenced interest in Costa Rica and have already made investments in three firms. The timing may be right for a focused campaign, although we understand the concern about the possibility of attracting drug smugglers.

Costa Rica has a lot to sell. The comfort investors feel due to the political stability, democracy and literacy will more than justify the higher labor costs.

As part of this program, PIE will be hiring an additional representative, with agribusiness experience, to be based in Miami, and to be responsible for the southeast U.S. Their other regional reps have been committed to dedicating 20% of their time to agribusiness. PIE is adjusting their Bonus Compensation Formula to make agribusiness more attractive.

PIE's approach to identifying potential investors is orderly and comprehensive and will get the results they want. However, in order to orient their representatives to allow them to focus in more quickly, and to better understand some of the problems they may face, they should consider using experts in the various targeted agricultural sectors involved, for briefings. Even the agribusiness specialist in Miami will most likely be experienced in only one of the targeted agribusiness sectors, and they all tend to be different.

The previous attempt at promoting foreign agribusiness investment failed for a variety of reasons. But, the managers of CAAP and PIE are now determined to make it work and have agreed to a sound program. However, this program involves split responsibility between CAAP and PIE, and with split responsibility, it becomes difficult to hold managers accountable. Without accountability, programs tend to falter. This program will require a substantial amount of teamwork and cooperation. The PIE reps cannot operate effectively without support and direction from CAAP; and CAAP can find itself continuously frustrated by a lack of responsiveness on the part of the PIE representatives. They have addressed this concern by designating a full-time coordinator between CAAP and PIE. However, there is no one in authority with personal responsibility for the success of the project to whom the two units are answerable.

In a worst-case scenario, unforeseen problems arise and the program falters. There is mutual recriminations but there is no pressure point forcing them to solve the problem, and the program drifts.

Foreign agribusiness investment can provide such significant social and economic benefits that USAID should again emphasize foreign investment as a key component of its strategy, and its progress highlighted as part of a USAID management information and control system. In addition, even though part of the work is delegated, CAAP should still have primary responsibility for foreign investment. This means that they would have the responsibility, in the event that the PIE program isn't working, to take action to correct the problem.

The Export Promotion and Marketing Assistance Program is a major initiative now being both designed and implemented, concurrently, by CAAP, and as a result the details are in constant flux.

This type of program can also make a significant contribution to Costa Rica's future. However, in our review of the plan that has been developed to date, and in interviews with the various CAAP executives, we have come to the conclusion that the Export Promotion Program is highly theoretical; has not been adequately thought through; is not "market-driven," that is, responsive to real, clearly defined needs of the exporting community; and is the subject of a substantial amount of confusion, and has been an unsettling influence within CAAP.

For the sake of illustration, two examples are the Miami office and the proposed European office.

The Miami office was opened eight months ago. There is, to this point, often very different interpretations of what his responsibilities are. Some of his early goals were supposed to be to take the "ombudsman role" to help in difficulties on shipment arrivals in south Florida, to act as a go-between the

shippers and the receivers, and also to look for new potential buyers or brokers for them. However, when the consultants went into the field, none of the participants in the CAAP program that were interviewed, including program managers, understood that this was his job. Some of them had had problems, which the Miami office possibly could have helped with, but they didn't realize that this help was available. Most thought the Miami office was for investment promotion only, others had no idea what it was for. In discussing this with CAAP management, it was said that, in fact, his job description was not finally arrived at until just recently; that they had some problems in developing it because of questions of association with PIE, etc.

Another example is the problem of expanding exports to Europe. As best as can be determined, Costa Rica's NTAE perishable exports to Europe is somewhere in the neighborhood of \$5,000,000, mostly in ornamentals, and that mostly produced by companies with European investors. The shippers the consultants spoke with were very interested in expanding their European business, but universally complained about the lack of transport, both air and sea. Attempts that they had made with transfers in Miami to Europe did not to work well.

In the meantime, PIE's representative in Europe found substantial initial interest in investing in Costa Rica. In fact, they were able to put together 25 itineraries. (Visits by prospective investors to Costa Rica.) However, invariably, the investors backed off because of concerns about the inadequacy of the transport.

CAAP's response to this is to implement a new, expensive export promotion office in Europe to stimulate interest in Costa Rican products, primarily perishables. In other words, they are developing a substantial response to solve what isn't a problem.

In the meantime, there is no focused program on solving the transportation problem for Europe, which is the central constraint for the expansion of exports to Europe. What

transportation efforts are being made are primarily designed towards the United States, or are infrastructural such as the changes in the airport. No one has taken the time to put together the pieces of the puzzle.

While the Export Promotion Program is a valuable, long-term project, there is no crisis that requires its immediate implementation. There is the time available to design and slowly implement a meaningful program in response to real needs.

First, it is important that the design team take time to do its homework. This has not been done. We all know how difficult it is for public or quasi-public institutions to change, or extricate themselves from, weak programs. This is particularly true in a service area where it is difficult to quantify the real results of a program.

There is a need for market research, defining exactly who CAAP's client base is by product, and exactly what kind of services are actually needed. This has not been done. The program must avoid theoretical generalities and be demand-driven to be successful. There is a wide diversity of products involved, all with their own particular demands. It is important to consider how these various needs can be woven together into one, overall program.

The program must be designed with input from a cross section of potential clients (exporters). This should be a team program, with clearly defined common objectives, and should involve the CAAP program managers. Currently, the program is being developed in isolation from both the program managers and the exporters. The design team has approached the design from the viewpoint that the shippers lack the sophistication and vision to understand what was needed, that they would design the program and, once it was working, the shippers would come to appreciate its value. What resulted was a design in a vacuum, without a clear understanding of either the demands of the export market, or the real needs of the potential clients, the exporters.

There should be some sharing of costs immediately, in the appropriate programs, to keep the programs on a sensible level. If exporters can't afford to pay something, they shouldn't be exporting. And if the program isn't perceived to be worth a contribution on their part, it should be reconsidered. We think it is foolhardy and dangerous to think that the reason the exporters are not supporting a program is the fact that they lack the sophistication to understand its benefits. We suppose on occasion and to some extent, this could be true, but more often in a real, dollar and cents world, the program really isn't worth anything and is perceived by the potential clients as just another theoretical bureaucratic exercise.

The program should be a cooperative effort with the agribusiness community, similar in tone to the excellent technical assistance program now in force. This program was designed after extensive consultation with producers and agriculturists in Costa Rica. It was a sensible program, and that the exporters appreciated its value is evidenced by the respect in which CAAP is now held by a broad range of growers and exporters. Even the larger firms that did not use CAAP's services spoke highly of their capability.

The program must work at being an integral part of the export community. Costa Rican agribusiness has changed over the past few years, and is poised to change radically over the next few years. The leadership will come from an increasingly dynamic private sector and if this program is not properly integrated into it, CAAP will find itself always a step behind, forever solving yesterday's problem. A paternalistic approach will only tend to attract the weaker elements in the community, and cause an erosion of credibility with the more competent exporters.

FEPROEXAAH (Phase I) in Honduras and FEDEXPOR in Ecuador are just two examples of where an elaborate marketing assistance system totally lacked credibility with the agribusiness community, due in large part to poorly thought through programs and a highly paternalistic approach.

The program should be focused and disciplined. The design team should identify those elements which are going to have serious, meaningful impact on exports, and organize available resources for their successful support. Again, the experience of the less successful export promotion agencies was that they were continually squandering resources, particularly management time, on trivial activities due to a real lack of understanding of what was important, and what they were ultimately trying to accomplish.

Outside technical assistance should be used to brief the team on just how the markets function, and to assist them in more intelligently designing the support system. This should involve persons with a good grasp of strategic marketing concepts.

And, finally, the design team must take into consideration, as we discussed in the earlier section, that Costa Rican exporters will be operating in a ferociously competitive environment and will need good organization, and programs of intelligence and substance.

In summary, the export promotion program has the potential for making a very valuable contribution to Costa Rican NTAE. However, there is not a critical, immediate need for it. There is time to design something that is market-driven and to slowly begin to build it, piece by piece, in response to real needs.

The danger is not just the waste of money on ineffective programs, but also the distraction of management time away from more important issues, the unsettling influence on the rest of the organization and, most important, the loss of respect and credibility with CAAP's potential clients, that a poor program can engender.

NOTE: The description of the organization and early activities of CAAP were drawn from the CINDE/CAAP evaluation prepared by CHECCHI and Co., May 1988.

A summary of CAAP's 1989 programs and budget is contained in
APPENDIX G.

B. NORTHERN ZONE CONSOLIDATION PROJECT

In July, 1983, USAID authorized the Northern Zone Infrastructure Development Project, the predecessor to the Northern Zone Consolidation project. This project, which terminated on September 30, 1988, concentrated on upgrading roads (over 100 kilometers), settling new families (over 700 families), providing land titles to farmers (about 1,000 titles), implementing community social infrastructure projects (over 85 projects), creating community development associations (over 20 associations), and undertaking studies and pilot projects to identify future public and private sector investment in the project area.

Its affect on nontraditional agricultural exports was substantial.

Prior to the effective startup of the project in 1984, the UPALA-GATUSO region had 1,000 Ha. of cocoa and 20 Ha. of ornamentals under cultivation. This was the entire amount of NTAE's being cultivated in the region. During phase one of the Northern Zone Project, between 1984 and 1988, pilot projects of 200 Ha. of cocoa, 30 Ha. of black pepper and 10 Ha. of ginger were implemented, using PL480 money.

In addition, the following activities took place without direct USAID project technical assistance or financing, but as a direct result of the infrastructure put into place with AID support.

Cocoa	750 Ha.*	
Black Pepper	25 Ha.	
Ornamentals	250 Ha.	
Macadamia	450 Ha.	
Passion Fruit	150 Ha.	
Pineapple	250 Ha.	
Cardamom	150 Ha.	* Includes 250 Ha.
Palm Heart	<u>250 Ha.</u>	on ADA settlements
Total	2,225 Ha.	

The Northern Zone Consolidation Project, the successor to this project, focuses primarily on the nontraditional sector. It has five components: 1) crop production diversification, 2) road maintenance and rehabilitation, 3) community development, 4) development of farmer land settlements and titling and 5) project administration and monitoring.

The diversification of crop production will be achieved by supporting commercial production of crops for which markets have already been identified and, though on a small scale, are being produced in the project area. Such crops include: cocoa, palm heart, passion fruit, macadamia and black pepper.

This component provides a limited amount of funding to complement existing credit sources to promote the production of nontraditional crops. This money will be channeled to producers through the area banking system. This activity will be supported by technical assistance to orient producers in production, harvesting and, in some cases, processing techniques for crops with which they have limited experience.

Listed below the targeted hectarage, estimated number of participating farmers, credit and technical assistance required for each crop. These promotional targets do not represent the potential for the target area, but rather the minimum area per crop which is required to achieve a development momentum, provide a basis for commercial marketing, or similar objectives. The design team determined that there was sufficient interest from the farmers, provided that basic production inputs and technical as well as financial support were available, to meet or exceed the promotion targets.

	<u>Target Ha.</u>	<u>Est. " Participating Farmers</u>
Cocoa	2,500	1,000
Palm Heart	1,000	650
Passion Fruit	500	250
Macadamia	500	370
Black Pepper	<u>100</u>	<u>130</u>
Total	4,600	2,400

The project will contract a full-time agronomist and a full-time assistant who, in consultation with the AID council advisor, will coordinate and approve the use of project funds to provide technical assistance to participating farmers, and promote groups of participating farmers. Technical assistance and production, post-harvest techniques and marketing will be provided on a crop-specific basis under contract. Efforts will be made by the team to assure that production technology packages already available from institutions such as Co-op San Carlos, Co-op Naranjo, MAG, POP, POTIEA, IICA, but which may require minor adaptive on-farm research, are utilized and technology transferred to the participating farmers. The budget also provides funds for contracting specialized short-term technical assistance from other sources such as major processors, farmer organizations and growers, within and outside the project zone, with already established market linkages.

Training activities will be offered by the same institutions providing the technical assistance and will be coordinated by the project team. Particular attention will be given to the use of pesticides and other chemicals.

Seven crops, vanilla, annatto, soursop, starfruit, ginger, ornamental plants and ramie, have been identified as having sufficient production potential to warrant consideration by the

project. These crops, however, will require a more detailed set of production and marketing potential studies before actual production is initiated. The project will fund studies for the purposes of: a) determining with greater accuracy the possibility of expanding these crops to commercial levels and b) generating needed economic feasibility information for promotion with financial institutions. Again, these pilot projects will work closely with existing institutions to make sure there is no duplication in studies and other implementation work.

Pilot projects are now planned as follows:

Cocoa (Injertos)	100 Ha.
Ornamentals	50 Ha.
Vanilla	50 Ha.
Soursop	100 Ha.
Starfruit	<u>50 Ha.</u>
Total	350 Ha.

In addition, during the 1989 - 1993 period, it is expected that the following product will be planted, as a result of project activities, including infrastructure and information gained from production or pilot projects, but not with direct project technical assistance. The anticipated levels are:

Cocoa	1,500 Ha.
Palm Hearts	1,500 Ha.
Macadamia	1,000 Ha.
Passion Fruit	600 Ha.
Black Pepper	100 Ha.
Pineapple	500 Ha.
Ornamentals	200 Ha.
Soursop	500 Ha.
Vanilla,	
Ginger, etc.	<u>100 Ha.</u>
Total	6,000 Ha.

This project is due to start in 1989, and much of the planned product needs time to fully mature (up to nine years, in the case of macadamia), so there will be a delay before the

full impact is felt in export sales. However, when at full maturity, these crops should have an export sales value of over \$40,000,000.

The consultants found that the quality of personnel working in the project, and the planning that has gone into its implementation to be excellent. At this point there is no apparent reason why they would not reach expected goals in the implementation.

C. ACDI GROUP

The projects involved with this group are the Coffee Technification and Diversification Project, which was started in 1985, and its successor, the Co-operative Development Services of Costa Rica Project, which was signed in May of 1989. Concurrent with this was USAID Costa Rica's participation in the ACDI Farmer-to Farmer Program, which made a relatively minor, but very useful contribution in support of the major projects.

The Coffee Technification and Diversification Project started in response to the discovery of coffee rust in Costa Rica in December of 1983. With coffee rust, the producers were faced with not just another pest which lowered yields, but instead with a disease that, under the right ecological conditions and if not controlled, was capable of virtually eliminating the entire population of coffee plantations.

The project had two purposes: the first, technification, consisted of raising the level of technology employed in growing coffee and the second, diversification, involved the substitution of marginally productive coffee plantations, located in areas which are not ecologically suited for coffee production, with other crops that are more adapted to those conditions. It is this diversification component which is playing an important role in increasing Costa Rica's nontraditional agricultural exports. The project was carried out by the Federation of Co-operatives of Coffee Growers, R.L. (FEDECOOP), with ACDI (Agricultural Co-operatives Development International) in an advisory role. FEDECOOP membership now accounts for half the coffee production in Costa Rica.

The project consisted of four main components.

1. Project coordination
2. Applied technology
3. Technical assistance
4. Credit

1. The project coordination component provided the overall direction for the various activities that were carried out by the project.
2. The applied technology component identified crops and existing technology for diversification activities.
3. The technical assistance component provided technical information and direct assistance in the field to FEDECOOP farmers in crop diversification. FEDECOOP kept 24 agronomists and 52 para-technicians working in the areas of both coffee and crop diversification.
4. The credit component contained \$3,000,000 in local currency available for loans to participating farmers at 18%, earmarked for nontraditionals, as part of the crop diversification program. The money was received at the 1984 exchange rate of 50 colones per dollar.

1,500 Ha. were targeted for diversification under the program. At the windup of the project, 1,170 Ha. had been put into diversified nontraditional agricultural crops. See SCHEDULE below. The goal was not reached partially by the decapitalization of the \$3,000,000 loan fund that took place with the rapidly rising inflation in Costa Rica over this period of time.

Diversification of Marginal Coffee Land

Crops	Ha.
Macadamia	901
Cocoa	189
Cardamon	41
Aguacate	23
Soursop	<u>15</u>
Total	1,169

The primary diversification effort was in macadamia, which will be discussed later. Macadamia will also be at the forefront of the diversification that takes place under Phase II, the Co-

operative Development Services Project, which started in 1989.

Cocoa was also to be a major effort. However, after problems with clones supplied by CATIE, and with the low and continuously falling market price, FEDECOOP has decided to put the cocoa program on hold. The source of the problem with clones is still undetermined. The San Carlos Co-op, which did the planting, claims they were sterile. CATIE, which supplied the plant material, claims that the reason for the very low yields was poor cultural practices. FEDECOOP has decided to wait until the technical problems are ironed out, and the world market price begins to show some strength before proceeding with the program.

In 1988, 15 Ha. of soursop was planted as part of a pilot program. This will be sold to the processing plants. Soursop for processing is also being pursued by CAAP, and a pilot program is to be put into place by the Northern Zone Consolidation Project. Plans are also to experiment with passion fruit. Again, this would be a product sold to processing plants.

There are two new fruit processing plants in the San Carlos area. One is Tico Fruit, which started up about a year ago, and the other is Frutas y Sabores, which has been troubled with startup problems, but is expected to be operating in the near future. Both plants will be running substantially under capacity and are interested in helping to develop alternative crops. The main production crop for each plant will be orange juice concentrate. The plants primary alternative interest right now is in passion fruit.

The new project, the "Co-operative Development Services for Costa Rica," which was signed on April 1 of 1989, is scheduled to run through 1992. It is the successor to the Coffee Technification and Diversification Project. This project will continue the diversification work of the Coffee Technification and Diversification Program with FEDECOOP, and will assist in the strengthening of co-op management and marketing for both the

coffee cooperatives and other export-oriented cooperatives that make requests. This service will target cooperatives which are involved in exporting nontraditional agricultural products. It will create a team of advisors with a mix of skills and the flexibility to focus on critical areas of need, and ACDI will assure that the resources invested in cooperatives will have a lasting stabilizing effect. This component of the project is aimed at cooperatives which are past the startup phase and need to consolidate their operations, assuring good performance in all technical areas such as accounting, production, purchasing, inventory, member relationships, etc. Important elements in this assistance will include training activities for management, employees, and boards of directors.

In addition, the project will provide a range of services for fledgling export-oriented cooperatives, defined as those under five years old. Cooperatives targeted for this assistance will also be those involved in exporting nontraditional items. ACDI will include umbrella organizations in this definition of fledgling cooperatives.

And, finally, the program will also work with nontraditional agricultural export commodity associations, to help strengthen the management and to consolidate the industry groups. It is anticipated, in this regard, that they will coordinate their activities with CAAP.

This project addresses a very critical need, in support of the nontraditional exporters expanding into an increasingly competitive environment.

The farmer to farmer program involves ACDI identification of working U.S. farmers to provide technical assistance on a voluntary basis. Three field visits have been made to date, with excellent results.

Macadamia has been, and will continue to be, the main product promoted under the diversification component. FEDECOOP

anticipates planting an additional 1,500 Ha. of macadamia before 1993, in marginal coffee lands. This will be done at the rate of 375 Ha. per year.

In addition, FEDECOOP is studying the feasibility of installing three processing plants, one in San Carlos, one in Turrialba and one in San Vito and a packaging plant in Canton de Fleures, Heredia Province, in the industrial zone near the San Jose airport.

The macadamia will involve 800 new producers, and it is estimated that by 1991 it will be possible to obtain a total of 237 metric tons of macadamia in shell, and by the year 2000, it will reach a volume of 6,500 to 10,000 metric tons.

FEDECOOP reported interest on the part of a number of companies in the United States, Europe, Japan, Korea and Australia in a joint venture of some type with the co-op on the sales of the macadamia nuts. FEDECOOP feels that it is the logical channel for sales based on its experience and procedures gained in the coffee business. Blue Diamond, McFarm and Mauna Loa have all offered technical and financial assistance in a joint venture. Macadamia de Costa Rica, S.A., which has its own processing plant already installed and operating, was also interested in an association with FEDECOOP. A number of studies have pointed to the probable success of Macadamia in Costa Rica.

D. THE AGRARIAN UNION

This project involves a grant to the American Institute for Free Labor Development (AIFLD) to assist the Costa Rican National Confederation of Workers (CNT). The project includes a program of strengthening agricultural unions, credit, developing the institutional and financial capacity as well as the self sufficiency of the CNT and its agricultural department.

The program enlarges the delivery system for agricultural services established under a previous project, providing technical assistance, training, credit and marketing services for five agrarian unions of the CNT. The project operates in Upala, Pocosol, Pital, Sarapiquí, Turrialba, Parrita, Guanacaste and Perez Zeledon.

The project provides technical assistance with the aim of providing farmer groups and farmer affiliates with resources that will help them to graduate from subsistence and/or production level economy to a market-oriented economy.

This technical assistance is provided in cooperation with the various institutions and agricultural input distributors through formal and/or informal arrangements. The program acts only to locate and coordinate the provision of this assistance. For example, they will:

- cooperate with research organizations and distributors for on-farm demonstration plots and visitation programs.
- coordinate collaborative studies between the University of Costa Rica, MAG, and CATIE and faculty and project site areas.
- coordinate research, thesis and scholarship programs for students with specific crops.
- provide local and overseas training in cooperation with CINDE/CAAP and other USAID programs.
- obtain access to foreign publications regarding cultural practices for specific commodities.

The technical assistance program is run by an agronomist, and each project site has one paratechnician.

In addition, the project provides agricultural marketing services, such as assistance in developing basic marketing infrastructure and in the identification and selection of secure markets. The program is implementing an innovative concept of intermediation between limited resource farmers and agribusiness. Agricultural production from affiliated farmers is collected, graded, processed, packaged and stored at program-financed or private agribusiness assembly centers prior to being transported to predetermined markets with purchase contract. The centers are also utilized as central distribution points for agricultural inputs, consumer staples and union organization activities.

Marketing activities are carried out by a marketing director with a field coordinator, a secretary and a paratechnician in each project area. Marketing personnel coordinate with the technical assistance personnel in identifying and selecting site areas, crops, programming planting periods and other related functions.

To date, the project has had its greatest success with roots and tubers, primarily yucca. This program was started in Pital in 1986. By 1987, its sales were \$50,000 and in 1988, it was up to \$150,000. Their success in this area has prompted a group of growers in Upala to ask for their assistance. By the end of 1989, they anticipate shipping at the rate of up to five 40-foot containers a week from Upala, Pocosol, Pital and Sarapiquí. This will be worth \$625,000 on FOB farm.

Nicoa has been the marketing agent for the project to date, and the project is now negotiating with Del Monte to become an alternate or additional sales channel. The project's preferred method is to work with established exporters, selling them on an FOB-Costa Rica basis. Once they have had what they feel is sufficient experience, they may attempt to market some of their

products directly. The project forecasts export sales, FOB-farm, for the roots and tubers portion of the project at \$1,750,000 annually by 1991. The market has been extremely strong, Costa Rican exports expanding from \$3,200,000 to \$8,500,000 in 1988

In 1988/89, the project experimented with melons, in Parrita. Here they were working with 28 small growers, on 15 Ha. The melons were sold under contract to Del Monte. Although they encountered some start up problems, they were generally very happy with the operation, and are expanding it to 40 Ha. next year. In addition, they're going to begin a pilot operation of 15 Ha. in Guanacaste for the coming season.

The project has also started programs in pineapple, pulp fruits, and jalapenos. (SEE APPENDIX F) In pineapples, although their main emphasis will be on the smooth Cayenne (yellow) pineapple, they are also working with Chiquita on the export of the local variety of pineapple, the Montelirio Verde, to Europe. Two container loads were recently sent, as a result of a taste test conducted on some air-freighted samples. If the reception to the two containers is positive, there will be an expansion in this business.

The fruit pulp area is going to include berries, passion fruit and soursop. They anticipate working closely with CAAP on the technology. This product will all be designed to go into processing. The jalapenos are an experiment with Del Campo.

Although many of the products are now on a trial basis, the outlook looks reasonable strong. The management of the project is aggressive and where products don't work out, they have the flexibility to move into other areas. It would probably be well if they coordinated their efforts on types of products being promoted with the work being done by CAAP.

E. MANAGEMENT INFORMATION AND CONTROL

The Scope of Work asked that the consultants address the issue of USAID information and control systems vis-a-vis the strategy components. The question asked was, "What types of information should USAID/CR receive, in order to properly monitor these activities?" This is an extremely important management issue, however, time did not permit a detailed review and the consultants can only answer this in general terms.

In the private sector, although it varies substantially from company to company, decentralized systems seem to be generally in vogue. The theory is to give subsidiary management total freedom to run their business, within some predetermined financial parameters and measure them strictly on quantifiable results. In practice, though, it's more complicated.

This type of approach will work for USAID/CR commodity-specific programs, involving the Agrarian Union, ACDI, or the Northern Zone and, to a lesser extent, CAAP; and for certain service projects, such as investment promotion, transportation expansion, etc.

The decision to proceed with a commodity or manufacturing process, is usually based on judgement, applied to an accumulation of facts and analyses. This is usually in the form of a formal feasibility study. It is this information that forms the basis for the manager's and/or USAID's decision to proceed, and it should then become the base data from which to measure the progress and success of the activity. For example, if certain quantifiable results were to be achieved in two years, the reports should include the actual results, compared to those forecasted at the time of project approval, along with explanations for significant variations.

USAID/CR understands that there must necessarily be some failure if growth and progress is to be achieved, and has taken a risk-tolerant approach to new product initiatives. However,

decisions to proceed must, in all cases, be based on a thorough understanding of the risks, costs, and potential benefits involved, and once implemented, the success or lack thereof, must be monitored.

This needn't be burdensome or complicated. In fact, the simpler, the better. There are certain key accomplishments USAID is looking for in the project, as was outlined in their strategy paper. This is: a) export sales value, b) employment generation and c) investment generation. Since these accomplishments are also the *raison d'etre* of the individual projects, it behooves management of the project to maintain very current, accurate information concerning these. This information should be compared against target, and reported to USAID at least monthly, along with a brief, written narrative. One critical point, is that it is essential that this information be developed and maintained in a form that allows it to be verified through audit, and that the audit can and should be done as part of the project evaluation. Monies expended are also of interest to USAID, but have not been included in this since USAID has already mandated control procedures in effect.

However, many projects provide very valuable services for which you can measure activities but not the final results; this includes training, information services, etc. These should be considered tools to accomplish the end result, which is the increase in export sales, employment and investment. It isn't necessary, in fact it would be self defeating, to attempt to itemize the activities, i.e., the number of training programs, the number of seminars, the number of trips to the United States for study, the number of contacts made, etc. Too often, organizations tend to focus on these activities as ends in themselves, rather than on what the activities are ultimately expected to accomplish. These activities may or may not have been effective. The manager has end results he is trying to accomplish, and these are merely tools (over which he should have control). The information reported should show how well all of his activities came together to produce the final result.

An exception to this would be the type of projects mentioned earlier, such as investment promotion and transportation expansion. The end results of these would be increased exports and employment, but there would be valuable, hard, intermediate data available, such as, dollar value of investments made, or a measurement of additional cargo space generated. It would certainly be appropriate to include these results in the monthly report.

In closing, it is important to remember that if the results cannot be quantified in an objective way, that can be subjected to audit, everyone involved in the preparation and review of the material would be wasting their time.

V. LIST OF APPENDICES

- APPENDIX A - CINDE/CAAP Air Cargo Terminal Program
- APPENDIX B - CINDE/CAAP National Flower Program, by Variety
- APPENDIX C - CINDE/PIE European Agro-Sector Investor Itineraries
- APPENDIX D - Maps of the Northern Zone Projects
- APPENDIX E - Cooperative Development Services Project
Implementation Plan
- APPENDIX F - Agrarian Union General Statistics
- APPENDIX G - CINDE/CAAP 1989 Budget
- APPENDIX H - NZCP Project Budget
- APPENDIX I - Cooperative Development Services Budget
- APPENDIX J - Agrarian Union Project Budget

10. AIR CARGO TERMINAL PROGRAM

A. Date Approved: January 1989

B. Program's Description

One of the major constraints to the expansion of non-traditional perishable exports has been the lack of adequate air cargo terminal facilities and a well organized administration of those facilities. The Dirección General de Aviación Civil approached CAAP for assistance in both areas.

This program was approved in 1988 for:

- US\$35,000	NETS
- ₡9,000,000	P.L. 480

Extensive delays were encountered in finalizing the agreement between CINDE/Ministerio de Hacienda/Consejo Técnico de Aviación Civil/MOPT which are the main institutions which play a role in air cargo at the Juan Santamaría Airport. The agreement was finally signed November 28, 1988. Plans for terminal remodeling are now nearly ready and will be put out to bid in January. CAAP is talking with the Miami Airport Authority to see if they can make available a Spanish speaking air cargo expert to assist in the reorganization of the terminal administration.

The interesting part of this program is that it was initiated by a request from the Dirección General de Aviación Civil. The agreement to reorganize the terminal administration is a key point to facilitating the flow of exports. In addition CAAP has included in the agenda of issues to review and resolve, the problem of delayed departures of air cargo planes. This has affected the quality of exports significantly in the past.

As expected, this is a program which has cross cutting impact on all Costa Rican perishable exports.

The main goals of the 1989 program are:

1. Completion of the infrastructure construction work programmed in the agreement
2. Improvement and reorganization of the cargo terminal administration

C. Budget 1989

- | | |
|--------------|---|
| - US\$35,000 | NETS |
| - ¢9,000,000 | CINDE/CAAP |
| - ¢1,400,000 | Counterpart from Dirección General de
Aviación Civil - MAG/Ministerio de
Hacienda |

FLORICULTURA NACIONAL

FLORES TRADICIONALES (1)

CRISANTEMOS
ROSA
CLAVEL - ESTANDAR Y MINIATURA
CAMPANILLA
CANTARERO
C. JARDIN
MORFONTO

FLORES TROPICALES (2)

ANILONUM
QUE DELE PANDILO
GENERA
HELECONIAS
MORACIAS
ORQUIDEAS
CIBIA

NUEVAS ESPECIES
Y VARIEDADES (3)

CALLA LILIA
FRANCIA
CANTARERO
CIBIA
CIBIA
ORQUIDEAS
MORFONTO
MORFONTO
MORFONTO

- (1) LA QUE HA SIDO TRABAJANDO MAS INTENSAMENTE LA INDUSTRIA Y SUBSECTOR EN LA QUE EL PROGRAMA ENDESA LA ACTIVIDAD.
- (2) NUEVA FLORICULTURA. SE INICIO EL PROCESO PARA DESARROLLAR EL PAQUE DE TECNOLOGIA QUE ATIENDA ESTE SUBSECTOR.
- (3) ESPECIES Y VARIEDADES QUE HAN DE INVESTIGARSE PARA ADAPTARSE A LAS CONDICIONES AGRICOLAS DEL PAIS. ESTA RAMA DE LA FLORICULTURA NO HA RECIBIDO LA ATENCION DEL PROGRAMA. JUNTO A ESA INVESTIGACION SE IMPONE LA NECESIDAD DE INVESTIGAR LA FLORA NATIVA PARA TRANSFERIR EN UN PLAZO DE UN AÑO A LA INDUSTRIA POR LO MENOS 1 ESPECIE CUYA FLOR TENGA CARACTERISTICAS COMERCIALES.

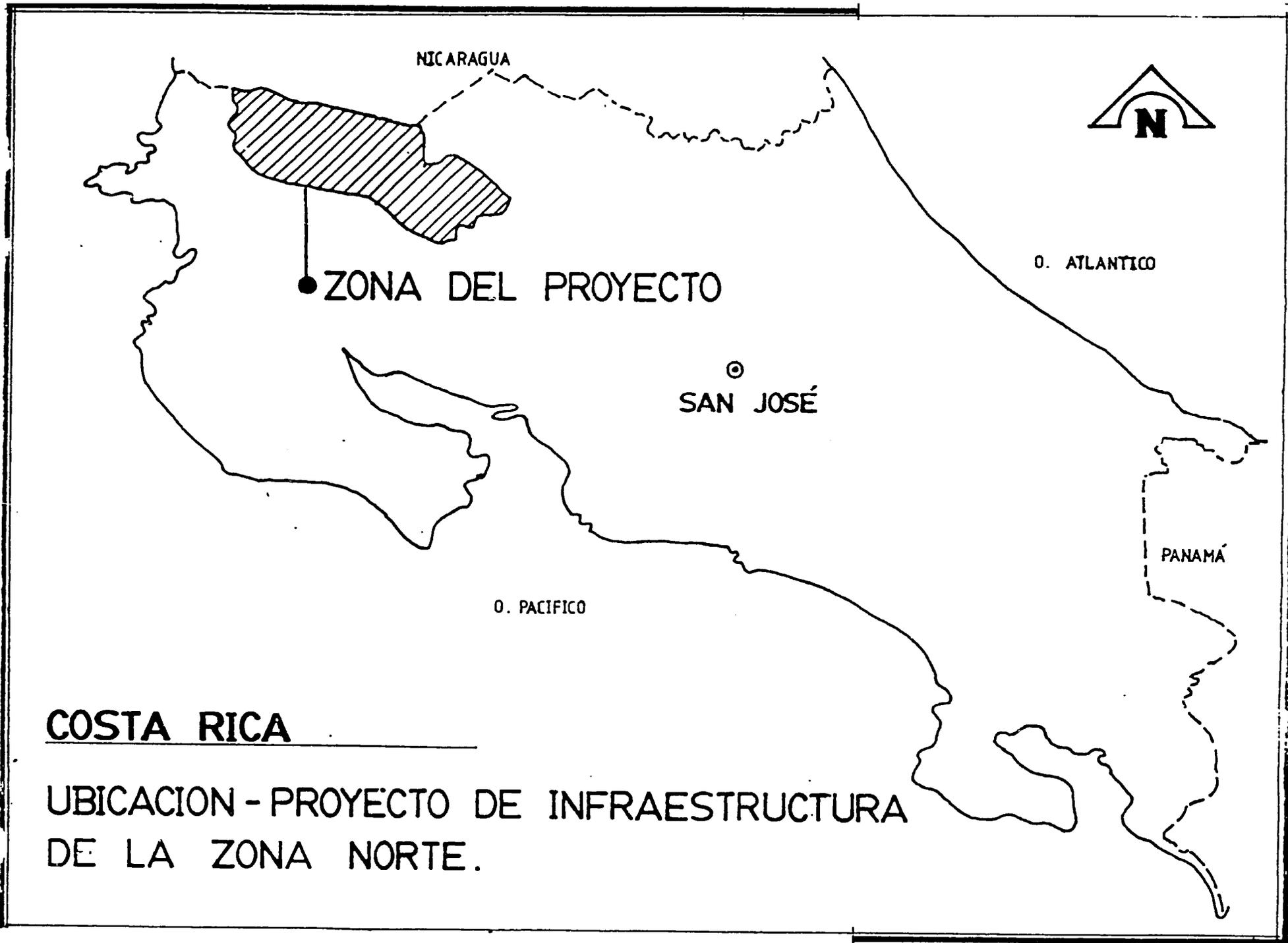
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APPENDIX C

CINDE-THE HAGUE (NETHERLANDS)
AGRO SECTOR ITINERARIES

Regional Director: Mr. Francisco Oreamuno
 Investment Officer: Ms. María Emilia Chaves
 Investment Assistant: Mrs. Lucía Gross

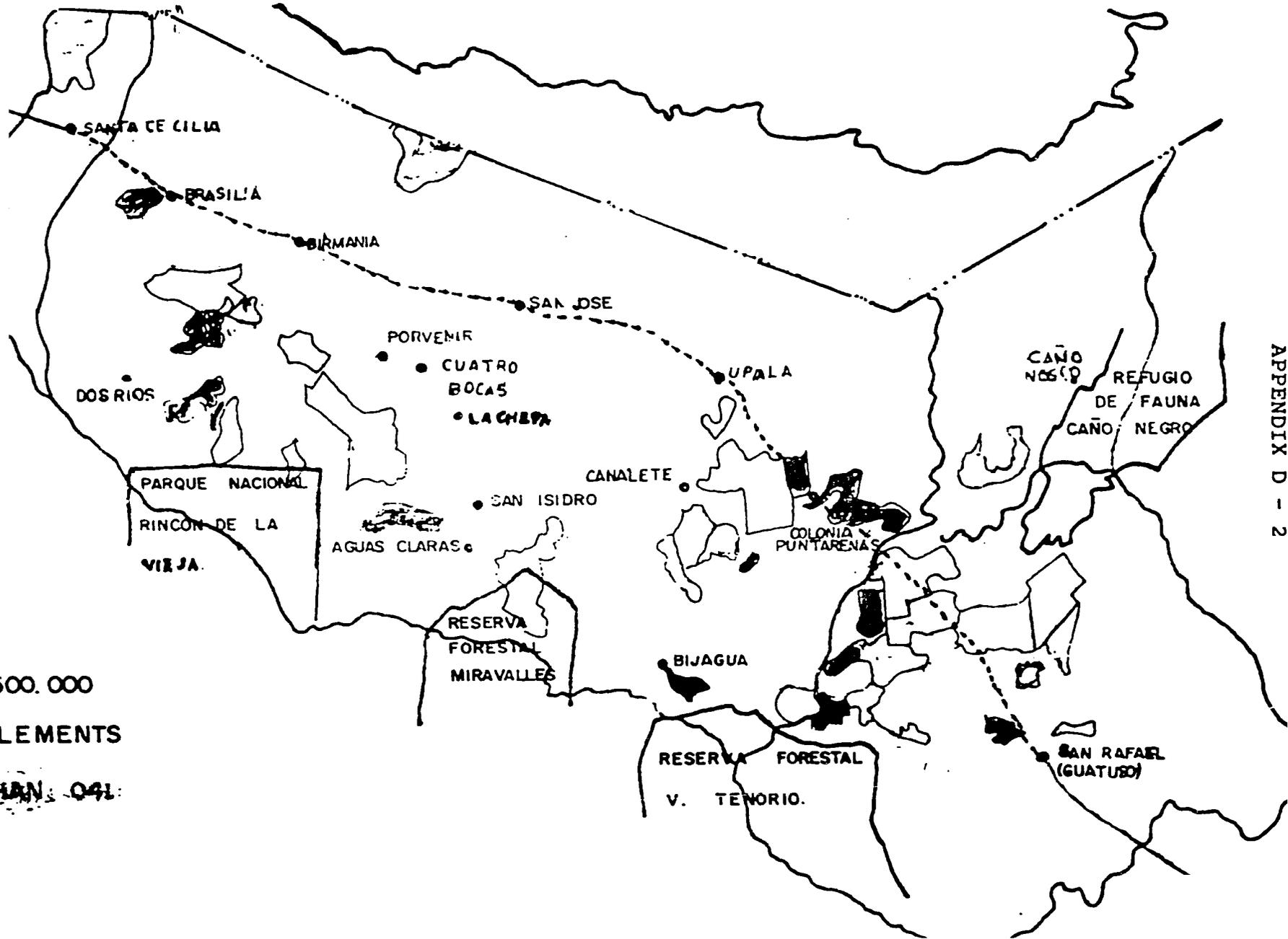
PRODUCT/ACTIVITY	NUMBER OF PROJECTS	COUNTRY
Ornamental Plants	1	Belgium
	7	Holland
Fruits	1	Belgium
	1	Holland
Flowers	2	France
	2	Holland
Flower Bulbs and Seeds	3	Holland
	1	France
Biotechnology	2	Holland
Agribusiness	1	SW
	1	Denmark
	1	Norway
	2	Belgium



COSTA RICA

UBICACION - PROYECTO DE INFRAESTRUCTURA
DE LA ZONA NORTE.

AGRICULTURAL SETTLEMENTS.

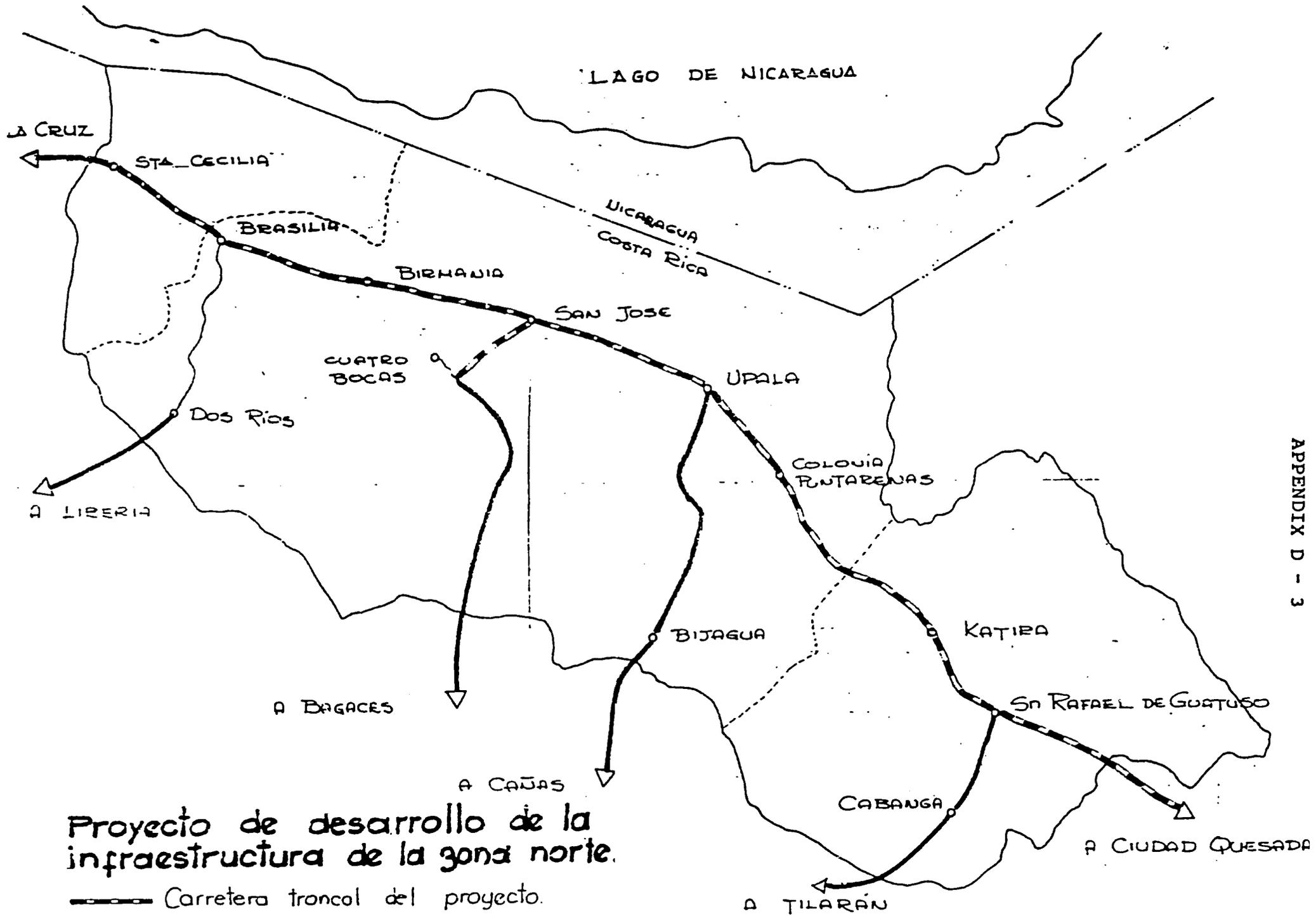


SCALE 1: 500.000

■ 041 SETTLEMENTS

□ OTHERS THAN 041

ROU'c 4



Proyecto de desarrollo de la infraestructura de la zona norte.

- — — Carretera troncal del proyecto.
- — — Accesos existentes al área del proyecto



09
R

Credit Services to FEDECOOP

Diagnostic/Feasibility/Action Document Assistance to NTAE Cooperatives

Training in Marketing for Cooperative Staffs

Management Training for Boards and Managers

Organizational and Management Assistance to Umbrella Associations

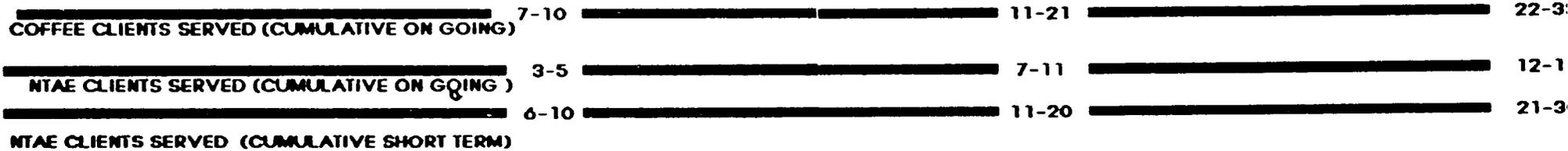
Identification of New Crops and Markets

Coordination and Collaboration with UNIEANC and Other CDOs

Mid-term Evaluation

Wrap up Project

Final Report



GENERAL STATISTICS
AIFLD OPG 515-0226
AGRARIAN SERVICES AND UNION STRENGTHENING

COMMODITIES/ZONES	GROWTH PROJECTIONS/ TRAILERS EXPORTED			SALES/DOLLARS FOB TO FARM UNIONS			EMPLOYMENT FARM LEVEL			GENERATION PLANT LEVEL		
	1989	1990	1991	1989	1990	1991	1989	1990	1991	1989	1990	1991
ROOTS & TUBERS												
UPALA	50	100	150	125,000	250,000	375,000	100	200	300	25	50	75
POCOSOL	50	100	150	125,000	250,000	375,000	100	200	300	25	50	75
PITAL	100	150	200	250,000	375,000	500,000	200	300	400	50	75	100
SARAPIQUI	50	100	150	125,000	250,000	375,000	100	200	300	25	50	75
TURRIALBA	-	25	50		62,500	125,000		50	100		13	25
TOTALS	250	475	700	625,000	1,187,500	1,750,000	500	950	1,400	125	238	350
PINEAPPLE (YELLOW)												
UPALA		10	50		25,000	125,000		20	100		10	25
POCOSOL		10	50		25,000	125,000		20	100		10	25
PITAL	10	50	200	25,000	125,000	500,000	20	100	400	10	25	50
SARAPIQUI		10	50		25,000	125,000		20	100		10	25
TOTALS	10	80	350	25,000	200,000	875,000	20	160	700	10	55	125
MELONS												
PARRITA	14	40	80	42,000	120,000	240,000	28	80	160	20	40	80
GUANACASTE		15	40		45,000	120,000		30	80		20	40
TOTALS		55	120	42,000	165,000	360,000	28	110	240	20	60	120
PULP FRUITS												
PEREZ ZELEDON	10	30	50	100,000	300,000	500,000	30	90	150	10	30	50
JALEPENOS												
PARRITA	3	10	25	30,000	100,000	250,000	15	50	75	7	25	35

NOTE: SALES ARE FROM FARM UNIONS/CNT TO EXISTING LOCAL AGRO-BUSINESSES WHO EXPORT THE CNT MARKETING DEPARTMENT PROJECTS DIRECT EXPORTS IN 1990

APPENDIX F

APPENDIX G - 1

BUDGET SUMMARY 1989-CAAP/CINDE PROGRAM

<u>Program</u>	<u>(\$)</u>	<u>Source (s)</u>	<u>(¢)</u>	<u>Source (s)</u>
1. Laboratory (UCR)	30,000	NETS	2,225,000 3,600,000	CINDE/CAAP MOU UCR Counterpart
2. Macadamia	18,000	NETS	6,143,000	CINDE/CAAP MOU
3. Ornamental Plants	72,000	NETS	11,600,000 2,500,000 3,300,000	CINDE/CAAP MOU CNAA Support UCR Counterpart
4. Blackberry-Raspberry	-	-	2,217,000	CINDE/CAAP MOU
5. Asparagus	11,800	NETS	6,482,000 1,332,000 2,179,924	CINDE/CAAP MOU CNAA Support UCR Counterpart
6. Agricultural Brochure	35,000	NETS	1,682,000	CINDE/CAAP MOU
7. Strawberry	34,750	NETS	8,371,000 2,250,000 2,085,500 1,191,000	CINDE/CAAP MOU CNAA Support UCR Counterpart ICAPE Support
8. Mango	1,300	NETS	6,749,600 1,228,600 105,000 1,587,200	CINDE/CAAP MOU PINDECO Support OIRSA Support growers Support
9. Cacao	13,400	NETS	10,715,000	CINDE/CAAP MOU
10. Air cargo Terminal Improvements	35,000	NETS	9,000,000 1,400,000	CINDE/CAAP MOU DGAC/MAG/Ministerio de Hacienda Counterpart
11. Difusión de Nuevas Tecnologías	-	-	1,362,000 3,194,000	CINDE/CAAP MOU UCR Counterpart
12. Papaya	-	-	4,227,400 1,380,047	CINDE/CAAP MOU PINDECO Support
13. Investment Promotion	-	-	13,850,000	CINDE/CAAP MOU

APPENDIX G - 2

<u>Program</u>	<u>(\$)</u> Source (s)		<u>(¢)</u> Source (s)	
14. CAAP/CNAA	-	-	11,016,056	CINDE/CAAP MOU
15. Melon	24,150	NETS	3,000,000	CINDE/CAAP MOU
16. Industrial Tomato	3,000	NETS	3,033,000	CINDE/CAAP MOU
17. Black Pepper	-	-	10,000,000	CINDE/CAAP MOU
18. Flowers	75,000	NETS	9,200,000	CINDE/CAAP MOU

	<u>(\$)</u>
<u>NETS:</u>	\$353,400
	(¢)
CINDE/CAAP MOU:	120,873,056
UCR Counterpart:	13,359,424
CNNA Support:	6,082,000
ICAFE Support:	1,191,000
PINDECO Support:	2,608,647
OIRSA Support:	105,000
DGAC/MAG/Minist.	1,400,000
Mango Growers Support	1,587,200
<u>TOTAL</u>	¢147,206,327

0027x/tml

APPENDIX H - 1

The proposed dollar budget is for \$5.150 million in USAID dollar resources.

The total local currency budget provided through the ESF stabilization program will be \$14.11 million in local currency equivalent. In addition \$0.38 million in local currency equivalent will be contributed by various community development associations in the project area.

NORTHERN ZONE CONSOLIDATION PROJECT BUDGET

	G.O.C.R. COUNTERPART (Colones)	A.I.D GRAND (Dollars)
I. Crop Diversification	343,000,000	1,000,000
II. Road Maintenance	340,500,000	1,665,000
III. Community Development	158,000,000	150,000
IV. Land Settlement & Titling	91,000,000	100,000
V. Coordination & Monitoring	125,000,000	350,000
VI. AID Project Advisor	0	630,000
VII. Environmental Specialist	0	1,255,000
TOTAL	C 1,058,000,000	\$5,150,000

(C,1,058,000,000 is the equivalent of \$14.11 million at a rate of C75/ to 1\$. Note that as exchange rate changes the dollar value will also change; however, since the counter-part budget has been developed based on colon costs, only the colon figure is important.)

counter-part budget has been developed based on colon cost, only the colon figure is important.)

15.1 million (approx)

NORTHERN ZONE CONSOLIDATION PROJECT BUDGET

	G.O.C.R. COUNTERPART (Colones)	A.I.D. GRANT (Dollars)
1 Crop Diversification		
A) Technical Assistance	343,000,000 ✓	1,000,000
B) Training	50,700,000 ✓	500,000
C) Pilot Projects	10,000,000 ✓	170,000
D) Credit	20,000,000 ✓	-
E) Studies	200,000,000 ✓	-
F) Administration	5,000,000 ✓	-
G) Land Use Maps	17,950,000 ✓	74,000
H) Contingencies	-	106,000
	39,350,000 ✓	100,000
2 Road Maintenance		
A) Rehabilitation	→ 1,340,500,000 ✓	1,665,000
B) Maintenance	193,720,000 ✓	107,000
C) Tools	38,750,000 ✓	30,000
D) Equipment	4,632,000 ✓	-
E) Rural Census	-	1,160,000
F) Support to MOP	5,000,000 ✓	-
G) O&M Operating Costs	26,156,000 ✓	-
H) O&M Construction	24,525,000 ✓	-
I) Technical Assistance	7,480,000 ✓	-
J) Contingencies	10,000,000 ✓	159,000
	30,187,000 ✓	200,000
3 Community Development		
A) Community Projects	158,000,000 ✓	150,000
B) Equipment	62,500,000 ✓	75,000
C) Personnel	2,600,000 ✓	-
D) Operating Costs	29,500,000 ✓	-
E) Housing Credit	8,600,000 ✓	50,000
F) Contingencies	40,000,000 ✓	-
	14,800,000 ✓	25,000
4 Land Settlement & Titling		
A) Titling	→ 21,000,000 ✓	100,000
B) New Settlements	5,000,000 ✓	-
C) Reforestation	57,500,000 ✓	100,000
D) Contingencies	12,000,000 ✓	-
	17,000,000 ✓	-

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APPENDIX H - 3

	G.O.C.R. COUNTERPART (Colones)	A.I.D. GRANT (Dollars)
Coordination & Monitoring	125,000,000	350,000
A) Personnel	63,100,000	-
B) Contract Services	14,500,000	-
C) Equipment	5,800,000	-
D) Information Activities	3,900,000	-
E) Operating Costs	24,700,000	-
F) Support Fund	-	280,000
G) Audits and Assessments	-	70,000
H) Contingencies	13,000,000	-
AID Project Advisor	0	630,000
A) Contract Costs	-	519,100
B) Official Vehicle	-	50,900
C) Contingencies	0	60,000
Environmental Specialist	0	1,255,000
A) Contract Costs	-	519,100
B) Official Vehicle	-	50,900
C) Local Assistant	-	40,000
D) Support Fund	-	585,000
E) Contingencies	-	60,000
TOTAL	21,058,000,000 ✓	\$5,150,000

(\$14.11 million equivalent
 275/\$. Note that as exchange rate
 changes the dollar value will also
 change; however, since the counter-
 part budget has been developed based
 on colon costs, only the colon
 figure is important.)

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Cooperative Development Services for Costa Rica

Table 1A. 1989-1991 Budget Summary

BREAKDOWN BETWEEN DOLLARS AND LOCAL CURRENCY

	1989	1990	1991	TOTAL	----BREAKDOWN----	
					DOLLARS	COLONS BY DOLLAR AMT
1. Salaries	\$73,600	\$77,280	\$81,144	\$232,024	\$232,024	\$0
A. Coop Dev Mktg Spec. 75%	\$35,100	\$36,855	\$38,698	\$110,653	\$110,653	\$0
B. Coffee Credit Spec. 100%	\$38,500	\$40,425	\$42,446	\$121,371	\$121,371	\$0
2. Payroll added costs	\$14,220	\$17,064	\$20,476	\$51,760	\$51,760	\$0
A. Coop Dev Marketing Spec.	\$7,020	\$8,424	\$10,108	\$25,552	\$25,552	\$0
B. Coffee Credit Spec.	\$7,200	\$8,640	\$10,368	\$26,208	\$26,208	\$0
3. Allowances	\$27,475	\$28,709	\$34,191	\$90,375	\$87,875	\$2,500
A. Housing	\$24,675	\$25,909	\$27,204	\$77,788	\$77,788	\$0
B. TQA	\$0	\$0	\$5,187	\$5,187	\$5,187	\$0
C. Ed/Ed travel	\$800	\$800	\$800	\$2,400	\$2,400	\$0
D. Other	\$2,000	\$2,000	\$1,000	\$5,000	\$2,500	\$2,500
4. Transport	\$2,000	\$0	\$5,000	\$7,000	\$7,000	\$0
A. Air Freight	\$2,000	\$0	\$2,000	\$4,000	\$4,000	\$0
B. POV	\$0	\$0	\$3,000	\$3,000	\$3,000	\$0
5. Travel	\$8,378	\$5,293	\$9,835	\$23,506	\$14,503	\$9,003
A. In Country	\$2,720	\$2,992	\$3,291	\$9,003	\$0	\$9,003
B. ACDI	\$1,200	\$1,300	\$1,400	\$3,900	\$3,900	\$0
C. In Lat America	\$858	\$1,001	\$1,144	\$3,003	\$3,003	\$0
D. Home Leave	\$3,600	\$0	\$4,000	\$7,600	\$7,600	\$0
E. In U.S.	\$0	\$0	\$0	\$0	\$0	\$0
6. Per diem	\$11,564	\$12,490	\$13,446	\$37,500	\$17,500	\$20,000
A. ACDI superv.	\$1,400	\$1,500	\$1,600	\$4,500	\$4,500	\$0
B. In country	\$9,196	\$9,990	\$10,814	\$30,000	\$10,000	\$20,000
C. In Lat America	\$968	\$1,000	\$1,032	\$3,000	\$3,000	\$0
D. In U.S.	\$0	\$0	\$0	\$0	\$0	\$0
7. Commodities	\$23,677	\$1,179	\$737	\$25,593	\$2,600	\$22,993
A. Vehicle	\$10,000	\$0	\$0	\$10,000	\$0	\$10,000
B. Office furniture	\$3,168	\$634	\$190	\$3,992	\$0	\$3,992
C. Computers	\$4,909	\$545	\$547	\$6,001	\$0	\$6,001
D. Audiovisual	\$600	\$0	\$0	\$600	\$600	\$0
E. Copymachine	\$3,000	\$0	\$0	\$3,000	\$0	\$3,000
F. Telephone system	\$2,000	\$0	\$0	\$2,000	\$2,000	\$0
8. Consultants	\$0	\$8,000	\$0	\$8,000	\$8,000	\$0
A. Fees	\$0	\$0	\$0	\$0	\$0	\$0
B. Travel	\$0	\$0	\$0	\$0	\$0	\$0
C. Per diem	\$0	\$0	\$0	\$0	\$0	\$0
D. Misc.	\$0	\$0	\$0	\$0	\$0	\$0
E. Evaluation	\$0	\$8,000	\$0	\$8,000	\$8,000	\$0

Cooperative Development Services for Costa Rica

Table 1A. 1989-1991 Budget Summary

BREAKDOWN BETWEEN DOLLARS AND LOCAL CURRENCY

	1989	1990	1991	TOTAL	-----BREAKDOWN-----	
					DOLLARS	COLONS BY DOLLAR AMT
9. Training	\$0	\$0	\$0	\$0	\$0	\$0
10. Other	\$20,251	\$21,727	\$22,492	\$64,470	\$4,000	\$60,470
A. Vehicle op/ins.	\$4,444	\$4,667	\$4,889	\$14,000	\$0	\$14,000
B. Vehicle Maint.	\$3,500	\$3,733	\$3,967	\$11,200	\$0	\$11,200
C. Tel/telec.	\$3,077	\$3,333	\$3,590	\$10,000	\$3,000	\$7,000
D. Supplies	\$960	\$994	\$1,046	\$3,000	\$0	\$3,000
E. Office Space	\$7,500	\$8,000	\$8,000	\$23,500	\$0	\$23,500
F. Misc.	\$770	\$1,000	\$1,000	\$2,770	\$1,000	\$1,770
11. Local Staff	\$56,843	\$59,685	\$62,669	\$179,196	\$0	\$179,196
A. Salaries	\$41,796	\$43,886	\$46,080	\$131,762	\$0	\$131,762
1. Mgmt/cred. spec 50%	\$21,996	\$23,096	\$24,251	\$69,343	\$0	\$69,343
2. Administrative Director	\$12,000	\$12,600	\$13,230	\$37,830	\$0	\$37,830
3. Secretary	\$4,200	\$4,410	\$4,630	\$13,240	\$0	\$13,240
4. Messenger/Janitor	\$3,600	\$3,780	\$3,969	\$11,349	\$0	\$11,349
B. Payroll added costs 36%	\$15,047	\$15,799	\$16,589	\$47,435	\$0	\$47,435
12. Sub-total	\$238,008	\$231,427	\$249,990	\$719,424	\$425,262	\$294,162
13. ACDI admin 39%	\$92,823	\$90,257	\$97,496	\$280,576	\$165,852	\$114,724
14. TOTAL	\$330,831	\$321,683	\$347,486	\$1,000,000	\$591,114	\$408,886
					59%	41%

2 YR COMPOSITE

ADMINISTRATION
COMPONENT COST DISTRIBUTION

LINE ITEM	YEARS					
	1		2		TOTAL	
	USAID	COUNTERPART	USAID	COUNTERPART	USAID	COUNTERPART
SALARIES	54,200.00	0.00	47,460.00	13,500.00	101,660.00	13,500.00
COMMODITIES	7,000.00	0.00	14,000.00	0.00	21,000.00	0.00
OTHER COSTS	15,600.00	0.00	15,600.00	0.00	31,200.00	0.00
CREDIT	0.00	0.00	0.00	0.00	0.00	0.00
SEMINARS	0.00	0.00	0.00	0.00	0.00	0.00
CONSULT SER'	3,000.00	35,000.00	3,000.00	35,000.00	6,000.00	70,000.00
TOTAL	79,800.00	35,000.00	80,060.00	48,500.00	159,860.00	83,500.00

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2 YR COMPOSITE

TECHNICAL ASSISTANCE
COMPONENT COST DISTRIBUTION

LINE ITEM	1		YEARS 2		TOTAL	
	USAID	COUNTERPART	USAID	COUNTERPART	USAID	COUNTERPART
	SALARIES	40,000.00	0.00	34,940.00	0.00	74,940.00
COMMODITIES	17,000.00	0.00	6,000.00	0.00	23,000.00	0.00
OTHER COSTS	13,200.00	0.00	13,200.00	0.00	26,400.00	0.00
CREDIT	0.00	0.00	0.00	0.00	0.00	0.00
SEMINARS	6,000.00	0.00	6,000.00	0.00	12,000.00	0.00
CONSULT SER'	73,000.00	0.00	73,000.00	0.00	146,000.00	0.00
TOTAL	149,200.00	0.00	133,140.00	0.00	282,340.00	0.00

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2 YR COMPOSITE

MARKETING
COMPONENT COST DISTRIBUTION

LINE ITEM	YEARS					
	1		2		TOTAL	
	USAID	COUNTERPART	USAID	COUNTERPART	USAID	COUNTERPART
SALARIES	49,600.00	0.00	43,320.00	12,400.00	92,920.00	12,400.00
COMMODITIES	76,000.00	60,000.00	54,000.00	60,000.00	130,000.00	120,000.00
OTHER COSTS	14,400.00	0.00	14,400.00	0.00	28,800.00	0.00
CREDIT	0.00	0.00	0.00	0.00	0.00	0.00
SEMINARS	6,000.00	0.00	6,000.00	0.00	12,000.00	0.00
CONSULT SER'	3,000.00	0.00	3,000.00	0.00	6,000.00	0.00
TOTAL	149,000.00	60,000.00	120,720.00	72,400.00	269,720.00	132,400.00

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