

PDKAT207

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UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
AGENCY FOR INTERNATIONAL DEVELOPMENT
Washington, D. C. 20523

Guatemala

PROJECT PAPER

Small Farmer Coffee Improvement

AID/LAC/P-581

Project Number: 520-0381

UNCLASSIFIED

AGENCY FOR INTERNATIONAL DEVELOPMENT PROJECT DATA SHEET		1. TRANSACTION CODE <input checked="" type="checkbox"/> A = Add <input type="checkbox"/> C = Change <input type="checkbox"/> D = Delete	Amendment Number _____	DOCUMENT CODE 3
2. COUNTRY/ENTITY Guatemala		3. PROJECT NUMBER <input type="checkbox"/> 520-0381 <input type="checkbox"/>		
4. BUREAU/OFFICE LAC <input type="checkbox"/> 05 <input type="checkbox"/>		5. PROJECT TITLE (maximum 40 characters) <input type="checkbox"/> SMALL FARMER COFFEE IMPROVEMENT <input type="checkbox"/>		
6. PROJECT ASSISTANCE COMPLETION DATE (PACD) MM DD YY <input type="checkbox"/> 0 <input type="checkbox"/> 6 <input type="checkbox"/> 3 <input type="checkbox"/> 0 <input type="checkbox"/> 9 <input type="checkbox"/> 7		7. ESTIMATED DATE OF OBLIGATION (Under 'B' below, enter 1, 2, 3, or 4) A. Initial FY <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> B. Quarter <input type="checkbox"/> 4 <input type="checkbox"/> C. Final FY <input type="checkbox"/> 9 <input type="checkbox"/> 3		

8. COSTS (\$000 OR EQUIVALENT \$1 =)						
A. FUNDING SOURCE	FIRST FY 89			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total						
(Grant)	(1,120)	(1,480)	(2,600)	(3,555)	(7,445)	(11,000)
(Loan)	()	()	()	()	()	()
Other U.S.						
1.						
2.						
Host Country		121	121		14,000	13,000
Other Donor(s)						1,000
TOTALS	1,120	1,601	2,721	3,555	21,445	25,000

9. SCHEDULE OF AID FUNDING (\$000)									
A. APPROPRIATION	B. PRIMARY CODE	C. PRIMARY TECH. CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1) FN	200	079				11,000	-	11,000	-
(2)									
(3)									
(4)									
TOTALS						11,000		11,000	

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each)						11. SECONDARY PURPOSE CODE	
010	042					210, 220	
12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)							
A. Code	BF	EQY	PART	TNG			
B. Amount							

13. PROJECT PURPOSE (maximum 480 characters)

To increase small coffee farmer income by increasing production, productivity and product quality.

14. SCHEDULED EVALUATIONS				15. SOURCE/ORIGIN OF GOODS AND SERVICES			
Interim	MM YY	MM YY	Final	MM YY	<input checked="" type="checkbox"/> 000	<input type="checkbox"/> 941	<input checked="" type="checkbox"/> Local <input checked="" type="checkbox"/> Other (Specify) CACM
	04 92	10 94		04 97			

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

I certify that the methods of payment and audit plans are in compliance with the payment verification policy.

17. APPROVED BY	Signature <i>Anthony J. Gauderucci</i>	Date Signed MM DD YY <i>09/27/99</i>	18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION MM DD YY
	Title Director USAID/Guatemala		

PROJECT AUTHORIZATION

Name of Country: Guatemala
Name of Project: Small Farmer Coffee Improvement
Number of Project: 520-0381

1. Pursuant to Section 103 of the Foreign Assistance Act of 1962, as amended, I hereby authorize the Small Farmer Coffee Project for Guatemala involving planned obligations of not to exceed Eleven Million Dollars (\$11,000,000) in grant funds ("Grant") over an eight year period from date of authorization, subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to help in financing foreign exchange and local currency costs for the project. The planned life of the Small Farmer Coffee Project is eight years from the date of initial obligation.

2. The project ("Project") consists of assistance to small coffee farmers through the provision of technical assistance, training and credit. Its goal is to increase small coffee farmer income by increasing production, productivity and product quality. The Project will comprise a grant (Grant) to the Government of Guatemala (GOG) and a Cooperative Agreement with the National Association of Coffee Growers (ANACAFE).

3. The Project Agreements which may be negotiated and executed by the officer(s) to whom such authority is delegated in accordance with A.I.D. regulations and Delegations of Authority shall be subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as A.I.D. may deem appropriate.

4. a. Source and Origin of Commodities, Nationality of Services

Commodities financed by A.I.D. under the project shall have their source and origin in countries which are members of the Central American Common Market (CACM) or the United States except as A.I.D. may otherwise agree in writing. Ocean shipping financed by A.I.D. under the project shall, except as A.I.D. may otherwise agree in writing, be financed only on flag vessels of the United States.

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b. Conditions Precedent to Disbursement for Specific Activities

Prior to the first disbursement to the GOG, or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made, the GOG will, except as the parties may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D.:

- (i) an opinion of counsel acceptable to A.I.D. that this agreement has been duly authorized and/or ratified by, and executed on behalf of, the Grantee, and that it constitutes a valid and legally binding obligation of the grantee in accordance with all of its terms;
- (ii) a statement of the name of the person holding or acting in the office of the Grantee specified in Section 8.2., and of any additional representatives together with a specimen signature of each person specified in such statement.

c. Conditions Precedent to Disbursement of Credit Funds

Prior to any disbursement of credit funds under the project for the technification of small farmer coffee crops, or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made, the Government of Guatemala will, except as the parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to A.I.D.:

- (a) a plan describing steps to be taken to implement measures recommended in the Environmental Assessment, to be contracted by AID, to mitigate potentially adverse environmental impacts caused by Project activities. The Ministry of Finance will collaborate with the Project Implementing Entity in the formulation of this plan.
- (b) Trust Fund Agreement between the Ministry of Finances and the Bank of Guatemala for the transfer of no less than ONE MILLION UNITED STATES DOLLARS (US\$1,000,000), or its local currency equivalent, of AID grant funds and an amount in Quetzales no less than the equivalent of ONE MILLION FOUR HUNDRED AND EIGHTY THOUSAND UNITED STATES DOLLARS (US\$1,480,000) of local currency funds from the 1989 PL-480 Program to finance through private and public banks, credit for small coffee farmers in conformance with the terms and conditions contained in Annex 1 to the Agreement.

- (c) Operating regulations that includes the terms and conditions to administer the Trust Fund Agreement indicated in previous article (b).
- (d) Trust Fund Agreements between the Bank of Guatemala, ANACAFE and the private and public participating banks that will provide supervised credit to the small coffee producers according to the terms and conditions of Annex 1 of this Agreement.
- (e) Operating regulations that include the terms and conditions to administer the trust fund agreements indicated in previous article (d).
- (f) Prior to any transfer of Project funds to BANDESA or to the issuance by A.I.D. of documentation pursuant to which disbursement to BANDESA will be made, BANDESA will, except as the parties may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D:

A resolution of the BANDESA Board of Directors approving a plan to decentralize, in stages, the operations of the District Offices, Agencies and Cajas Rurales located in Regions I, II, VI, and VII in accordance with the actual regional distribution of the bank. This plan will include, but not be limited to, (1) an increase in the limits of loan approval authority in regional offices, Agencies and Cajas Rurales; (2) decentralization of credit analysis, delivery and administrative processes; (3) decentralization of administrative and legal loan recovery processes and procedures; and (4) decentralization of accounting and financial systems.

d. Covenants

ANACAFE shall covenant the following:

- 1. Prior to any disbursement of project funds for purposes other than the contracting of technical assistance and the procurement of project-related goods and materials, ANACAFE will, except as the Parties may otherwise agree in writing:

provide evidence, in form and substance satisfactory to A.I.D., that the project management Unit has been created within ANACAFE to assure proper functioning and coordination of the project within ANACAFE and the participating institutions;

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2. Prior to any disbursement of credit funds for the technification of small farmer coffee crops, ANACAFE shall:

- (i) reach written agreement with AID on measures recommended in the Environmental Assessment to mitigate potentially adverse environmental impacts caused by project activities.
- (ii) Provide to A.I.D., within sixty days of obligation of the funds and every year thereafter, until project termination, an annual time-phased action plan which describes all project inputs, outputs and implementation arrangements of ANACAFE, including a detailed description of its counterpart contributions including personnel and logistic support to the project.
- (iii) Assign Guatemalan professionals with appropriate technical qualifications to serve as counterparts to all project-financed consultants;
- (iv) Carry out, one year after the first disbursement is made to BANDESA, an evaluation, using GOG grant funds, to determine BANDESA's compliance with its decentralization plan. Additional disbursements will depend upon confirmation of steady progress under the plan.
- (v) Carry out an impact evaluation near the end of the project with A.I.D. grant resources included in this Agreement. The consulting firm or individuals will be selected by mutual agreement of the Parties.

e. Waivers

The following waiver to A.I.D. regulations is hereby approved:

A waiver of competition for the cooperative agreement with ANACAFE. The waiver is based on Handbook 13, Chapter 2, Section 3b which states that competition is not required for "assistance awards for which one recipient is considered to have exclusive or predominant

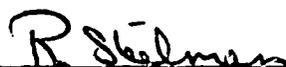
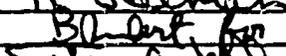
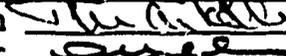
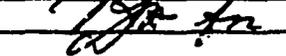
capability, based on experience, specialized facilities or technical competence, or based on an existing relationship with the cooperating country or beneficiaries."



Anthony J. Cauterucci
Director
USAID/Guatemala

Date 7/27/89

Clearances:

PDSO, RSteelman 	Date: <u>7-20-89</u>
ORD, CStraub 	Date: <u>7-20-89</u>
PRM, TKellermann 	Date: <u>7-21-89</u>
OEPA, DHoelscher 	Date: <u>7-21-89</u>
CONT, JOHill 	Date: <u>7/27</u>
ADM, LWhitlock 	Date: _____
DDIR, PEWhite 	Date: <u>7/27/89</u>

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SMALL FARMER COFFEE PROJECT
(520-0381)

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SMALL FARMER COFFEE PROJECT
(520-0381)

I. PROJECT SUMMARY AND RECOMMENDATIONS

A. Recommendations

The Project Committee recommends that \$11,000,000 in grant funds (Sec. 103) be authorized for the Small Farmer Coffee Project to be disbursed over eight years. Host country institutions will contribute an estimated \$14,000,000 for a total project cost of \$25,000,000.

It is proposed that AID funds be obligated as follows:

- \$9,325,000 through a Cooperative Agreement with the Asociación Nacional del Café (National Coffee Association), ANACAFE, which will serve as the implementing agency for the project.
- \$1,675,000 through a Project Grant Agreement with the Government of Guatemala to partially capitalize the credit fund and finance a limited amount of commodities and operating costs for participating rural offices of the National Agricultural Development Bank, BANDESA. The Ministry of Finance, Ministry of Agriculture, and ANACAFE will be signatories to the Grant Agreement.

The GOG will agree to make available the equivalent of \$9.25 million in local currency to capitalize the credit fund, to be administered through a tripartite agreement between ANACAFE, the Central Bank, and the Government of Guatemala. Four million quetzales in local currency under the 1989 PL-480 Title I Agreement have been committed as a first tranche of the Q25 million total the GOG will contribute to the credit fund. The remainder will be made available by the GOG from future PL-480 Title I funds or other Local Currency sources. ANACAFE will contribute an estimated \$3.75 million to the project, and private and public sector banks will provide an estimated \$1 million in production credit beginning in the fifth year of the project.

B. Project Summary

The potential impact of increased production and productivity of high quality coffee on the incomes of small farmers in Guatemala has become increasingly apparent over the past few years. Through the transfer of current advances in technology, combined with accessible credit resources, small coffee farmers can increase their coffee production four-or five-fold and greatly reduce their per-unit cost of production. This is to say that farmers now producing an average of seven cwt. (cwt.=100 lbs.) per manzana are capable of increasing their production to 30 cwt. through the application of relatively simple, proven technology currently inaccessible primarily because of the lack of credit and know-how. Continued strong demand for high quality coffee in international markets, and higher prices now commanded by the hard bean and specialty coffee varieties, provide major economic incentives for

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increasing the yields and production of coffee in Guatemala. Over the medium and longer term, increased coffee production and enhanced marketing capabilities can provide small farmers with a real opportunity for greater participation in commercial agricultural production, and make a significant contribution to the economic and social well-being of the rural poor.

The goal of the proposed Small Farmer Coffee Project is to increase the participation of Guatemala's rural poor in sustained, real economic growth. The project's purpose is to increase small coffee farmer income by increasing production, productivity and product quality. The project seeks to accomplish this objective through the establishment and implementation of a closely linked technical and financial assistance program for small farm coffee producers. First-round beneficiaries of the project will include approximately 8,100 (4,500 initial and 3,600 additional with credit reflows) small coffee growers selected from several regions of the country. The Association of Coffee Growers in Guatemala (ANACAFE) will be the principal Project Grantee and serve as the central institution for the administration, coordination and implementation of project activities. A project management unit in ANACAFE will be responsible for developing and implementing the training and technical assistance program. This program will be coordinated with participating financial institutions (the GOG Agricultural Development Bank and private banks) and the Ministry of Finance, the principal source of Quetzal resources for the credit fund. Extension and training plans will be based on ANACAFE's technical assistance program using Grupos de Amistad y Trabajo, and successful AID-financed coffee projects in Honduras, Costa Rica, and Ecuador. Extension personnel from the two major coffee producer cooperative federations (FEDECOCAGUA and FEDECOVERA) will be trained under the project and their individual farmer members will be eligible to participate in the project through ANACAFE's Grupos de Amistad y Trabajo.

The project's two primary components are: (1) the transfer to small farmers of a technical package and the necessary expertise for the production of high-yielding, export-grade coffee; and, (2) the establishment and operation, through the commercial banking system and the GOG Agricultural Development Bank (BANDESA), of a credit fund to finance the production and investment needs of the target group.

In order to adequately serve the 4,500 initial small coffee growers, and the subsequent 3,600 farmers to be financed with credit reflows, \$9,325,000 in grant funds will finance a significant expansion and specialization of ANACAFE's extension programs and \$1,675,000 in grant funds will support the establishment and partial capitalization of the project's credit fund. Project technicians and extension agents will be assisted by para-technicians selected from among the members of participating farmers groups to ensure technical continuity, supervision and follow-up as needed by small farmer producers participating in the project.

Under the project, \$11.75 million for small farmer investment and production credit will be channeled through selected private banks and BANDESA utilizing existing networks of rural branch offices. This effort will represent the first major involvement of Guatemalan private banks in small

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farmer lending. BANDESA will also manage a portion of the credit funds, particularly in the isolated areas of the country where it represents the only formal financial institution. Initially, it is likely that BANDESA will manage the largest portion of the loan portfolio. However, the participation of commercial banks is expected to increase during the LOP as successful experience in small farmer lending is gained. ANACAFE extension agents will pre-select creditworthy loan applicants before seeking final loan approval from the participating banks. In addition to this pre-selection and loan preparation activity, these same personnel will guide the producers in selecting the most appropriate production technologies needed to optimize yields and financial returns.

The project will also provide limited financing to construct small processing plants and to upgrade existing processing facilities following the completion of a needs assessment in the second year of the project. The project will draw on the experience of the Small Farmer Coffee Improvement Project in Honduras which is just now implementing a processing plant component after eight years of small farmer renovation credit efforts. The processing plants will be owned by individual farmers, small farmer groups or local entrepreneurs and will be conveniently located in close proximity to small farm production areas. This will enable producers to market a higher quality and higher value product, and to temporarily store the coffee to hedge for more optimum market conditions. In close coordination with the upgrading of small farmer coffee processing, the project will also undertake a pilot effort to certify and promote specialty or gourmet coffee produced by small farm coffee growers. The pilot activity will undertake a promotional campaign directed at U.S. wholesalers of speciality coffee and test the acceptability and marketability of an independent certificate that guarantees the quality of Guatemalan coffees. Although the certification program will be accessible to all producers, the project will ensure small farmer access to this certification process.

In the area of project personnel and technical assistance, the project will finance the cost of establishing a management unit in ANACAFE, including a project general manager/administrator, an assistant administrator/coordinator, a project accountant, a computer data specialist, and three clerical/secretarial support personnel. All of these positions will be long-term assignments over the eight-year life-of-project. The project will also provide for the full cost of the following three long-term advisors: an extension specialist (3 yrs.); an agricultural economist with a background in rural credit programs (4 yrs.); and a locally-hired professional to focus on specialty coffee marketing and export promotion (most probably for 5 yrs.). In addition, 38 person-months of short-term technical assistance, incorporating a variety of specialized technical skills, will be financed with project funds. Project funds will also finance equipment and materials for the project's production technology and processing component; long- and short-term participant and in-country training costs; vehicles and other equipment expenses; and a management information system for tracking project results and gathering and disseminating project data.

Guatemalan counterpart contributions will be provided from three different sources. The Government will make a contribution of \$9.25 million, derived from Pl-480 Title I local currency generations, to capitalize the major share of the project's credit fund. ANACAFE's counterpart contribution of \$3.75 million includes the cost of additional personnel and institutional support costs not financed with project grant funds. Project-related positions will include extension agents and Project Management Unit staff. ANACAFE and the beneficiaries themselves will also finance a portion of the costs related to training (per diem expenses), equipment and logistic support, and administrative assistance. Beginning in year five, private banks are expected to contribute an estimated \$1 million to finance small farmer coffee production credit.

SUMMARY COST ESTIMATE AND FINANCIAL PLAN
(U.S.\$000)

	AID	ANACAFE	GOG	PRIVATE BANKS	TOTAL
Technical Assistance	2,188				2,188
Training	1,346	455			1,801
Vehicles and Equipment	1,192	512			1,704
Operating Costs*	2,426	2,033			4,459
Credit fund	1,500		9,250	1,000	11,750
Publications	350				350
Evaluation and Audit	350				350
Inflation	1,174	474			1,648
Contingency	<u>475</u>	<u>275</u>			<u>750</u>
TOTAL:**	11,000	3,749	9,250	1,000	25,000

Notes: *Includes the following: technology transfer, management information system, Project Management Unit, and specialty coffee program for ANACAFE, and \$120,000 to support BANDESA participation. **Totals are subject to rounding error.

The Project Design Committee has determined that the project is technically, economically and environmentally sound, with the necessary capacity and development resources to fully accomplish intended project objectives.

There are no policy issues of significance related to this project. Negotiations with ANACAFE, the Government of Guatemala, and private commercial banks are well advanced and should permit a mid-1989 obligation of funds.

C. Resolution of PID Issues:

The following information responds to the issues raised during the USAID review of the Small Farmer Coffee Project Identification Document (PID) on October 14, 1988.

1. Project Justification and Relationship to Mission Strategy

The DAEC requested that the Rationale and Project Goal/Purpose section be expanded and developed to clarify the project's linkage with the Mission's Agriculture Strategy Statement, with a specific rationale for moving off the Altiplano and for providing assistance to coffee farmers rather than for crop diversification. Reference was also to be made to the socio-economic status of the target group and how the project will complement USAID's existing agricultural portfolio. These issues are addressed in Sections II.C and E; Section III.A, Project Goal, Purpose and Strategy; and the Technical Analysis.

2. Credit

The guidance indicated that credit should be extended primarily through the private sector and that BANDESA's role should be complementary at most. Given the conservatism of the Guatemalan banking system it was felt advisable to start with one private bank and, as confidence developed, encourage others to participate. The Mission is currently finalizing negotiations with BANCAFE, the private sector bank that will handle part of the project's credit funds. In addition, the Mission has planned meetings with both ANACAFE and other private sector banks that have voiced interest in the project. Any private sector bank that wishes to participate may, provided it is willing to adhere to the credit terms and conditions described in this PP. No regional monopoly will be given to any one bank as our only concern is that the participating banks can efficiently carry out the project's credit operations in whatever region they are active.

BANDESA will manage another trust fund, with close monitoring and support from the Mission, as BANDESA's outreach cannot be matched by any single private bank. As other private banks come on board, the role of BANDESA will be reviewed.

The DAEC also directed that an analysis of the private sector's interest in and ability to extend credit to the rural sector be carried out. This was to include private banks, financieras, credit unions and cooperatives. In addition, appropriate terms for interest rates, eligibility, and collateral, were to be defined. A detailed analysis was carried out and its findings are reflected in the PP (See Section III.B.2). Final details are being worked out with the GOG and participating bank with regard to interest

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rates and spread, funding mechanisms and eligibility. These terms will be formalized in a Memorandum of Understanding (MOU) signed by the participating entities. The MOU will be a CP to disbursement of the credit funds.

3. Project Design

The following DAEC recommendations have been incorporated into the Project Paper: (1) revise the purpose statement to reflect a focus on farmer income and productivity; (2) eliminate the diversification component and change the project title accordingly; (3) eliminate the elevation restriction for providing assistance to coffee farmers; and, (4) reduce proposed graduate level training for 10 ANACAFE technicians to a more reasonable number and consider third country sites in addition to U.S. pres training. (Four ANACAFE technicians will be trained to the MSc. level at either U.S. or Latin American universities.)

4. Life of Project

The Review Committee felt that the proposed four-year LCP was insufficient and should be increased to six or eight years, given the long-term assistance needed to assure proper renovation of coffee farms, institutionalize the program within ANACAFE and establish a program of private bank lending for small producer production credit. During intensive review, it was determined that eight years were needed to accomplish these objectives.

5. Other Actions

The PP was to provide a clearer definition of the target group, including selection criteria. The design committee was also to incorporate methods to assure that project benefits reached non-Spanish speaking beneficiaries. This guidance is addressed in Section III.B.1 and the Social Soundness Analysis.

6. Project Coordination

The Project Design Committee was to develop a streamlined project management system, and reevaluate the need for the proposed Steering Committee within ANACAFE. The revised project management system, described in Section III.A, comprises a Project Management Unit in ANACAFE under an advisory committee composed of the President of ANACAFE's Board of Directors, the ANACAFE Project Manager, representatives of the coffee industry and the AID project manager. The Advisory Committee will serve as the policy and decision-making body for the project. The Project Design Committee believes this to be a sufficiently streamlined and responsive structure for the project.

7. Sustainability

The Project Design Committee was to examine alternatives to assure sustained benefits from the project. The project is designed so that 5% of credit fund reflows will revert to ANACAFE to assist in maintaining the small

farmer coffee program introduced by the project. In addition, as ANACAFE's income is derived from a charge on the coffee exported, the increased exports resulting from the project will further augment ANACAFE income.

D. Project Committee

The USAID/Guatemala Project Design Committee for the Small Farmer Coffee Project was constituted as follows:

Brian Rudert, Chair, and Deputy Chief, Office of Rural Development
Richard Steelman, Co-chair, and Deputy Chief, Project Development and Support Office
Barry Lennon, PASA, Credit Specialist
Rod Tsuji, PSC, credit specialist
Rosario Reyes, Office of Economic Policy Analysis
Alejandro Pontaza, Financial Analyst, Controller's Office
Tom Kellermann, Program Office

The principal consultants participating in project design were:

Donald Fiester, Coffee Specialist
James McSweeny, Marketing Specialist
Michael Loftstrom, Editor
Michael Schwartz, Economist

The members of the USAID Executive Project Review Committee were:

Anthony J. Cauterucci, Mission Director and Chair
Paul E. White, Deputy Mission Director
Christina H. Schoux, Chief, Project Development and Support Office
Gordon Straub, Chief, Office of Rural Development
Richard Burke, Chief, Program Office
Samuel L. Skogstad, Chief, Office of Economic Policy Analysis
Felipe Manteiga, Chief, Office of Private Enterprises Development
Liliana Ayalde, Chief, Office of Human Resources Development
Joe Hill, Controller
Linda Whitlock, Acting Executive Office

II. PROJECT BACKGROUND AND RATIONALE

A. Socio-Economic Background

Over the past two years Guatemala has continued its recovery from a severe economic recession brought on by a combination of internal financial mismanagement and a general world recession that began in the early 1980s. At that time, the military government also confronted growing social tensions among the rural poor population, as well as strong political opposition from the private sector. The decade of the '80's saw a heavy emphasis in investment in the industrial sector, for reasons of security (risk), a policy

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of import substitution and the potential for increased industrial exports within the Central American Common Market. As a result, the agricultural sector, historically the cornerstone of the economy, failed to receive adequate resources for either infrastructure maintenance and improvement, or the financing needed to introduce new technologies to increase agricultural production and productivity. As the economy stagnated and small farmer real income fell, political and social unrest led to major changes in Guatemala's political structure.

In 1985, a civilian President was elected for the first time in 30 years. The new government initiated several major economic and social changes, primary of which was a broad-based economic policy to foster "growth with parity". In 1986 and 1987, the new government implemented a number of important actions to both restore financial stability as a basis for long-term growth in the economy, and to significantly improve the quality of life for the disadvantaged sectors of the population. More disciplined fiscal, monetary and foreign exchange policies have had a significant positive effect on key economic indicators. Inflation, which was over 36% in 1986, has been reduced to less than 15%. Higher interest rates are now stimulating greater private savings, and wide and unpredictable swings in the exchange rate have been halted. Probably most important is that capital flight has been slowed and some off-shore monies are now being reinvested in the country. Additionally, throughout 1987 the real economic growth rate was in-step with the real population growth rate for the first time in seven years, enhancing the economic upturn and improving per capita income.

Few countries comparable in size to Guatemala have the same potential for production of a broad range of food crops, fiber, spice and animal products. The agricultural sector produces over 25% of the Gross National Product and generates 60% of foreign exchange earnings. Guatemala's current agricultural base comprises over 650,000 farms, and employs more than 51% of the country's economically active population (estimated at 1.2 million people in 1987).

Although average per capita income for the population as a whole was over Q.1,250 (\$1.00 = Q2.70) in 1987, it is estimated that small farm income is less than Q.400 per year. This disparity has caused severe hardships for rural families. In particular, children must work to augment the family income rather than attending school; nutrition levels are lower than a decade ago; and increasing numbers of rural poor are still migrating to urban centers in the hope of finding some form of unskilled employment. Although migration to the city is the choice of last resort for the rural poor, economic necessity frequently forces this decision. Continuing rural/urban migration will place increasing pressure on the government to support direct assistance programs to alleviate the plight of the rural poor.

Of Guatemala's total land area of 10,888,900 hectares, approximately 4.25 million hectares are currently used for crop and animal production. Of the total land in production, some 89% is used for subsistence production and the rest for mixed and export crops. The commercial sector is typically made

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up of larger farms that have access to highly productive land, capital, modern technology, and efficient marketing channels. In contrast to small producers, these farms employ advanced production methods, utilize new processing facilities, produce high quality products, have access to timely information and are otherwise well-informed on current trends in the export market. Most large farmers participate in some type of international marketing agreement and depend on market-driven price relationships. In summary economic terms, the commercial agricultural sector is strong, producing some 60% of foreign exchange receipts.

Coffee production is similar to other commercial crops, except that the majority of producers are small farmers. Small coffee producers have not been able to access, in a regular and systematic way, the modern technology used by larger farmers. Consequently, small farmers are not growing the newer, high producing, semi-dwarf varieties, nor applying the proper fertilizers, controlling diseases and insects or processing their crop in a manner that will bring the highest price in the export market.

Growing numbers of small farmers are attempting to produce both food and commercial crops in mixed farming operations. Food crops are primarily produced for consumption needs, and their small surpluses are sold on the local market. Product quality, uniformity, and yields are very low for both food and commercial crops. Adding to these constraints is a lack of technical training, with most small farmers being characterized as zero input operators who use little more than the skills learned from their communities in their production systems.

Small coffee farmers have not had an opportunity to learn how or what to produce, nor do they have the means to acquire inputs for increased coffee production. They have been plagued by low productivity and low value product, poor quality harvests and lack of good processing facilities. Moreover, they are usually faced with immediate family economic needs that have frequently forced them to sell or pre-sell their product to intermediaries at prices well below the going market rate.

There is a growing awareness that these "traditional farmers" are inclined to enter the economic mainstream by expanding production of food and commercial crops and increasing their incomes correspondingly. Over the past few years this desire for change has been exemplified by the small farmers who produce a wide range of non-traditional vegetables in the Chimaltenango highlands and the Zacapa Valley areas. In the coffee sector, over 7,700 small farmers have joined the 435 groups ("Grupos de Amistad y Trabajo") promoted by ANACAFE/PROMECAFE training programs as a means of learning new methods of coffee production and to benefit from other technical information unavailable elsewhere.

It is clear that if Guatemalan agriculture is to play a more dynamic role in accelerating the economic development of the nation, constraints facing both subsistence and commercial farmers must be addressed. A successful agricultural strategy must include the transition of subsistence

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farms into commercial operations for both the domestic and export markets. This requires the identification and development of new investment opportunities, improved labor efficiency, increased production per area, better product quality, and an improved response to changing market demand. Significant advancement in these areas will permit more small farmers to increase their incomes, expand employment opportunities, better educate their children and improve the quality of rural life.

B. The Guatemalan Coffee Industry

Coffee is the largest single export produced in Guatemala both in terms of volume and income. The economic importance of coffee in Guatemala is evidenced by the total production of 260,000 hectares of coffee. Only 11% of the total production of coffee is sold on the domestic market, with export sales estimated at an average of \$440 million per year. The coffee industry provides an estimated 122,000 people with full-time employment and an additional 19 million person days of temporary employment during the harvest season.

Coffee is produced between an elevation of 800 ft. to slightly above 6,000 ft. The principal production areas in Guatemala are along the Pacific Coast beyond the coastal piedmont on relatively rich, deep and recent volcanic soils. Other major production areas are scattered throughout the country, including fairly large zones in the Departments of Huehuetenango, Quiche, Alta and Baja Verapaz, Izabal and El Progreso.

A majority of coffee farms in Guatemala are small, inefficient, and produce a relatively mediocre to poor quality product. Of the 43,772 total coffee producers registered with ANACAFE, approximately 90% are small farmers whose total annual production is less than 40 cwt. of dry bean per year. Another small farmer group comprised of only 6% of all coffee growers has a total annual production of between 40 and 500 cwt. of dry bean coffee; 2.4% of the total producers are represented by medium-size farms producing between 500 and 2,000 cwt.; and finally, less than 1% are large farm operations producing over 2,000 cwt. per year. The national average yield is currently estimated to be seven cwt. per manzana (0.7 hectare); however, yields vary considerably according to the size of the farm and access to credit and technical assistance. Most small farms are producing in the range of two to seven cwt. per manzana, with an average production less than five cwt.

Large farms with access to credit or owner-financing are utilizing relatively high levels of technology. These farms generally have high plant populations; use the newer semi-dwarf, high-yielding and disease resistant varieties; employ good plant nutrition and appropriate pest and weed control measures; and, process their coffee quickly and under controlled conditions. As a result, large farms are obtaining yields above 25 cwt. per manzana (the best farms average over 40 cwt.) and producing a high-quality, high-value product.

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Since the larger coffee producers produce the bulk of coffee exported from Guatemala, it is not surprising that they have received the majority of technical assistance and other available support. There exists a 1% tax on FOB value and an additional surcharge of Q.0.25 per bag of exported coffee which is allocated to ANACAFE, and the large farm coffee exporters are the primary source of funds. Large farm groups have also been able to bring in technicians from Costa Rica, Brazil, Hawaii and other centers of excellence and to take advantage of the new varieties and production technology developed in these countries. Not surprisingly, small producer performance has lagged far behind the larger producer in almost all phases of production and processing. Although small farm technologies are available, they have not been accessible to a large number of small coffee producers because of the lack of coordinated credit and technical assistance mechanisms.

Since 1981, ANACAFE has directed 80% of its operational budget to assisting small farm coffee producers. With a current team of 41 field technicians (including seven supervisory professionals), it is providing a modest level of technical assistance to approximately 7,700 farmers. The assistance program of the "Grupos de Amistad y Trabajo" has attained good results in the transfer of technical information and training on a group level to rural farm communities. However, the absence of long-term investment credit to finance the application of new technological advances has been the small farmers' greatest barrier to incorporating adequate technology into their production program and has limited the impact of the ANACAFE technical assistance package.

In addition to the ANACAFE technical assistance program, two cooperative Federations (FEDECOCAGUA and FEDECOVERA) and the Fundación del Centavo (Penny Foundation) currently provide technical assistance to small coffee growers. However, the eighteen technicians of these organizations are only able to provide limited technical orientation to a combined membership of approximately 11,000 farmers. Although the efforts of these three private organizations and the ANACAFE technology transfer program does provide some degree of assistance to the small coffee producer in Guatemala, there exists a large unmet demand for an effective and integrated technification program for farmers identified as having the greatest potential for success. This includes those farmers currently receiving some support, as well as an additional 17,000 small producers who receive no significant technical support from any external source.

Small growers are harvesting old trees that need to be replaced. Their farms lack proper nutrition and are usually infested by insects and disease; yields are low and product quality is poor. In addition to these on-farm production problems, processing facilities are inadequate or not accessible to the small coffee producer who is frequently forced to sell his crop quickly and at severely discounted prices. Although the world-wide demand for coffee is strong and prices have tended to remain at profitable levels, the small producer has not participated commensurately in either profits or greater market share in the export and specialty markets.

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The inherent quality of coffee also varies greatly according to the elevation at which it is grown. Coffee produced at the lowest elevations is low in cup acidity, high in body and competes almost directly on the world market with a large percentage of Brazilian coffees and many other similar low-grown types. Most of these coffees are sold on the U.S. market. The higher grown (above 3,500 ft.) types of coffee are considerably higher in cup acidity. These varieties are used in blends or specialty coffees to enhance the flavor of bulk coffees purchased from Brazil and the lower producing areas of Latin America, Africa and Asia. Higher elevation coffees are strongly favored by Europe and Japan.

In line with consumer tastes and demand-driven marketing, Guatemala has increased its production of higher quality coffee over the past two decades. Whereas low-altitude Guatemalan coffee sold in 1974-1975 totaled 256,622 cwt., it has now decreased in importance, reflected in 1986-1987 crop production of only 131,907 cwt. This compares with a production of 914,023 cwt. of hard bean coffee (high quality) in 1974-1975, which has increased considerably to 2,017,963 cwt. in the 1986-1987 crop year. At the present time, there are approximately 28,000 small coffee farms operating above 3,500 ft. that are capable of growing high quality coffee and at much greater yields. Under normal market conditions the hard bean, higher elevation coffee can demand a premium of at least \$20 per cwt. more than low grown coffee sold on the New York spot market.

Coffee has perhaps one of the most sophisticated and competitive marketing structures of any commodity in Guatemala. Small farmers currently are unable to take advantage of this because they must sell their production immediately upon harvest. To take full advantage of the marketing structure, coffee must be sold in the parchment stage (first level of processing) which can be stored. The great majority of small farmers currently sell their coffee in the cherry (cereza) stage, which must be processed within twelve to twenty-four hours of harvesting to avoid a loss of bean quality through uncontrolled fermentation. Sale at this stage is generally to small buyers who arrive at the farm gate daily, purchase the day's harvest and transport it to the processing facility.

The small coffee producer is unable to participate in the free market structure for several reasons. As already indicated, because of the susceptibility of fresh picked coffee to fermentation damage, it requires immediate transport to a processing and drying facility. Because of small production levels and, often, distances to these facilities, the capacity of individual farmers to perform or contract this function is limited. As a result, the small producer is subject to a disadvantageous price structure in which there are few buyers and no controls on weight or the conversion factor used between cherry and parchment coffee (the latter is the basic price level in the wholesale markets).

In addition to the market bias against the small, and especially isolated producer, he is adversely affected by the informal financing mechanisms he must rely upon to produce his annual crop. The intermediary who

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purchases the small producer's harvest frequently finances the production stage, or advance purchases the harvest at a moment when the farmer is in need of cash to cover production and/or harvest costs. Thus, while the small producer presently has no difficulty marketing his production, his income is prejudiced by his lack of production and market flexibility.

The International Coffee Organization (ICO), of which Guatemala is a member, does not adversely affect the ability of small coffee producers to compete with larger producers for higher prices earned under its quota system. The quota system in Guatemala seeks to maximize export income by channeling as much high quality, premium coffee as possible into the quota market. Given the existence of at least 18 major exporters, and an abundance (at least 500) of other coffee intermediaries, small farmers should be able to seek competitive terms in selling their coffee whether under the higher-value quota or traditional market. An increase in the quantity of Guatemalan coffee will also assist the country to gain an increase in future coffee quotas, if the present system is continued. In addition, apart from coffee sold under the quota system, the remainder of Guatemala's best coffee is sold in the secondary or non-traditional market (at about 75-80% of the quota price), where it competes favorably with other varieties of coffee from other countries.

There has also been speculation regarding the withdrawal of the United States from the ICO which would probably result in its collapse. The U.S. is not happy with the fact that non-member consumer countries reap tremendous windfalls of cheap coffee and with an overly rigid quota system which does not allow for differentiation in coffee quality. Most Guatemalan producers feel that they would only benefit from the demise of the ICO and that they could adequately compete in a free market because of the high demand for Guatemalan coffee.

C. Project Rationale

The 39,700 small coffee farmers represent the largest group of traditional crop producers in Guatemala. For the majority of these farmers, the application of existing new technology, or "technification", represents an opportunity to increase their productivity and production by at least four to five times over current levels.

Support for the improvement of a major traditional crop, which brings in some \$500 million annually, complements the income-increasing activities carried out under the Mission's overall strategy of agricultural diversification in the Guatemalan highlands, and is consistent with the focus on commercialized production. Many small growers targeted under this project do not have the range of diversification options available to the Altiplano farmer, nor do they receive economic or social assistance from Government and/or other agencies, which is typically made available to highland populations. Yet the potential for increased income through technification is as great for small coffee producers in certain regions of the country as it is

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for small farmers who diversify into non-traditional export crops (see Economic Analysis). The project represents a "target of opportunity" in line with USAID/Guatemala's agriculture strategy for improving the competitive position of the small commercial farmer.

For the project's target group, technified coffee production provides the highest income potential per farm over other available alternatives (see Economic Analysis). Within two years, the premium for high altitude coffee (above 3,500 ft.) has increased from \$3-4 per cwt. to a new high of \$20 or more per cwt. The world coffee market for high altitude coffee is growing rapidly as witnessed by increased total consumption and exports of 2.6% per year from 1976-1987 versus 15% for speciality coffee during the same period. The demand for high quality coffee greatly exceeds the current amount available for export. Beyond the extraregional demand for high quality coffee in restaurants, hotels and supermarket chains, there exist approximately 10,000 specialty/gourmet coffee outlets in the U.S. paying an even higher premium for the best quality gourmet coffees.

Despite optimistic signs for increased coffee production and profitable export sales, the Guatemalan small farmer is faced with many constraints. Chief among these constraints is the lack of credit sources sufficient to finance off-farm goods and services needed for farm improvements and adoption of new technology. The control of disease and insects, training in the appropriate use of technology and equipment, capital to construct and operate efficient coffee processing facilities, and the lack of market access are all major obstacles to the small farmer, resulting in low levels of production and low product prices.

Coffee technification projects supported by USAID Missions in Honduras and Costa Rica have resulted in much higher yields and higher quality coffee for export. Coffee technification research done in Colombia and Brazil is producing similar results. In all of these countries, production yields of 30 cwt. or more per manzana are being achieved (compared to 7.0 cwt. per manzana in Guatemala). Recent research by PROMECAFE (the regional coffee technical agency structured under IICA, and supported in part by ROCAP) has developed new, high-yielding, rust-resistant varieties; a new tissue culture method of propagating coffee; and procedures to prevent pest destruction in older plantings. These new techniques will, over time, be fully incorporated into the technical package used by extension agents under the project. Effective implementation of the project will permit small farmer participants to obtain even higher yields and profits than those achieved by USAID-assisted programs in Honduras, Costa Rica and Ecuador.

D. Conformity with GOG Strategies/Programs

Increased production in agriculture is viewed as the area in which Guatemala enjoys one of its largest comparative advantages. The government has initiated a two-pronged approach to meet the need for expanded production and exports in the agricultural sector. Primarily, the GOG is trying to emphasize the production of traditional crops that have a comparative

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advantage in foreign markets. At the same time, it is expanding the production of non-traditional products in both fresh and processed form for long-term export market development. However, expanded production of traditional exports may offer the brightest hope for more immediate impact on the Guatemalan economy, and as such, it represents a key component of the GOG's new focus on agriculture development.

E. Relationship to USAID/Guatemala and AID Agricultural Development Strategies and Other Donor Activities.

The USAID/Guatemala Agricultural Development Strategy is based on the need for a development assistance program that supports both subsistence level and commercial enterprise farming systems. USAID agriculture assistance is aimed at establishing a program of direct assistance for the subsistence level farmer, and creating a more favorable investment environment for commercial agricultural enterprises. The underlying theme of the Mission's agricultural strategy is to assist farmers in making the transition from the subsistence level poverty cycle to becoming a fully competitive, integral part of the commercial agriculture system. Mission research and analysis have determined that a relatively quick and effective way to do this is through commercial export agriculture, with emphasis on non-traditional agricultural exports and irrigation programs. The Mission's strategy is designed to accomplish the following specific objectives: (1) provide broader support for agriculture product marketing and processing, particularly related to exports; (2) develop credit delivery mechanisms needed by small farmers and farm groups to finance agricultural diversification and exports; (3) expand agriculture technology development and transfer, especially related to irrigated agriculture; (4) remove credit constraints through more efficient operations in public and private sector lending programs; and, (5) provide assistance in agriculture education and training, with emphasis placed on improving the administrative and managerial capabilities of agricultural enterprises and support institutions in the sector.

The proposed Small Farmer Coffee Project incorporates two key elements of the Mission's agriculture strategy. First, it represents a target of opportunity for Mission assistance in a high-value traditional crop which involves many small farmer producers. Second, it represents an export development initiative designed to assist small farmers in making the transition from the upper-end of subsistence level farming (with potential for replication at lower subsistence levels) to commercial agriculture with market-competitive production. The project will address the primary constraints of small farmers in the production of coffee for export. Constraints which significantly affected small coffee growers' incomes in the early-to mid-1980's (e.g., low yields, depressed world market prices, and the need to replace old plantings with newer, high-yielding and disease resistant varieties) can now be overcome given the strong demand for the type of coffee Guatemalan small farmers can produce, the existence of a proven technology which is applicable to small farms, and the availability of the expertise and the extension mechanisms needed to apply the technology. The beneficiary

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groups identified for initial participation in the project are already organized and oriented to coffee "technification" training programs through their participation in ANACAFE "Grupos de Amistad y Trabajo" and the extension efforts of cooperative federations.

The project will take advantage of the regional PROMECAFE program (Coffee Improvement Program) affiliated with IICA and supported by ROCAP. PROMECAFE conducts research (e.g., on genetic improvements, pests such as coffee rust) and training for institutions such as ANACAFE. The recent transfer of PROMECAFE's headquarters from Costa Rica to Guatemala will considerably facilitate project access to new technology and training programs available from PROMECAFE.

The Italian government is in the process of negotiating with the ICG and several coffee grower cooperative organizations a proposed \$20 million program to support the institutional development of these cooperative federations. USAID/Guatemala will make every effort to coordinate the implementation of the Small Farmer Coffee Project with the Italian cooperative program once more details are available. No other bilateral or multilateral donor organization is currently providing assistance to small coffee producers within the target area of the project.

III. PROJECT DESCRIPTION

A. Project Goal, Purpose and Strategy

The goal of the Small Farmer Coffee Project is to increase the participation of Guatemala's rural poor in sustained, real economic growth. The purpose of the project is to increase small farmer income by increasing production, productivity, and product quality.

The project will build on the successes and lessons learned from USAID-supported projects in Honduras, Costa Rica, and Ecuador in terms of the delivery of technology, extension and credit services for increasing the yields and incomes of small farm coffee growers. The project will incorporate the successful aspects of the technical outreach program of ANACAFE (through its Grupos de Amistad y Trabajo) in organizing groups of farmers and providing assistance in new technology, supervision, training and follow-up activities. Project training programs will be designed to provide the groups with a standardized methodology for "institutionalizing" the process of applying and adopting new technology packages.

Since 1981, ANACAFE has channeled a major portion of its technical assistance budget to assist the small-scale coffee producer. By June, 1988, ANACAFE had organized and provided a significant level of assistance to over 435 farmer groups with 7,700 individual members. Farm size among these groups averages 2.18 manzanas (3.8 acres). The program model of Grupos de Amistad y Trabajo serves to organize groups of 10 to 30 small producers and provides a vehicle for training programs in modern coffee production technology. By the

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end of the crop year 1986-1987, members of the "Grupos" had been able to increase their production of green bean coffee by 29%. This level was achieved without the use of modern technical inputs such as fertilizers and improved varieties due to the lack of financing.

A key initial activity of the project will be the development of a systematic training schedule prepared for farmer groups, using ANACAFE agricultural technicians and para-technicians drawn from the farm groups themselves. In addition to the transfer of agricultural production techniques, the training plan will focus on the responsibilities of project borrowers and their obligation to use credit properly and repay it on time.

The AID-funded coffee improvement projects in Honduras and Costa Rica have been visited and observed first-hand by representatives of ANACAFE, the cooperative federations, and interested banks. Increased coffee production to 30 cwt. per manzana has been universally demonstrated in these countries, with improved processing facilities and marketing practices leading to coffee price increases of an additional 10-20%. Lessons learned in the USAID/Honduras project emphasize the importance of accompanying profitable technical practices with timely credit delivery. Farmers in Honduras have proven extremely receptive to the adoption of high level technology packages. The adoption of technical packages in Honduras has been shown to be financially viable, with the potential for strong, longer-term economic impact. The role and effectiveness of para-technicians and extensionists in the dissemination and adoption of a high-tech package have been shown to be of utmost importance to increasing production and productivity.

In Costa Rica, the key to establishing an effective credit system has been the transfer of modern, profitable technology which has served to convert otherwise high-risk, low-income small farmers into creditworthy borrowers accepted as responsible clients by commercial banks. Project support for a credit mechanism is an integral part of the small farmer coffee technification program. The need for long-term investment capital is critical for financing the technical package proposed under the project, as well as covering additional contracted labor costs associated with production increases.

Credit fund mechanisms will be established within private and public sector financial institutions. Private sector credit funds will be established within one or more interested commercial banks having the necessary infrastructure, loan review and supervisory procedures, and credit delivery capacity to successfully administer the project's credit component. In addition to the participation of the commercial banking system, the Government's Agricultural Development Bank (BANDESA) will be used to administer a major portion of the credit element. BANDESA's rural infrastructure is ideally located in a number of important small coffee producing areas, and the de-centralized credit mechanisms currently being developed by the GOB will be utilized to channel the project's credit funds. As in Honduras, Guatemala's public sector agricultural bank is expected to play a major role during the start-up phase of the project. However, increasing participation of the private banks is expected to result as experience is gained.

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Commercial banks electing to participate in the project will be expected to apply the same efficient management techniques which characterize their current financial services. Private bank participation is important to ensure the availability of follow-on production credit to project beneficiaries after the initial project-funded investment period has expired. Although several commercial banks have indicated their interest in participating in the project, most notably Banco del Cafe, particularly in areas where they have rural offices, lack of experience in small farmer lending and concern over the high costs likely to be incurred are mentioned as major concerns. For these reasons, the role of ANACAFE in the pre-selection of potential borrowers and the planned supervision and coordination mechanisms to be established between the Association and the participating banks are viewed very favorably. The credit mechanisms are designed to streamline the loan application and approval process, ensure adequate loan supervision, and lower transaction costs. The credit mechanism will also attempt to promote competition among the banks (i.e., bank liquidity is currently limited) and will provide for an effective monitoring system. Project evaluations will compare the experience of the participating commercial banks with that of BANDESA, and thus allow for any modification or reallocation of project credit funds as required.

The terms and structure of loans will include a market rate of interest (16%), a loan term of up to seven years, and a three-year grace period on principal repayment. A portion of the interest rate (approximately 4%) will be retained in a loan loss reserve to ensure the integrity of the credit fund beyond the life of the project. Whenever necessary, the annual interest rate will be adjusted to ensure the use of market rates throughout the life-of-project.

A new unit will be established in ANACAFE to manage the project. The unit will have the capacity to manage and oversee the project's extension (i.e., coffee technification, training and processing) and credit delivery components. The Project Management Unit (PMU) will be structured within ANACAFE to take full advantage of its existing staff capabilities in coffee technology, research and extension, as well as administrative support requirements. The PMU will be comprised of a project manager/administrator, an assistant administrator/coordinator, an accountant, a computer data specialist, and three clerical/secretarial support personnel.

A project Advisory Committee will serve as the operational and decision-making body for project approvals, longer-term planning and other actions necessary for efficient project implementation. Major project modifications and strategic and budgetary planning will be done in conjunction with the ANACAFE Board of Directors. The Advisory Committee will be comprised of a Board representative, who will also serve as the Grantee's legally authorized official (the President of ANACAFE); the ANACAFE project manager; the USAID Project Manager (without voting or approval authority); one or more representatives from participating financial institutions; and the Guatemalan coffee industry (also without voting or approval authority).

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The project will provide both long and short-term foreign experts not available from either national sources or the regional PROMECAFE project. These will include the long-term positions of (a) an extension and training specialist and (b) an agricultural economist with a background in rural credit programs; the project will also finance a locally-hired specialty coffee marketing coordinator. Short-term technical expertise (up to 38 person months) will be provided in such areas as coffee production, processing and marketing, specialty coffee grading, and credit delivery.

B. Project Components

1. Production Technology and Processing

Assistance will be provided to the small farmer target group of 8,100 coffee producers in improving their production and processing technologies, primarily through a wide range of extension services and training. Project-specific extension activities to be provided by ANACAFE and supported by the project include:

- The transfer of a technification package to small farmers to effectively use new technology in coffee production;
- Training small farmers in the proper procedures and applications of the tech-pack. This process will be patterned after the existing program and model for organizing and working through farmer groups (Grupos de Amistad y Trabajo). The in-country training program will include project extension agents, para-technicians and credit extension agents, and participant training will be used to help institutionalize the enhanced project extension program;
- Completion of feasibility analyses and studies required to plan for the construction or enhancement of existing processing facilities and to ensure proper utilization of such facilities to improve marketing capabilities and value-added income benefits to the small farmers.

a. Coffee Technification

Project-funded activities involving coffee technification are designed to assist 8,100 small producers in the total renovation of old, low-yielding coffee plantings into high-yielding new plantations. Existing coffee plantings are typically old, low-density plantings which suffer from disease and insect problems, lack proper nutrition, are unpruned and heavily shaded. These conditions and practices greatly restrict yields and reduce productivity. In order to effectively utilize proven production practices which consistently yield 30 or more cwt. per manzana, it is necessary to completely remove the present plantings and introduce new varieties and a technical package of inputs and procedures which farmers - through extension, education and training - can readily employ.

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The technical staff of ANACAFE has developed a technical package and standardized methodology of practices that build on the best production research and experience to date. The package includes the use of proven, high yielding hard bean varieties which are adapted to the ecology of project areas. Given that newly planted coffee requires an average of five years to achieve maximum commercial yields, the project will finance the complete renovation of one manzana of coffee per participating farm.

The objective of the technification/extension program is to fully develop and institutionalize a methodology for providing the technology needed by small growers to increase their production and productivity, through extension services patterned after the Grupos de Amistad y Trabajo and by means of training programs. The project will provide for an expansion of the existing staff of 36 extension agents to 60 over the eight years of the project. Approximately five experienced extension agents and two credit agents will be assigned to the project at the outset. In the following years additional extension agents and credit agents will begin working with project participants. Exact estimates are difficult to make at this time because project participants will be integrated into regular ANACAFE training activities in addition to project-funded activities. USAID will finance the purchase of approximately 42 vehicles for field staff participating in the project; ANACAFE will finance the purchase of an additional 32 vehicles.

During the first year, project participants will be selected from existing "Grupos". Figure 1 shows the geographic location and concentration of the 435 existing "Grupos" and ANACAFE field offices. Methods of project promotion and individual farmer selection will be based upon available ANACAFE area profiles which take into account farmer characteristics, community organizations, media availability, and other systems of communication. Eligibility criteria will require that participants have between two and ten manzanas of coffee, an annual production of less than 15 quintales per manzana, and more than half of their cash income derived from coffee production. Other specific selection criteria will include: soil types, slope of land, access to water, access to roads, availability of family labor, educational level, and relative need (e.g., reliance upon coffee and availability of outside income).

b. Farmer Training and Assistance

The primary mode of training will be instruction through farmer groups. From 15 to 30 farmers will be organized into an instructional unit, and will receive formal instruction from extension agents on a regular basis (approximately biweekly). Individuals from among these groups will be trained as para-technicians. While extension agents will rely primarily on group instruction, each participating farmer will also be visited at key times in the crop year, with individualized assistance focused on specific production practices for the application of the tech-pack. The project will also provide short-term T.A. to assist in specific aspects of group formation and instruction.

Perhaps the most important feature of a small farmer training program is the development of an appropriate system of communication with the farmers. The Grupos de Amistad y Trabajo extension model will be applied for each different teaching mode. The development of training materials and curricula will be the responsibility of the extension advisor who will draw on short-term assistance in communications and in technical aspects of production and publication. Specialized short-term T.A. will also assist with the development and implementation of media and marketing information programs. A.I.D. will finance the services of a long-term (3 years) extension specialist, short-term advisors, the purchase of specialized training equipment, and a portion of the additional operating costs associated with the training program. ANACAFE will finance the balance of training-related operating costs.

Every three to four months, participating farmers will meet and visit the farms of the other group participants. The regional coffee agent and the project para-technician will also accompany the groups. This will permit the farmers to discuss the progress each farmer is attaining and compare results with those of his neighbors. It will also provide for healthy peer pressure in terms of motivating each farmer to carry out specific project recommendations.

The training plan for participating farmers will include all essential phases in the selection of seed for the nursery, providing the nursery lay-out, transplanting the seedlings to plastic bags, controlling pests in both the seedbed and the nursery, removing old coffee trees, layout of the field to prevent erosion, planting new trees, applying proper fertilization, pest control and weeding techniques, as well as providing temporary and permanent shade management. As the trees come into production, farmers will receive training in proper techniques of coffee harvesting and processing.

31X

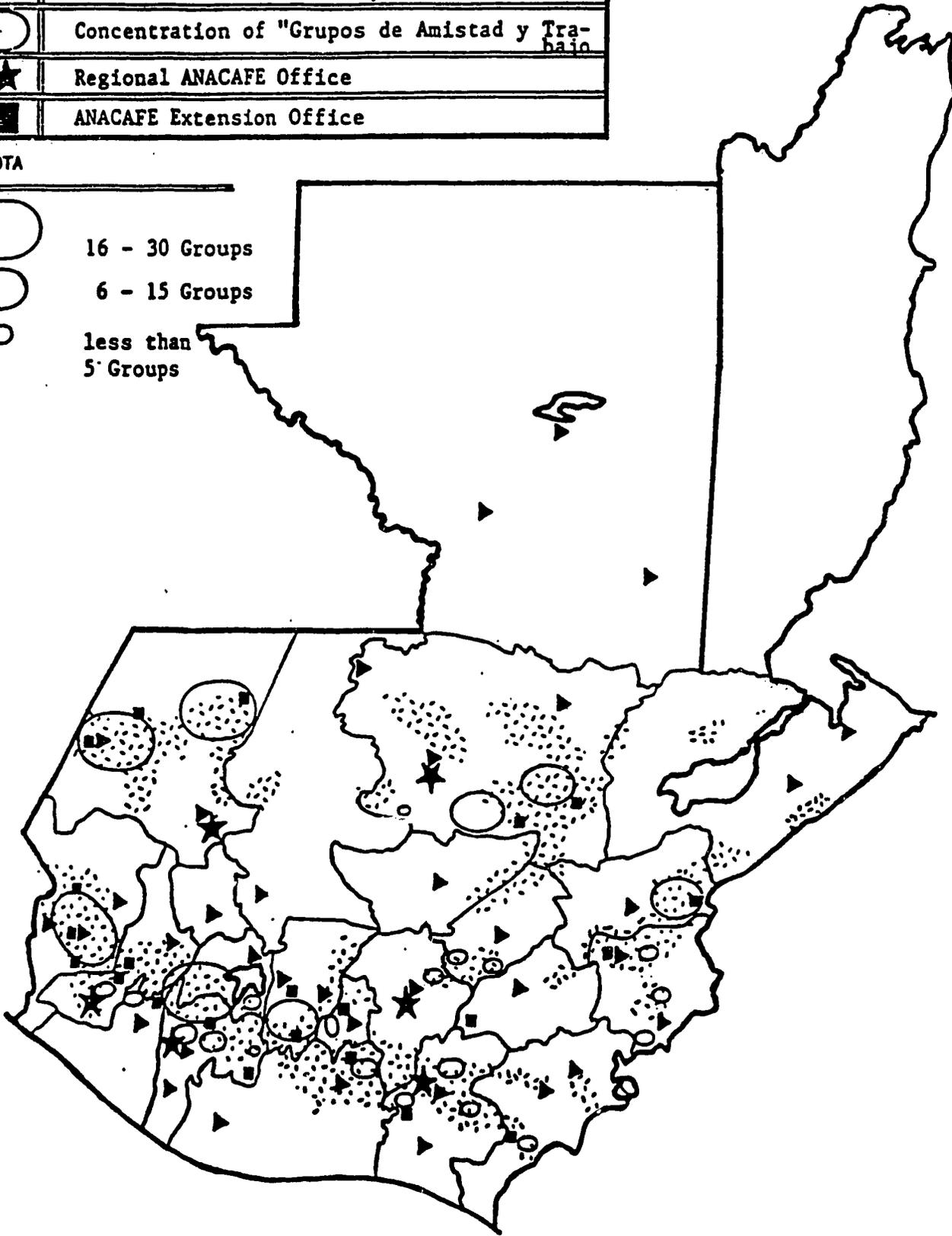
MAP OF GUATEMALALA WITH DISTRIBUTION OF COFFEE ZONES, BANDESA OFFICES,
GRUPOS DE AMISTAD Y TRABAJO, AND ANACAFE OFFICES.

KEY

	Coffee Zone
	BANDESA Office
	Concentration of "Grupos de Amistad y Trabajo"
	Regional ANACAFE Office
	ANACAFE Extension Office

*NOTA

	16 - 30 Groups
	6 - 15 Groups
	less than 5 Groups



Para-technicians will be selected from farm-leaders who are participating in the coffee renovation program themselves. They will be selected based on their dynamism, respected position in the community and ability to speak the dialect of the area as well as Spanish, if applicable. Such a system is already in place and utilized in choosing the coordinators of the Grupos de Amistad y Trabajo. They will work part-time to assist their neighbors in all phases of coffee farm renovation, and, together with the credit extension agents, provide guidance in the use of credit provided through participating banks. Since the loans must be repaid in accordance with the amortization schedule, it is important that farmers be provided with all the assistance necessary to ensure on-farm success and the timely repayment of loan funds.

Observational visits to the two successful projects in Honduras and Costa Rica are planned for at least 20 ANACAFE technicians during the second and third years of the project. Moreover, all extension agents will benefit from on-going training courses and conferences. The PROMECAFE program will be extremely beneficial in augmenting the training activities planned under the project. The project will finance the cost of sending ten technicians per year to workshops and courses sponsored by the PROMECAFE program in Guatemala.

There are no project technicians or program leaders in the existing small farmer training programs of ANACAFE or the cooperative federations with studies above the BSc. agronomist level. The rapidly evolving areas of production, processing and marketing require that technicians have more training than simply a general course in agriculture. The project will assist in upgrading the technical skills of the staff working with small farmers by funding four technicians in the U.S. or Latin American graduate schools for degrees at the M.Sc. level. They will be programmed over years two through six of the project, so as to not deplete the technical staff excessively during any one year. One student will be sent to study in each of the following fields (illustrative): (1) Agricultural Economics/Marketing; (2) Agricultural Extension; (3) Agricultural Mechanics and (4) Tropical Crops/Pomology with a specialization in coffee.

Coordination of project activities will occur through the following series of regularly scheduled meetings:

General Meetings: Each quarter, the total group of technicians working in the program will meet to review problems and exchange information.

Regional Meetings: Project personnel in each region, both technical and para-technicians, will meet every month to coordinate project activities.

Management Meetings: Regional ANACAFE supervisors will visit each technician at least every quarter to review their progress and problems.

Coordination Meetings: At least quarterly, Project Management Unit staff will meet with representatives from participating organizations to review progress and identify and address problems among themselves, their staff and farmer participants regarding both the technical components of the project and the loan portfolio.

Other Staff Meetings At least quarterly, PMU staff will meet with the head of the communications program, the processing unit, other ANACAFE offices involved in the project and project advisors to review progress and plan and coordinate future activities.

c. Marketing and Processing

The primary objective for marketing under this project is to move as many small farmers as possible into marketing their product at the parchment rather than cherry stage. This will allow them to take advantage of the fairly sophisticated coffee marketing structure in place in Guatemala. Increased production from the project is not expected to cause any major distortions or problems in marketing. Over a 15-year period, the project will only result in a 3% increase in Guatemala's total production, lower than the anticipated increase in total world demand for coffee. The major marketing intervention under the project will focus on improving small farmer access to processing and, in the long run, access to the opportunities created by the complementary specialty coffee initiative.

A definitive decision on the types of investment in processing infrastructure will be made in year two of the project after a detailed needs analysis has been completed. In all likelihood the project will follow the example of the Honduras project which is now financing the construction of 10 processing facilities per year at a cost of approximately \$2,000 per facility with each handling processing for up to 10 small farmers. After the needs analysis is completed and a determination made, facilities will be constructed or upgraded for this purpose, based on the Honduras level of activity. Funds for this purpose are included within the AID-financed credit line item.

The introduction of improved post-harvest handling and processing for small farmer coffee will be directed at the following benefits, listed in order of importance to project beneficiaries:

(1) Greater marketing flexibility by selling coffee in a dry form (parchment) rather than fresh (cherry), enabling the producer to investigate alternative opportunities without loss of product quality.

(2) Higher prices to the producer due to the value added factor of processing and a better quality product because of proper post-harvest management.

(3) Higher prices on the world market because of improved quality of product (hard bean and better processing/handling), which represent benefits to Guatemala and to exporters, and which may reach the producer under favorable marketing arrangements.

There are three basic coffee post-harvest and processing stages of importance to the producer and coffee merchant. The first is when the coffee is picked ripe at the cherry stage; the second, when it undergoes a depulping process to remove the fruit covering the bean, and is sun or mechanically dried to the parchment stage. At this stage it generally is sold to exporters who have the necessary equipment to remove the parchment (membrane covering the bean), polish the bean, and convert it into the final green bean stage suitable for cup testing, grading, and roasting. Each of the three stages involves value added benefits. Currently, most small farmers must sell at the cherry stage. An objective under the project is to enable beneficiaries to obtain increased benefits from the sale of their product by offering options for entry into the marketing chain at appropriate levels.

As part of the needs analysis to identify small farmer coffee processing alternatives, existing facilities will be reviewed to identify the possibility of increasing small producer access to effective processing, and studies will be undertaken to identify the feasibility of constructing small-scale on-farm processing plants. These studies will also define the additional extensionists required to supervise the installation and to advise with the operation of the plants.

Participating farmers will be taught the best methods of harvesting, fermentation, and drying, and will use existing and/or new facilities to prepare the crop to the dry parchment stage. In the case of small processing plants likely to be financed with project resources, technicians will provide on-site supervision to the operators of these plants, as well as necessary follow-up to assure that each processor uses the best methods and equipment for processing his own and his neighbors' coffee. Beneficiaries will be assisted in laying out the new plant, ordering and procuring the appropriate equipment, constructing facilities, and installing and testing the equipment before it is used by the processor. Effective small farmer use of coffee processing facilities will enable them to attain a higher price for their coffee and redirect more of their production toward the speciality coffee export marketing initiative to be promoted by the project. The separate specialty/gourmet coffee certification and marketing activity will also support this process.

2. Credit

Currently, only 10% of Guatemala's small-scale farmers have access to formal credit. They are dependent upon their own resources, informal markets (money lenders and intermediaries) and, to a lesser degree, the National Agricultural Development Bank (BANDESA) for their financing needs. When credit is available, terms are restricted to annual loans, interest rates vary widely, costs are high, and loan amounts too small to finance more than minimal inputs for production. As a result, national agricultural yields are low, technology use is limited, and few opportunities exist for small farmers to diversify or to make the on-farm investments which can increase production, productivity and income.

In this respect, the small-scale coffee producer typifies the small farmer sector in Guatemala. Average farm size is small, technology use is minimal, yields are low, disease and pest control are irregular, and there is little cash available to purchase the inputs needed for annual production. Although coffee is the mainstay of the agricultural economy (generating 37% of the total value of exports) and Guatemala has the potential to increase production of the very high quality, premium coffee which is in demand on international markets, average national coffee yields are among the lowest in Latin America (7-9 cwt./manzana). The technology exists to greatly increase yields and quality of Guatemalan coffee, but the technification package requires access to medium-term financing and a secure source of annual short-term credit. The small coffee producer has access to neither.

a. Nature of the Investment Credit Fund. The Project will finance the creation of a series of trust accounts (fideicomisos) within selected private and public sector banking institutions to provide small-scale coffee producers with the funds needed to technify their farms. These credit accounts will be capitalized by A.I.D. project funds totalling \$1.5 million and GOG counterpart of \$9.25 million in yearly increments over the first five years of the project. Annual disbursements will be determined by effective demand and the technical support capabilities of ANACAFE. Financing provided by these funds will include:

- investment credit for the complete renovation of coffee farms (i.e., labor, new coffee varieties, chemical inputs, and basic equipment) based on one renovated manzana per farmer;
- investment and production credit to finance the costs of establishing nurseries to produce high-yielding and disease-resistant seedlings;
- working capital to finance the annual labor and input needs of participating farmers during the first two years of production; and,
- credit to finance the construction or upgrading of small farmer oriented processing facilities.

Project credit funds will finance the start-up investment costs (two years of renovation funding and two years of production credit) for each farmer participating in the technification program. The participating banks and the GOG will covenant to continue to provide project beneficiaries with annual production credit following the fourth year of project-financed credit.

b. Credit Terms. As noted earlier, access to renovation credit will permit a small producer to clear one manzana of old, low yielding coffee; replant the land with disease-resistant and more highly productive varieties; and, effectively maintain the newly renovated manzana by providing him with a secure source of annual production credit. The project's credit component will finance the initial four-year costs of renovating a manzana of coffee

(approximately Q6,000), and the participating banks will provide the follow-on production financing using their own capital or other sources of funds. Renovation financing will be provided to beneficiaries at market interest rates (currently 16%) and have a maximum seven-year term, and up to a three-year grace period on principal repayment. There will be no grace period for annual interest payments. Renovation credit will finance the purchase of improved plant varieties, agricultural inputs, general supplies and labor. The Project will finance renovation of a minimum of 4,500 manzanas of coffee over the first five years, with total credit requirements (renovation and two years' production credit) approximating Q26 million (\$9.75 million). Reflows will then finance an additional 1,200 farmers per year.

In the third year, production obtained from the renovated land will enable the farmer to begin loan repayment from production income. As discussed earlier, project funds will be used to finance the borrower's investment costs during Years 1 and 2, as well as production credit required in Years 3 and 4. Beginning in Year 5, annual credit needs will be financed by short-term production loans from participating banks. The loans will be rolled over annually: essentially providing medium term credit. The interest rate on these production loans will be determined by prevailing market rates.

In addition to investment and production credit for renovated coffee farms, short-term loans (18-months maximum) will be provided to selected borrowers for nursery operations. Eligible borrowers will be prequalified by ANACAFE on technical and economic criteria. Nursery size will be kept small (approximately 30,000 plants) and only 5-6 farmers will obtain seedlings from each. The Honduras Project started with larger nurseries in an attempt to lower investment and management costs, but this methodology was shifted to smaller nursery operations after quality control and disease problems began to appear. In Guatemala, the small nursery approach will be employed from the start to ensure the use of adequate disease control measures and the maintenance of high quality seedlings for resale to project participants. This will also permit a wider dissemination of nursery management techniques to project beneficiaries and shift the responsibility for successful nursery development to the farmers themselves. Recipients of nursery loans will be provided technical guidance and supervision by ANACAFE. All farmers, whether they maintain a nursery or not, will be encouraged to participate in the training programs for nursery maintenance and disease control as a means of increasing their technical skills.

Finally, the project's credit component will finance the rehabilitation and/or construction of coffee processing facilities. The terms and conditions of such lending will be determined once a needs analysis and the requisite feasibility studies have been completed. Both producers and non-producers will be eligible for processing loans; however, facilities financed with project resources will target small coffee producers.

c. Eligible Borrowers. A total of approximately 8,100 small-scale producers are expected to benefit from the credit component during the eight-year life-of-project. An individual producer will be eligible to

participate in the technification program if he has a total of no more than 15 manzanas of land, of which no less than 2.0 and no more than 10 manzanas is planted in coffee; coffee yields of less than 15 cwt. per manzana; and, sufficient economic capacity to absorb the loss of income during the renovation period and meet new obligations (i.e., annual interest payments) imposed by the terms of his bank loan. Preference will be given to farms capable of producing high altitude, high quality coffee, and all farmer participants will be members of Grupos de Amistad y Trabajo.

Representatives from two cooperative federations (FEDECOCAGUA and FEDECOVERA) sit on ANACAFE's Board of Directors as spokesmen for the small coffee producer. Although both federations have serious financial and operational shortcomings, they do provide an effective organizational mechanism through which groups of individual farmers can be reached by ANACAFE technicians. The Mission does not envision the use of the cooperatives as credit intermediaries for the renovation and production financing; however, the internal cooperative structure will be used for group training sessions, technical orientation, nursery development, etc.. Active participation of each cooperative member in ANACAFE training programs will be a prerequisite to eligibility for coffee financing. In addition, the participation of cooperative extension personnel in ANACAFE training events will be strongly encouraged.

The Grupos de Amistad y Trabajo represent informal farmer associations created by ANACAFE for the purpose of providing small coffee growers with training and technical assistance. Since 1981, ANACAFE has promoted the creation of 435 grupos throughout the country. Many of these informal associations are well-organized and have been in operation for five years or more. In these older groups, farmer participation is active and many have obtained notable increases in coffee yields as a result of the training activities and the partial application of new technologies. These grupos will be targeted for early credit assistance by ANACAFE when project implementation begins. As with the cooperatives, farmer credit eligibility will be determined in part by active membership in a grupo, regular participation in ANACAFE training programs, and compliance with technical recommendations.

d. Nursery Credit. Nursery credit will be provided to selected growers for the production of high-quality seedlings used in replanting. Financing will be provided to nursery operators for their investment and production credit needs for a period of 18 months at an interest rate of 16%. Estimated investment and production costs approximate \$140 per thousand plants.

e. Reflow Use. Credit reflows resulting from the repayment of principal will be retained by the participating banks in interest-bearing accounts. The reflows corresponding to ANACAFE will be disbursed to that organization on a schedule agreed to prior to the initiation of credit activities. When received, the reflows will be used by ANACAFE to increase the capabilities of its extension program, finance new activities, etc.

Reflows resulting from interest payments will also be used to defray a portion of the operating costs of the GOG, ANACAFE and the participating banks, and to create loan loss reserves against non-recovery of a portion of the portfolio.

Participating banks, including BANDESA, will provide quarterly financial reports to ANACAFE and the Central Bank which summarize the status of their loan portfolio. As a minimum, the quarterly reports will include the following:

1. Name of client
2. Loan identification number
3. ANACAFE regional office and Bank agency
4. Amount of principal and interest collected and balance outstanding
5. Identification of all past due accounts and collection actions being taken
6. A statement of the distribution of any interest payments collected.

Tentative distribution of the interest spread is illustrated as follows:

Central Bank	1.0%
Participating Bank	6.0
ANACAFE	1.0
Reserve Creation	<u>8.0</u>
	16.0%

The Mission anticipates that loans for renovation will be disbursed to small producers as follows:

<u>Year</u>	<u>Number of Borrowers</u>
1990	500
1991	700
1992	900
1993	1,100
1994	1,300
1995	1,200 (reflows)
1996	1,200 "
1997	<u>1,200</u> "
Total:	8,100

f. Loan Guarantees. In Guatemala, few small farmers possess real assets to pledge as effective loan guarantees. This lack of collateral is, in part, the reason that commercial banks have been reluctant to finance agricultural investment on small farms. In addition, agricultural lending is viewed as a risky and unprofitable activity, and commercial bank preference has been to invest in bonds or to lend for urban investment and commerce or

for large-scale farming enterprises owned by long-time clients. Even in these areas, the banks minimize risk by requiring high ratios of collateral to loan amounts and by limiting loan periods.

In the case of coffee financing, the perception of the commercial banks is somewhat more flexible. Coffee is a major export crop which has relatively secure markets and generates substantial foreign exchange. In addition to the high value of coffee in international markets, private banks already finance coffee processing and marketing infrastructure. An increase in coffee production and export is viewed very favorably by the commercial banks due to the multiplier effect for likely increases in new business.

During intensive review, the Mission financed an assessment of private and public sector banks to determine their interest in and the terms and conditions under which they would consider participating in the project. The survey was limited to those banks with rural branches in areas where the greatest number of potential project beneficiaries are located (i.e., Huehuetenango, Alta Verapaz, Solola, Zacapa, Jalapa and Escuintla). Two public and six private banks were interviewed on a wide range of topics including: past experience in small farmer lending; prior use of trust funds or external lines of credit; financial services offered in rural areas; administrative and operational costs incurred in rural lending; and, general observations concerning the design of the credit mechanism to be used under the project.

Only two private banks indicated that they would not be interested in participating in the project due to small loan size, the lack of borrower collateral, and the likely high costs and risks that would be incurred in such lending. The banks which expressed interest in the project have had experience with small loan portfolios, and are familiar with the trust fund mechanism we are proposing. Since the initial assessment, a total of nine banks have voiced an interest in learning more about this project. The Presidents of ANACAFE and the Banker's Association are planning a joint meeting to present and discuss this project. This meeting will probably result in more banks wanting to participate in the credit component.

While it is desirable that as many banks as possible be informed of opportunities offered by the project, it must be kept in mind that the conservative implementation calendar restricts the number of potential clients during the initial years, limiting the level of credit opportunities available to the participating banks, during that period. As noted earlier, no geographic monopoly will be granted to any bank, though the participating institutions may wish to divide the country up themselves: each taking a region in which its branches are more numerous or better equipped. This would not be a problem, nor would it cause monopolistic practices as all participating banks must offer terms agreed to with AID.

Among those banks indicating interest in the project and willingness to manage the credit funds, a common list of suggestions or conditions were proposed to improve the effective operation of the credit program:

- All banks agreed that a trust fund is the only possible mechanism that could be used to channel investment credit to small farmers. Guatemalan banking legislation limits credit terms and borrower eligibility to the amount and type of collateral that is pledged. Application of this legislation would eliminate a majority of the targeted small coffee producers from access to loans for terms such as are proposed under the project. Trust fund lending is not required to adhere to this legislation.

- Banks are not willing to risk institutional capital in lending for medium-term renovation credit, but they are willing to covenant to provide ongoing short-term production financing beginning in year 5 for all clients who have proven credit-worthy during the initial four-year period. This follow-on credit would take the form of one-year loans rolled over as needed.

- The spread required by the participating financial institution to defray the administrative costs of managing the credit fund are negotiable and will depend on the projected loan volume, services required, and the degree of risk involved.

- The trust fund should be capitalized with a sufficiently large amount of resources to ensure that the participating bank can rapidly respond to loan demand. The amount of the initial capitalization is also negotiable, and the banks have indicated their willingness to pay a competitive rate of interest on unused trust account balances.

The credit component design has addressed the concerns of interested financial institutions by creating mechanisms which will permit commercial bank participation under terms and conditions that will be acceptable to their shareholders. There is interest in lending to the coffee sector. However, the loan risk factor represented the major impediment to private bank participation in the project. For this reason, as well as the bank legislation issue mentioned earlier, the project will finance the creation of fiduciary accounts rather than promote the use of lines-of-credit to transfer the credit funds to the commercial banks. Private bank management of a fiduciary account (i.e., trust fund) will encourage early participation in a relatively risk-free environment. The bank's exposure to losses of shareholder and depositor capital is eliminated without reducing the risk to earnings, an important incentive to effective management of the project's credit portfolio. Since bank income is earned only as interest is collected, the profit of a participating bank becomes a factor of loan collection. This encourages effective loan analysis and portfolio supervision.

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g. Administration of Credit Trust Funds: The effective administration of the project's credit funds will depend on the degree of coordination and collaboration that develops between ANACAFE and the participating banks. All of the banks interviewed during intensive review stated that the role of ANACAFE must be active and supportive of the financial operations of the project. In addition to ANACAFE's pre-selection of eligible borrowers and the provision of training and technical agronomic assistance, the banks saw ANACAFE's role in credit supervision as crucial to the success of the program. The roles of ANACAFE and the participating banks have been designed to ensure the effective application of the technification package and the efficient administration of the credit component.

Pre-selection of potential project beneficiaries from among members of the "Grupos de Amistad y Trabajo" will be undertaken by ANACAFE extension personnel using such factors as farm size and location, active participation in ANACAFE training programs, willingness to adopt new technologies, economic potential, compliance with technical recommendations, etc. The intent is to classify the members of each "Grupo" and identify those farmers who have the greatest potential to successfully adopt the technification package if provided with access to investment and production financing. Once a list of potentially eligible candidates has been completed, an ANACAFE agent will assist each pre-selected farmer in completing the documentation necessary for the loan application (e.g., farm plan or investment loan proposal, calendar of activities and necessary financing, repayment schedule, etc.) for submission to a participating bank's rural office. A standardized loan analysis format will be used for all loan applications under the project to speed-up the processing and loan analysis to be completed by the participating bank. It is likely that the individual loan applications will be submitted to each of the participating banks as a package of applications representing the pre-selected participants of each of the "Grupos de Amistad y Trabajo" to further speed-up document flows. Upon receipt of the loan applications, the participating bank will register each application, complete an initial review and analysis, and notify ANACAFE extension personnel of loan approval and disapproval. Once loans are approved, the participating bank will prepare the formal loan documentation and notify ANACAFE extension personnel that the farmers must present themselves at the agency office to sign the loan contract. Disbursements of credit will be made to the borrowers as determined by the investment plan included in the loan application. The specific roles of ANACAFE and the participating banks are summarized as follows:

As Administrator of the Project, ANACAFE will:

- Establish the geographic zones where the project will be developed;
- Reassign or hire the ANACAFE personnel required to meet the projected demand for services (e.g., supervisors, extension agents, and support staff, etc.);

- Promote small farmer participation in the project and pre-select potential beneficiaries as per the terms of the Cooperative Agreement;
- Prepare the initial feasibility analysis and gather the basic financial information required for a loan application (e.g., investment plan, loan disbursement calendar, and estimate of income and expenditures);
- Provide borrowers with an understanding of the financial aspects of the technification package; assist them in entering and proceeding through the loan application process; and, follow up on loan approvals and disapprovals to ensure that the farmers fully understand the credit process;
- Provide general technical guidance and training to project beneficiaries in all aspects of coffee production and processing technology;
- Provide specific guidance, assistance and training to nursery operators, as well as to the owners and operators of small coffee processing facilities;
- Supervise farmer utilization of credit funds for nursery operations, renovation and processing facility construction and maintenance;
- Closely coordinate with participating banks on all aspects of loan portfolio supervision, assist with loan collections indirectly by stressing the importance of repayment to participating farmer-borrowers, and participate in regular coordination meetings to review project progress and problems; and,
- Maintain files on all beneficiaries being assisted under the project.

The participating banks will be expected to perform all of the following functions in support of the project:

- Receive and register all loan applications from potential project beneficiaries;
- Analyze and approve or disapprove all loan applications received;
- Notify ANACAFE extension personnel and supervisors of loan approvals and disapprovals, and provide copies of all pertinent documentation;

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- Prepare legal documentation required for loan formalization;
- Supervise borrower use of credit funds through periodic visits to the technified farm;
- Maintain accurate records and files for all loan applications and borrowers and provide regular quarterly reports to the ANACAFE Project Management Unit and the Central Bank which include the following:
 - Name of client
 - Loan identification number
 - Bank agency where loan was originated
 - Amount of principal and interest paid and unpaid balance
 - Status of delinquent accounts by agency, number of payments past due, actions being taken, etc., and
 - Monthly movement of new lending
- Participate in regular coordination meetings with ANACAFE to evaluate progress and problems in loan administration;
- Maintain accounting records for all project-related financial transactions;
- Take whatever actions are necessary (legal and administrative) to collect past due accounts, including both principal and interest; and,
- Distribute on a quarterly basis the portion of the interest spread that pertains to the Central Bank and ANACAFE, as well as continuing to capitalize the loan loss reserve in an interest bearing account.

The specific responsibilities of each participating institution will be clearly defined in agreements to be signed between ANACAFE, participating banks, USAID/Guatemala and the GOG. Illustrative examples of these agreements are included as Annex K.

h. Funds Transfer and Loan Planning Process: The effective transfer of credit funds from the GOG to participating banks, and subsequently, from the banks to the small coffee producers will require annual financial planning exercises between USAID/G and the GOG, and between the participating banks and ANACAFE. The GOG will provide the local currency necessary to capitalize the credit trust accounts on an annual basis. These funds will be administered through tripartite agreements between the Government of Guatemala (e.g., the Central Bank and/or the Ministry of Finance), ANACAFE, and participating public and private banks. As was noted earlier, the GOG has committed to make available a total of Q4 million under the 1989 PL-480 Title I Agreement to finance projected lending during 1990. Additional counterpart contributions by the GOG will be provided from Title I

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or other local currency sources that the GOG selects. AID will commit \$1.5 million in DA funds to provide bridge financing to the credit fund until GOG Title I funds have been placed in participating banks. This bridge financing is particularly important to assure that funds are available for project nurseries.

The role of the Bank of Guatemala (i.e., Central Bank) will be limited to administering credit trust funds managed by the public and private sector banks participating in the project. The Central Bank will receive the credit funds transferred from the Ministry of Finance and subsequently capitalize the trust funds (fideicomisos) established in the participating banks. As Administrator, the Bank of Guatemala will track credit disbursement and recovery on a quarterly basis as the banks liquidate outstanding advances and request additional resources. The Central Bank will seek to ensure that adequate funding remains available in the Trust Funds for onlending to farmer beneficiaries, but it will not complete in-depth loan analyses nor detailed portfolio reviews of the credit activities of participating banks. The Bank will participate in annual planning exercises between participating banks and ANACAFE; however, the detailed loan analyses, approval and supervision will be a function of each participating bank, in close coordination with ANACAFE.

The actual transfer of credit funds from the GOG to the participating banks will be achieved through two similar mechanisms:

(1) In the case of the commercial banks, the Ministry of Finance will transfer PL-480, or other local currency resources, to the Central Bank (Banco de Guatemala), the only GOG institution permitted to have financial relationships with the private banking community. The Central Bank will establish trust funds (fideicomisos) in each of the participating private banks and capitalize these with an initial advance. The amount of the advance will be based upon the annual projections to be developed by ANACAFE for each of the coffee producing regions where the project is expected to operate. As loans are approved and disbursed to small farmer participants, the banks will liquidate the outstanding advance with the Central Bank by submitting a listing of all loan disbursements made to project beneficiaries. Simultaneously with the liquidation process, the banks will request an additional advance to recapitalize the trust fund and ensure credit availability. Although it is currently recommended that the advances be liquidated on a quarterly basis, more frequent liquidations and advances may be necessary during periods of peak demand.

(2) A similar mechanism will be used to transfer and administer the funds provided to the Agricultural Development Bank (BANDESA). However, the Ministry of Finance will establish the credit trust fund (fideicomiso) rather than the Central Bank. In both cases, the terms and conditions to be applied in the management of the trust funds (i.e., advance and liquidation procedures, credit policy, reporting requirements, etc.) will be identical.

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Effective coordination between participating banks and ANACAFE will be a function of the Project Management Unit to be established during the project's start-up phase. This Unit will closely monitor all phases of the project through a management information system (MIS), which will include the tracking of all credit operations with project beneficiaries. The Project Management Unit will monitor the progress of both the extension program and the delivery of investment and production financing, identify potential problems, and develop solutions through regular contacts with the GOG, participating banks, and ANACAFE extension personnel.

On an annual basis, USAID/G and the GOG will determine the amount of local currency which will be made available to the project credit fund for relending to small coffee producers. The amount of funding required will be determined by annual projections developed by participating banks and ANACAFE, including the estimated number of new farmers to enter the project as well as the ongoing financial relationship (i.e., production credit) with earlier beneficiaries.

Successful coordination between ANACAFE and participating banks will be critical to long-term and sustainable success of the credit component. Although project funds will be used to finance borrower investment costs during Years 1 and 2, as well as production credit required in Years 3 and 4, beginning in Year 5 the farmer's annual credit needs will be financed by short-term production loans from the participating banks using other sources of funding. These annual loans will be rolled over as required, essentially providing medium-term credit. Therefore, project beneficiaries must demonstrate their credit-worthiness to participating banks to ensure continued access to annual production credit. For this reason, the ANACAFE training programs will also provide orientation to the beneficiaries in such areas as the preparation of farm plans, loan application, guarantee requirements, and legal obligations incurred in obtaining credit.

3. Specialty/Gourmet Coffee Certification and Export Promotion

The specialty/gourmet coffee quality control and marketing initiative will be initiated under the project and tested as a separate, yet related component to technification and processing activities. The primary focus of this component will be to assess the feasibility and potential for capitalizing on the comparative advantages of Guatemala in the production, processing and marketing of the high altitude, higher quality coffees in demand on the premium specialty coffee markets in the U.S. and elsewhere. Such coffees command premiums of up to \$20 per cwt. over regular coffee. The mechanism to be used will be a promotional "push through" campaign directed toward gourmet coffee wholesalers that will promote Guatemalan quality coffees and establish the reliability and value of a new quality certificate. Because of the limited focus of the promotion campaign, it is expected to cost no more than \$150,000. Complementing this effort will be the issuance of a new grade certificate by an independent authority such as ICAITI that will guarantee specific quality and characteristics for the coffee based upon altitude, variety, fermentation and drying methods.

All Guatemalan coffee producers will benefit from the certification activity and the promotion campaign, both of which will be partially financed on a fee basis until a determination can be made that they can be self-sustaining. In particular, project beneficiaries will be in a better position than most to comply with the quality characteristics necessary for issuance of the certificate since they will have access to quality control assistance from ANACAFE.

During intensive review, a preliminary study was completed to determine interest and viability of having a portion of small farmer coffee production specifically targeted to the higher-premium specialty export market. The study identified a market window of opportunity for Guatemalan coffee. Guatemala has a potential advantage over other producer countries in much the same way as Mexico, Central America and other countries in this hemisphere have in the development of the non-traditional agricultural export market. Advantages include the existence of higher altitude coffee growing areas ideally suited for the production of the finest quality coffees; the existence and transfer capability of modern coffee production technology, to be employed by small farmers under the project; and, the availability of low cost labor and accessible and inexpensive transportation given the proximity of Guatemala to major markets. All of these factors support the need for a closer examination of the potential role of small farmers and the participation of ANACAFE in developing a niche within the specialty coffee market to more fully achieve the project objectives of increasing small farmer incomes and product value.

The pilot effort has the following objectives: (1) insure that small farmers receive maximum compensation for their coffee production, and benefit directly from the improved quality and higher premiums paid for their export product; (2) increase market demand for high quality Guatemalan coffees at each stage in the export market process (i.e., importer, roaster, distributor, and consumer); (3) increase the value of high quality Guatemalan coffees and thus generate higher "premiums" for these coffees over other specialty coffees; and, (4) determine the feasibility of developing "quality controlled" production and processing centers for the growing, harvesting, and processing of coffees. This may be achieved through improvements in raw materials, processing and handling procedures, and the use of specialized equipment, and would result in improved coffee quality with self-sustained production and promotion over the longer-term.

This activity will be managed directly by ANACAFE, although an independent authority such as ICAITI will be identified to issue the Certificates of Quality. A local long-term professional in the Project Management Unit will be hired to manage this activity. This individual will be assisted by short-term technical consultants in gourmet coffee marketing. A U.S. firm will be hired separately to handle the promotion campaign in the U.S. ANACAFE will cover the up-front costs of establishing the independent certification unit. The specific strategy to accomplish the objectives of this component includes the following actions, each of which will be assessed and incorporated into the project implementation plan, if deemed appropriate, over the eight year life-of-project:

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1. Establish criteria by which all coffees may be evaluated and graded to determine their "premium" value in the specialty coffee market (i.e., isolated growing/processing; plant type and age; altitude, soil, climatic conditions; harvesting; and, wet and dry processing and grading techniques);
2. Develop the control mechanisms through which quality evaluations can be sustained and documented in order to allow "specialty graded" coffees to be verified, documented, and exported in a controlled and consistent fashion;
3. Develop and implement an aggressive and well-targeted "push through" promotional program which will increase and maintain the value and demand for high quality Guatemalan coffees on all market levels;
4. Develop a promotional/educational package of literature for roaster/distributors, roaster/retailers, and retailers which includes promotional ad slicks to be used by roaster/distributors to build sales in specific grades of high quality Guatemalan coffees; and,
5. Develop a quality certificate issued by an independent institution indicating the production, processing and cup quality ranking of each exported lot of coffee to roasters.

The most successful promotional program in the U.S. Specialty Coffee market has been the "pull through" advertising campaign employed by the Colombian Coffee Federation. By creating consumer demand, the program has been successful in "pulling" the product through traditional marketing channels of importer, roaster, distributor, and retailer. As a result, wholesale and retail sales volume of Colombian coffees are approximately five times greater than any other varietal coffee in the Specialty Market.

An evaluation of current market conditions shows that the Specialty Coffee Market is the fastest growing segment within the U.S. coffee industry. This fast growth over the past ten years has created large number of roaster/distributors, roaster/retailers, and retailers of Specialty Coffees who gain significant profits from specialty coffee, while knowing little about the technical nature of Specialty Coffees. The promotional activities of the project component will thus provide information and promotional tools communicating the superior quality of high-altitude Guatemalan coffees. The essential elements in the initial design and production of the specialty coffee facility will be the establishment of distinctively improved quality standards that are definable, achievable, enforceable and certifiable.

4. Management Information System

The purpose of the Management Information System (MIS) within the Small Farm Coffee Project is to provide a quantitative overview of implementation progress for each component of the project. The development of

an accurate, responsive MIS is crucial to assure that problems are identified and resolved quickly and that any necessary design or implementation change is made evident and carried out. The information to be provided will be disaggregated by financial and physical components. The financial component will include obligations and expenditures, both scheduled and actual, while physical data will be related to progress in achievement of outputs. Although some outputs may be difficult to quantify, such as institutional strengthening, the MIS will assess progress by measuring key indicators to determine the magnitude of change over each trimester.

Of particular importance to track will be the flow of credit funds from the Ministry of Finance through the Central Bank to participating banks. The Mission is interested in monitoring the comparative performance of participating banks, including such factors as approval and disbursement time, collection rates, lending volume, and, eventually, commitment of the banks' own capital for small farmer coffee lending.

Information on financial matters and indicators will be complemented by a brief report which will describe progress, identify constraints impeding progress as planned, and make recommendations for action to be taken to address those constraints. Data will be obtained from the reports of extension agents, evaluations, and other reporting and analysis techniques as determined by USAID, ANACAFE, and the technical assistance team.

One possible approach would be to use the rapid appraisal technique. Rapid appraisal (RA) techniques are based on the recognition that the context of the data is as important as the data themselves, and that variations in the data may be more revealing than the averages that are often the sole output of conventional surveys. Above all, the RA methodology is intended to be a highly iterative process. Learning takes place in the field as part of the dialogue with farmers and other members of the RA team. Accuracy is achieved by repeated cross-checking of information from several directions using different techniques, such as: (1) secondary data review; (2) direct observation; (3) semi-structured interviews; and, (4) analytical workshops.

Baseline data gathering will be an on-going process and will be initiated during the first year of the project. A plan will be developed to determine the most effective schedule for any needed surveys to be undertaken in each of the project areas. The final impact evaluation is planned for April/May 1997. The Project Management Unit, with support from the technical assistance team, will design the basic information instruments, data processing programs and analytical measurements in order to standardize them throughout ANACAFE, AID and possibly within the participating financial institutions as well.

C. Project Outputs/End-of-Project Status

Based on the planned level of inputs and the project's implementation plan, the following project outputs are expected:

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1. 8,100 small coffee producers trained in modern, appropriate renovation and production technologies.
2. 800 small producers trained in improved coffee processing technology.
3. 4 ANACAFE technicians trained to M.S. level in modern coffee technology.
4. 60 ANACAFE extension agents trained.
5. 300 para-technicians trained.
6. ANACAFE project management unit established and operating with required levels of staffing and financial resources.
7. X No. processing facilities constructed.
8. Credit trust funds established in X No. of private commercial banks and BANDESA to finance coffee renovation and production credit.
9. Quality certificate developed and issued by independent institution to certify coffee quality and characteristics based on altitude, variety, fermentation and drying methods.
10. Promotional campaign established to promote high quality Guatemalan coffees in export markets in the U.S. and elsewhere.

At the end of eight years, the following conditions should exist to indicate that the project purpose - to increase small coffee farmer incomes by increasing production, productivity, and product quality - has been achieved:

1. Approximately 8,100 manzanas of coffee will have been replanted to high-yielding, export-quality coffee, and new production practices will have been adopted by an estimated 8,100 small coffee growers.
2. At full production (o/a 4 years following renovation), farmers will be earning at least Q2,500 in net income per manzana of improved coffee per year, representing a five-fold increase over current annual net income (Q500).
3. Average annual small farmer coffee yields, on renovated manzanas in full production, will have increased from 7 CWT. per manzana to 30 CWT./manzana (parchment).
4. An increased percentage of small farmer coffee output will be marketed at the dry parchment stage, rather than at the lower-value cherry stage.

5. An effective small coffee farmer assistance program will have been institutionalized within ANACAFE, and evidence will exist to show that the program is being expanded to additional small coffee producers.
6. Small producer coffee renovation and production credit requirements are being met by private and public financial institutions in coffee producing regions of Guatemala; minimum 90% repayment rate can be demonstrated.
7. A pilot gourmet coffee export marketing and quality certification program will have been established and be functioning effectively to increase the sale of small producer output in the export market (U.S., Europe, possibly Asia).

D. Project Beneficiaries

The project's principal direct beneficiaries will be 8,100 small coffee producers who will significantly increase their production, yields and income. These small producers will benefit from the total technification program, which includes the transfer of the tech-pack, training in its application and effective utilization and related technology and procedures, and technical assistance in the processing of coffee and in enhancing small farmer marketing opportunities, particularly in the higher price specialty coffee markets. Farmers will also directly benefit from assistance in preparing loan applications, improved financial organization and management of farm operations, and, important to the achievement of project objectives, access to commercial credit needed to finance the technification of one manzana of land. Based on production from one manzana of renovated coffee, participating farmers are expected to increase annual net income from a current average of Q.500 to more than Q.2,500 per manzana. In all, an estimated 45,000 rural poor are expected to benefit from the project.

A number of institutions and individuals can also be expected to benefit directly or indirectly from the project. Principal among these beneficiaries is ANACAFE which will be provided with a significantly expanded capability to respond to small coffee producer needs. Planned short-term technical expertise (38 person months) will upgrade ANACAFE in several critical areas of disease research and pest management, data gathering and analysis, processing and marketing for the specialty coffee market, and product handling and appropriate modes of transportation. The four long-term participants, who will obtain MSc. level degrees in related fields of coffee production, will form the future nucleus of technical expertise within ANACAFE.

Commercial banks will develop a new clientele for loans, savings and bank services. By contributing to their increased portfolio development and earnings, the banks will, in turn, have played a key role in the financing of small coffee farmer credit needs. The cooperative federations will also benefit indirectly through technical assistance and credit to some of their beneficiaries, and their technical personnel will also be eligible for technical training under the project.

Other benefits are attributed to the generation of significant new employment, and the upgrading of existing jobs owing to the project's training and technical assistance programs. For example, assistance provided in on-farm technification and the processing of coffee will require additional labor to meet increased production levels. These workers will also have the opportunity to observe and/or participate with the target group farmer during the training sessions provided by project extensionists. Additional jobs will be created through the process of marketing the increased coffee production. Whether through normal channels of distributing small farmer product or by way of the proposed specialty coffee processing and marketing activity, the project will contribute to the development of many employment opportunities.

IV. COST ESTIMATE AND FINANCIAL PLAN

The total estimated cost of the Small Farmer Coffee Project is \$25 million over an eight-year implementation period. Of the total, AID will contribute \$11 million in ARDN grant funds; the Government of Guatemala will provide the equivalent of \$9.25 million in local currency; ANACAFE will contribute \$3.75 million to the project; and private and public sector banks will provide an estimated \$1 million in production credit beginning in the fifth year of the project.

Table I, below, provides a summary project budget by input.

AID funds will finance long and short-term technical assistance (\$2.2 million); off-shore and in-country training (\$1.3 million); vehicles and equipment (\$1.2 million); the operational costs of the Project Management Unit, Management Information System, the expanded small farmer program, speciality coffee marketing activity, and limited support to BANDESA (\$2.4 million); evaluation and audit (\$0.35 million); publications (\$0.35 million) and a portion of the credit component (\$1.5 million). Approximately \$1.2 million has been calculated for inflation using a 10% inflation factor, compounded, while \$0.5 has been budgeted for contingencies (equivalent to 4.5% of LOP project costs). Of the total AID contribution, approximately 32% will be used to finance foreign exchange requirements (principally technical assistance, participant training, and vehicles). The balance of AID financing will be used for local costs: equipment procurement, a portion of ANACAFE's operating costs, in-country training costs, credit, one long-term Guatemalan for the specialty coffee component, and local costs of evaluations and financial reviews.

The Government of Guatemala has committed PL-480 Title I local currency generations totalling Q4 million under the 1989 PL-480 Title I Memorandum of Understanding to finance the creation of fiduciary accounts with selected commercial banks and BANDESA. An additional Q21 million will be provided by the GOG to fully capitalize the credit component over the life-of-project. These accounts will be capitalized with annual advances, the amount of which will be determined by ANACAFE as a factor of the preselection of beneficiaries from among the "Grupos de Amistad y Trabajo".

The Ministry of Finance will represent the Government of Guatemala in the creation of these trust accounts, and detailed Management Agreements will be signed with each of the participating banks. Examples of these Agreements are included in Annex K. As stated earlier, all of the GOG credit resources will be disbursed to the participating banks prior to the use of reflows for relending to new project participants. It is anticipated that these credit funds will be sufficient to finance the renovation of 4,500 manzanas of coffee during the first five years of the project.

BEST AVAILABLE DOCUMENT

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TABLE 1

Small Farmer Coffee Project Budget (\$000)*

	<u>AID</u>	<u>ANACAFE</u>	<u>GOG</u>	<u>PRIVATE BANKS</u>	<u>TOTALS</u>
TECHNICAL ASSISTANCE	<u>2,188</u>	-	-	-	2,188
Long-term advisors (3) (12 person years)	1,650	-			
Short-term Advisors (38 person-months)	539	-			
TRAINING	<u>1,346</u>	<u>455</u>	-	-	1,801
Participant					
Long-term (4 MSc)	200	-			
Short-term (60 months)	240	-			
In-country	906	455			
COMMODITIES	<u>1,192</u>	<u>512</u>	-	-	1,704
Vehicles	672	512			
Equipment	520	-			
ANACAFE					
Technology Transfer	280	-			
Management Info	80	-			
Specialty Coffee	50	-			
Project Implementation	65	-			
BANDESA	45	-			
OPERATING COSTS	<u>2,426</u>	<u>2,033</u>	-	-	4,459
ANACAFE					
Technology Transfer	600	2,033			
Management Info. System	170	-			
Project Management Unit					
Personnel	752				
Operations	384				
Specialty Coffee	400				
BANDESA	120				
CREDIT FUND	<u>1,500</u>		9,250	1,000	11,750
Renovation/Production	500				
Processing	1,000				
PUBLICATIONS	<u>350</u>	-	-	-	350
EVALUATION AND AUDIT	<u>350</u>	-	-	-	350
INFLATION	<u>1,174</u>	<u>474</u>	-	-	1,648
CONTINGENCY	<u>475</u>	<u>275</u>			750
TOTALS	<u>11,000</u>	<u>3,749</u>	<u>9,250</u>	<u>1,000</u>	<u>25,000</u>
	=====	=====	=====	=====	=====

*Total subject to rounding error.

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ANACAFE will finance administrative support, accounting and reporting required for the project and implement the technification program among the small farmer members of the Grupos de Amistad y Trabajo through the provision of technical assistance, training and supervision of project participants. It will also finance vehicles and maintenance costs for all project-funded vehicles. ANACAFE will provide the staff required to prequalify all potential borrowers, assist in the preparation of feasibility analyses and loan documentation, supervise the investment of financing, and assist the participating banks with loan promotion and collection.

Finally, as noted above, it is intended that commercial and public banks will provide an additional \$1 million in production credit after the fourth year of the project (renovation and production credit will be financed by the GOG using local currency and by AID in years 1-4 of the project).

Table 2A, below, provides a summary budget by component and Table 2B shows a summary of projected annual expenditures.

Table 2A: Budget Summary by Component (U.S.\$000)

<u>COMPONENT</u>	<u>AID</u>	<u>ANACAFE</u>	<u>GOG</u>	<u>PRIVATE BANKS</u>	<u>TOTAL</u>	<u>%</u>
Credit	1,745	-	9,250	1,000	11,995	48.0
Technology Transfer and Processing	4,647	3,000			7,647	30.6
Management Informa- tion System	375	-	-		375	1.5
Speciality Coffee Unit	909	-	-		909	3.6
Project Management Unit	1,325	-	-		1,325	5.3
Evaluation and Audit	350	-	-		350	1.4
Inflation	1,174	474			1,649	6.6
Contingency	<u>475</u>	<u>275</u>	<u>-</u>	<u>-</u>	<u>750</u>	<u>3.0</u>
TOTAL	11,000	3,749	9,250	1,000	25,000	100.0

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Table 2B: Summary of Projected Annual Expenditures (U.S.\$000)

<u>YEAR</u>	<u>AID</u>	<u>ANACAFE</u>	<u>GOG</u>	<u>PRIVATE BANKS</u>	<u>TOTAL</u>	<u>%</u>
1	1,098	26	95	-	1,219	4.9
2	1,796	185	387	-	2,368	9.5
3	1,993	298	837	-	3,128	12.5
4	1,547	460	1,667	43	3,718	14.9
5	1,306	605	2,101	104	4,116	16.5
6	1,087	605	1,949	183	3,824	15.3
7	1,081	749	1,362	278	3,470	13.9
8	<u>1,092</u>	<u>822</u>	<u>852</u>	<u>391</u>	<u>3,157</u>	<u>12.6</u>
TOTAL	11,000	3,749	9,250	1,000	25,000	100.0
%	44.0	15.0	37.0	4.0	100.0	

The following tables provide additional information on project financing:

Table 3 - Annual contributions by source, project component and type of input

Table 4 - AID financing disaggregated by foreign exchange and local costs.

Table 5 - AID financing by project component and type of input.

Table 6 - AID financing by activity line item.

Table 7 - indicates the recurring costs to be met by ANACAFE over a 7-year period. Costs shown for years nine through 15 (\$1.1m.-\$1.4m. per year) are based on an extension program similar to ANACAFE's present expenditure level for technical assistance and training for small coffee producers or \$1.2m./year, in current dollars. ANACAFE will continue to emphasize farmer and technician training, and maintain and support a technical team at the level reached at the end of the project (approximately 60 extension agents). To a large extent the management information system and Project Management Unit will be incorporated into ANACAFE's support function, thus enabling it to realize certain economies, especially when project reporting requirements are eliminated. The Specialty Coffee activity will, likewise, become integrated into the structure and budget of ANACAFE, with similar savings in personnel and administrative expense.

The GOG contribution to a rotating Credit Fund will be from PL-480 Title I local currency generations, and will be distributed over the eight years as demonstrated in Table 3. It is estimated that first-round use of the Fund will permit the renovation of 4,500 manzanas of coffee. The \$1.5 million of complementary credit funds provided by AID will guarantee a smooth start and bridge financing in the case of possible gaps created in the GOG contribution caused by delays in PL-480 negotiations. This is particularly important in the initial establishment of nurseries in the early project years.

Table 8 - provides detail on planned AID expenditures for operating costs/institutional support, the specialty coffee unit, and the management information system, and provides a procurement schedule for vehicles and equipment.

Table 9 - shows planned expenditures for the Project Management Unit.

Table 10 - provides details on methods of project implementation and financing. A variety of AID disbursement procedures will be used including direct reimbursement, direct payment, and advances.

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TABLE 3: SMALL FARMER COFFEE PROJECT --Budget by Source and Fiscal Year (U.S. \$000)
Fiscal Years:

COMPONENT	Sources	1			2			3			4			5		
		AID	ANACAFE	GOG	AID	ANACAFE	GOG									
CREDIT																
a. Credit Fund																
(1) Renovation		100		95	200		387	200	95	837			1667			2101
(2) Processing								160								
b. Operating Expenses		9			14			15			100				200	
c. Training (In-Country)		10			10			10			10				10	
d. Equipment		15			9			3			3				3	
TECHNOLOGY TRANSFER AND PROCESSING																
a. Technical assistance																
(1) Long Term (foreign)		200			400			400			300				100	
(2) Short Term (foreign)		43			99			99			43				28	
b. Training																
(1) Participant																
(a) Long Term					25			50			50				50	
(b) Short Term					30			30			60				20	
(2) In-Country		30			20	50		70	45		80	107		80	107	
c. Operating Expenses		52	26		63	103		75	140		82	238		81	286	
d. Vehicles and Equipment																
(1) Vehicles		32			64			64	64		64	64		64	96	
(2) Equipment		60			45			45			30			15		
e. Publications		26			30			50			50			50		
MANAGEMENT INFORMATION SYSTEM																
a. Technical Assistance (ST)		28			28			14			14					
b. Training (In-Country)		10			15			15								
c. Operating Expenses		10			15			20			20				20	
d. Equipment		35			30			15								
SPECIALTY COFFEE UNIT																
a. Technical Assistance																
(1) Short Term (foreign)		14			43			28			14					
(2) Long Term (Guatemalan)		50			50			50			50				50	
b. Training																
(1) ST Participant					10			10								
(2) In-Country					5			10			15			15		
c. Operating Expenses		50			100			100			100			50		
d. Equipment		25			7			6			6			6		
PROJECT IMPLEMENTATION UNIT																
a. Technical Assistance (ST)		14			14											
b. Personnel		94			94			94			94			94		
c. Vehicles and Equipment																
(1) Vehicles (6)		64												32		
(2) Equipment		65														
d. Operating Expenses		48			48			48			48			48		
EVALUATION AND AUDIT																
					50			50			50			50		
FLATION																
					169	17		205	30		173	50		159	72	
CONTINGENCY																
					89	15		97	19		75	31		62	44	
TOTAL by SOURCE																
		1,098	26	95	1,796	185	387	1,993	296	837	1,547	460	1,667	1,306	605	2,101
TOTAL by FISCAL YEAR																
		1,219			2,368			3,129			7,574					

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TABLE 3: SMALL FARMER COFFEE PROJECT

COMPONENT	6			7			8			TOTALS				PROJECT			
	AID	ANACAFE	GOB	AID	ANACAFE	GOB	AID	ANACAFE	GOB	AID	%	ANACAFE	%	GOB	%	PROJECT	%
CREDIT										1,745	14.7			9,250	100.0	10,995	45.81
a. Credit Fund																	
(1) Renovation			1949			1362			952	500	4.2			9,250	100.0	9,750	40.6
(2) Processing	200			200			200			1,000	8.5					1,000	4.2
b. Operating Expenses	16			16			16			120	1.0					120	0.5
c. Training (In-Country)	10			10			10			80	0.7					80	0.3
d. Equipment	4			4			4			45	0.4					45	0.2
TECHNOLOGY TRANSFER AND PROCESSING										4,647	42.2	3,000	33.0			7,647	31.9
a. Technical assistance																	
(1) Long Term (foreign)										1,400	12.7					1,400	5.8
(2) Short Term (foreign)	14									326	3.0					326	1.4
b. Training																	
(1) Participant																	
(a) Long Term	25									200	1.8					200	0.8
(b) Short Term	20			20			20			220	2.0					220	0.9
(2) In-Country	125	62		140	47		150	37		695	6.3	455	5.1			1,150	4.8
c. Operating Expenses	85	324		88	443		74	503		600	5.5	2,033	22.2			2,633	11.0
d. Vehicles and Equipment																	
(1) Vehicles	96	96		96	96		96	96		576	5.2	512	5.7			1,088	4.3
(2) Equipment	15			15			15			280	2.5					280	1.2
e. Publications	50			50			50			350	3.2					350	1.5
MANAGEMENT INFORMATION SYSTEM										375	3.4					375	1.6
a. Technical Assistance (ST)										85	0.8					85	0.4
b. Training (In-Country)										40	0.4					40	0.2
c. Operating Expenses	25			30			30			170	1.5					170	0.7
d. Equipment										80	0.7					80	0.3
SPECIALTY COFFEE UNIT										909	8.3					909	3.8
a. Technical Assistance																	
(1) Short Term (foreign)										99	0.9					99	0.4
(2) Long Term (Guatemalan)										250	2.3					250	1.0
b. Training																	
(1) ST Participant										20	0.2					20	0.1
(2) In-Country	15			15			15			90	0.8					90	0.4
c. Operating Expenses										400	3.6					400	1.7
d. Equipment										50	0.5					50	0.2
PROJECT IMPLEMENTATION UNIT										1,325	12.0					1,325	5.5
a. Technical Assistance (ST)										28	0.3					28	0.1
b. Personnel	94			94			94			752	6.8					752	3.1
c. Vehicles and Equipment																	
(1) Vehicles (6)										96	0.9					96	0.4
(2) Equipment										65	0.6					65	0.3
d. Operating Expenses	48			48			48			384	3.5					384	1.6
EVALUATION AND AUDIT	50			50			50			350	3.2					350	1.5
INFLATION	144	78		155	104		170	124		1,174	10.7	474	5.2			1,649	6.9
CONTINGENCY	51	45		50	59		50	62		475	4.3	275	3.0			750	3.1
TOTAL by SOURCE	1,087	605	1,949	1,081	749	1,362	1,092	822	852	11,000	100.0	3,749	41.7	9,250	100.0	24,000	100.0
TOTAL by FISCAL YEAR	3,641			3,192			2,766										

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TABLE 4: SMALL FARMER COFFEE PROJECT -- AID Annual Budgets by Currency (U.S. \$ 000 Equivalents: U.S \$ = 2.7 Quetzales)

SOURCE: USAID	Year	1		2		3		4		5		6		7		8		Totals		Project Totals
		FI*	LC	FI	LC	FI	LC	FI	LC	FI	LC	FI	LC	FI	LC	FI	LC	FI	LC	
CREDIT																				
a. Credit Fund			100		200		300		100		200		200		200		200		1,500	1,500
b. Operating Expenses			9		14		15		16		18		16		16		16		120	120
c. Training (In-Country)			10		10		10		10		10		10		10		10		80	80
d. Equipment			15		9		3		3		3		4		4		4		45	45
PRODUCTION TECHNOLOGY AND PROCESSING																				
a. Technical Assistance																				
(1) Foreign		243		499		499		343		128		14						1,726		1,726
b. Training																				
(1) Participant		20		55		80		110		70		45		20		20		420		420
(2) In-Country			30		20		70		80		80		125		140		150		695	695
c. Operating Expenses			52		63		75		82		81		85		88		74		600	600
d. Vehicles		32		64		64		64		64		96		96		96		576		576
e. Equipment			60		65		65		30		15		15		15		15		260	260
f. Publications			20		30		50		50		50		50		50		50		350	350
MANAGEMENT INFORMATION SYSTEM																				
a. Technical Assistance (ST)		28		28		14		14										85		85
b. Training (In-Country)			18		15		15												40	40
c. Operating Expenses			10		15		20		20		20		25		30		30		170	170
d. Equipment			35		30		15												80	80
SPECIALITY COFFEE UNIT																				
a. Technical Assistance																				
(1) Short Term (foreign)		14		43		28		14										99		99
(2) Long Term (Guatemalan)			50		50		50		50		50							250		250
b. Training																				
(1) ST Participant				10		10												20		20
(2) In-Country					5		10		15		15		15		15		15		90	90
c. Operating Expenses			50		100		100		100		50							400		400
d. Equipment			25		7		6		6		6		6					50		50
PROJECT IMPLEMENTATION UNIT																				
a. Technical Assistance (ST)		14		14														28		28
b. Personnel			94		94		94		94		94		94		94		94		752	752
c. Vehicles and Equipment																				
(1) Vehicles		64								32									96	96
(2) Equipment			65																65	65
d. Operating Expenses			48		48		48		48		48		48		48		48		384	384
EVALUATION AND AUDIT																				
				50	30	20		50	30	20		50		50	50			110	240	350
INFLATION																				
			78	91	84	121	72	101	44	115	23	121	20	135	30	140		352	323	1,175
CONTINGENCY																				
			41	48	38	58	30	45	15	48	4	47	1	49	10	40		139	325	475
TOTALS																				
Total by Currency		415	683	832	964	848	1,145	647	900	383	923	182	905	137	944	206	886	3,555	1,445	11,000
Total by Year		1,098		1,796		1,993		1,547		1,306		1,087		1,081		1,092		11,000		

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TABLE 5: AID PROJECT BUDGET BY COMPONENT (U.S. \$ 000)

COMPONENT	1	2	3	4	5	6	7	8	TOTALS
CREDIT									
a. Credit fund									1,745
(1) Renovation	100	200	200						500
(2) Processing			100	100	200	200	200	200	1,000
b. Operating Expenses	9	14	15	16	18	16	16	16	120
c. Training (In-country)	10	10	10	10	10	10	10	10	80
d. Equipment	15	9	3	3	3	4	4	4	45
PRODUCTION TECHNOLOGY AND PROCESSING									
a. Technical assistance									4,647
(1) Long term (foreign)	200	400	400	300	100				1,400
(2) Short term (foreign)	43	99	99	43	28	14			326
b. Training									
(1) Participant									
(a) Long term		25	50	50	50	25			200
(b) Short term	20	30	30	60	20	20	20	20	220
(2) In-country	30	20	70	80	80	125	140	150	695
c. Operating Expenses	52	63	75	82	81	85	88	74	600
d. Vehicles and Equipment									
(1) Vehicles	32	64	64	64	64	96	96	96	576
(2) Equipment	40	65	65	30	15	15	15	15	280
e. Publications	20	30	50	50	50	50	50	50	350
MANAGEMENT INFORMATION SYSTEM									
a. Technical assistance (ST)	28	28	14	14					85
b. Training (In-country)	10	15	15						40
c. Operating Expenses	10	15	20	20	20	25	30	30	170
d. Equipment	35	30	15						80
SPECIALITY COFFEE UNIT									
a. Technical assistance									909
(1) Short term (foreign)	14	43	28	14					99
(2) Long term (Guatemalan)	50	50	50	50	50				250
b. Training									
(1) Short term participant		10	10						20
(2) In-country		5	10	15	15	15	15	15	90
c. Operating Expenses	50	100	100	100	50				400
d. Equipment	25	7	6	6	6				50
PROJECT IMPLEMENTATION UNIT									
a. Technical assistance (ST)	14	14							28
b. Personnel	94	94	94	94	94	94	94	94	732
c. Vehicles and Equipment									
(1) Vehicles	64				32				96
(2) Equipment	65								65
d. Operating Expenses	48	48	48	48	48	48	48	48	384
EVALUATION AND AUDIT									
		50	50	50	50	50	50	50	350
INFLATION									
		169	205	173	159	144	155	170	1,174
CONTINGENCY									
		89	97	75	62	51	50	50	475
TOTAL	1,098	1,796	1,993	1,547	1,306	1,087	1,081	1,092	11,000

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TABLE 6: SMALL FARMER COFFEE PROJECT: AID Project Budget By Activity Line Item (U.S. \$1,000)

Project Costs	Year	1	2	3	4	5	6	7	8	Totals
CREDIT FUND		100	200	300	100	200	200	200	200	1,500
Renovation and Nursery		100	200	200						500
Processing				100	100	200	200	200	200	1,000
TECHNICAL ASSISTANCE		349	634	592	421	178	14			2,189
Long Term - Foreign		200	400	400	300	100				1,400
Long Term - Guatemala		50	50	50	50	50				250
Short Term - Foreign		99	184	142	71	28	14			539
OPERATING EXPENSES		263	334	352	360	311	268	276	262	2,426
MMCAFE		254	320	337	344	293	252	260	246	
Technology Transfer		52	63	75	82	81	85	88	74	600
Management Info Syst		10	15	20	20	20	25	30	30	170
Specialty Coffee		50	100	100	100	50				400
Project Implement Unit										
Personnel		94	94	94	94	94	94	94	94	752
Operation		48	48	48	48	48	48	48	48	384
BANDESA		9	14	15	16	18	16	16	16	120
TRAINING		70	115	195	215	175	195	185	195	1,345
In-Country		50	50	105	105	105	150	165	175	905
Short Term Participant		20	40	40	60	20	20	20	20	240
Long Term Participant			25	50	50	50	25			200
PUBLICATIONS		20	30	50	50	50	50	50	50	350
COMMODITIES		296	175	153	103	120	115	115	115	1,192
Vehicles		96	64	64	64	96	96	96	96	672
Equipment		200	111	89	39	24	19	19	19	520
EVALUATION AND AUDIT			50	50	50	50	50	50	50	350
INFLATION			169	205	173	159	144	155	170	1,174
CONTINGENCY			89	97	75	62	51	50	50	475
TOTAL		1,098	1,796	1,993	1,547	1,306	1,087	1,081	1,092	11,000

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TABLE 7: SMALL FARMER COFFEE PROJECT -- ANACAFE Recurring Cost Budget (U.S. \$000)

COMPONENT	Year:	9	10	11	12	13	14	15	Totals
TECHNOLOGY TRANSFER AND PROCESSING									
a. In-Country Training		128	128	128	128	128	128	128	896
b. Operating Expenses		503	503	503	503	503	503	503	3,521
c. Vehicles and Equipment									
(1) Vehicles		192	192	192	192	192	192	192	1,344
(2) Equipment		15	15	15	15	15	15	15	105
d. Publications		50	50	50	50	50	50	50	350
MANAGEMENT INFORMATION SYSTEM									
a. Operating Expenses		20	20	20	20	20	20	20	140
SPECIALTY COFFEE UNIT									
a. Personnel*		50	50	50	50	50	50	50	350
b. In-Country Training		15	15	15	15	15	15	15	105
c. Operating Expenses*		50	50	50	50	50	50	50	350
PROJECT IMPLEMENTATION UNIT									
a. Personnel		52	52	52	52	52	52	52	364
b. Vehicles			32					32	64
c. Operating Expenses		30	30	30	30	30	30	30	210
INFLATION		111	125	138	152	167	184	207	1,084
TOTAL		1,216	1,262	1,243	1,257	1,272	1,289	1,344	8,883

* Incurred by ANACAFE beginning year 6.

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TABLE 8: SMALL FARMER COFFEE PROJECT: AID Purchase/Expenditure/Procurement Plan (U.S. \$ 1,000)
(Except for Project Implementation Unit)

ACTIVITY	Year	1	2	3	4	5	6	7	8	TOTAL
VEHICLES (Except Proj Impl Unit)										
Quantity		6	4	4	4	6	6	6	6	42
Cost		96	64	64	64	96	96	96	96	672
OPERATIONAL EXPENSES (Except Project Impl Unit)										
Production Tech and Processing										
Demonstration		11	14	15	20	23	25	28	12	148
Research		20	20	20	20	20	20	20	20	160
Communication		2	4	5	7	8	10	12	14	62
Studies and Reports		15	20	27	23	20	20	20	20	165
Miscellaneous		4	5	8	12	10	10	8	8	65
Sub-total		52	63	75	82	81	85	98	74	600
Specialty Coffee Unit										
Support personnel		7	7	7	7	8				36
Travel (domestic)		2	2	2	2	2				10
Studies and Reports		20	35	20	20	10				105
Communications		6	6	6	6	5				29
Marketing Program		15	50	65	65	25				220
Sub-total		50	100	100	100	50				400
Management Info Syst										
Personnel (data mgt)		10	10	10	10	10	10	10	10	80
Office supply		3	3	4	4	4	4	4	4	30
Studies, Rpts & Com		2	4	4	4	4	5	6	7	36
Travel (domestic)		3	3	3	3	3	3	3	3	24
Sub-total		18	20	21	21	21	22	23	24	170
Credit										
Communications		4	5	5	5	5	5	5	5	39
Travel (domestic)		5	6	6	6	7	7	7	7	51
Miscellaneous		2	4	4	4	4	4	4	4	30
Sub-total		11	15	15	15	16	16	16	16	120
TOTAL OPERATIONS		131	198	211	218	168	123	127	114	1,290
EQUIPMENT (Except Project Impl Unit)										
Production Tech and Processing										
Computers		30	15	15						60
Visual aids		8	12	5						25
Office		16	5	5	5					25
Field		6	8	8	10	10	4	2		48
Research/lab		5	10	10	10	6	6			47
Processing			10	20	20	15	10			75
Sub-total		59	60	63	45	31	20	2		280
Management Info Syst										
Computers		15	15							30
Office		7	5	6						18
Software		10	10	5						25
Miscellaneous		3	2	2						7
Sub-total		35	32	13						80
Credit (Office & Supply)										
Office & Supply		3	3	6	6	7	7	7	6	45
Specialty Coffee										
Computer		15								15
Office Equip and Supply		10	7	6	6	6				35
Sub-total		25	7	6	6	6				50
TOTAL EQUIPMENT		122	102	88	57	44	27	9	6	455

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TABLE 9: SMALL FARMER COFFEE PROJECT: Project Implementation Unit (U.S.\$ 000)

ACTIVITY	Year	1	2	3	4	5	6	7	8	TOTALS
PERSONNEL										
Coordinator		38	38	38	38	38	38	38	38	304
Ass't Coordinator/Regional		17	17	17	17	17	17	17	17	136
Data Management		18	18	18	18	18	18	18	18	144
Computer Operator		5	5	5	5	5	5	5	5	40
Accountant		7	7	7	7	7	7	7	7	56
Secretary		6	6	6	6	6	6	6	6	48
Driver		3	3	3	3	3	3	3	3	24
Sub-total		94	94	94	94	94	94	94	94	752
OPERATING EXPENSES										
Travel and Per diem*		18	18	18	18	18	18	18	18	144
Fuel, Maintenance, Repair		5	5	5	5	5	5	5	5	40
Office Supplies		4	4	4	4	4	4	4	4	32
Communications		5	5	5	5	5	5	5	5	40
Reports and Documents		2	2	2	2	2	2	2	2	16
Insurance		2	2	2	2	2	2	2	2	16
Didactic Materials		2	2	2	2	2	2	2	2	16
Short Term Contracting		8	8	8	8	8	8	8	8	64
Misc.		2	2	2	2	2	2	2	2	16
Sub-total		48	48	48	48	48	48	48	48	384
COMMODITIES										
Vehicles (6)		64				32				96
Computers (3)		45								45
Office**		15								15
Field Support		3								3
Didactic Support (proj, photographic, copiers, etc.)		2								2
Sub-total		129				32				161
TOTAL		271	142	142	142	174	142	142	142	1,297

*Per Diem (at \$49/day)
 Coordinator 40 days
 Ass't Coord. 120 days
 Others 33 days
 Driver 150 days
 Int'l \$1200/yr

** Elect typewriters = 1,200
 Office furniture = 6,300
 Copy equipment = 4,000
 Printing = 3,500

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TABLE 10: SMALL FARMER COFFEE PROJECT -- Methods of Project Implementation and Financing (U.S.\$ 000)

COMPONENT	IMPLEMENTATION METHOD	FINANCING METHOD	AMOUNT
CREDIT			
Credit Fund	Intermediate Credit Institution	Advances	1,500
Operating Expenses	Institutional Procedures/Separate Invoices	Direct Reimbursement	120
Training (In-country)	Institutional Procedures/Contractor or Interinstitutional	Advances	80
Equipment	Institutional Procedures/Purchase Orders	Direct Reimbursement	45
PRODUCTION TECH & PROCESSING			
Technical Assistance	USAID Direct/ Profit Making Contractor	Direct Payment	1,726
Training			
Participant In-country	Placed by Mission/Direct Placement Institutional Procedures/Contractor or Interinstitutional	Direct Payment	420
Operating Expenses	Institutional Procedures/Separate Invoices	Advances	695
Vehicles	Institutional Procedures/Pro forma Invoices	Direct Reimbursement	600
Equipment	Institutional Procedures/Purchase Orders	Advances	576
Publications	Institutional Procedures/Pro Forma Invoices	Direct Reimbursement	280
		Advances	350
MANAGEMENT INFORMATION SYSTEM			
Technical Assistance	USAID Direct/ Profit Making Contractor	Direct Payment	85
Training (In-country)	Institutional Procedures/Contractor or Interinstitutional	Advances	40
Operating Expenses	Institutional Procedures/Separate Invoices	Direct Reimbursement	170
Equipment	Institutional Procedures/Purchase Orders	Direct Reimbursement	80
SPECIALITY COFFEE UNIT			
Technical Assistance			
Ex-patriot	USAID Direct/ Profit Making Contractor	Direct Payment	99
Local Hire	Institutional Procedures/PSC	Advances	250
Training			
Participant In-country	Placed by Mission/Direct Placement Institutional Procedures/Contractor or Interinstitutional	Direct Payment	20
Operating Expenses	Institutional Procedures/Pro Forma Invoices	Advances	90
Equipment	Institutional Procedures/Pro Forma Invoices	Advances	400
		Advances	50
PROJECT IMPLEMENTATION UNIT			
Technical Assistance	USAID Direct/ Profit Making Contractor	Advances	28
Personnel (Local Hire)	Institutional Procedures/PSC	Advances	752
Vehicles	Institutional Procedures/Pro forma Invoices	Advances	96
Equipment	Institutional Procedures/Purchase Orders	Advances	65
Operating Expenses	Institutional Procedures/Separate Invoices	Advances	384
EVALUATION AND AUDIT			
	USAID Direct Contract/Profit Making Contractor	Direct Payment	350
INFLATION	-----	-----	1,174
CONTINGENCY	-----	-----	475
		TOTAL	\$11,000

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V. IMPLEMENTATION PLAN

A. Administrative Arrangements

1. Methods of Obligation

AID funds will be obligated through two means:

- a. Handbook 13 Cooperative Agreement with ANACAFE for \$9.325 million, and
- b. Handbook 3 bilateral Project Grant Agreement with the Government of Guatemala for \$1.675m.

A Cooperative Agreement has been chosen as the Grant instrument with ANACAFE to allow for greater USAID involvement in project management and implementation. The Cooperative Agreement will be negotiated and executed by the Regional Contracting Officer in Guatemala. The Ministry of Finance, the Ministry of Agriculture, and ANACAFE will be signatory to the Handbook 3 Project Agreement. Although the signature of ANACAFE is not a legal requirement for the Project Agreement, it will allow for an overall framework for the project with the GOG agreeing to provide the Q25 million to capitalize the credit fund, AID agreeing to execute the separate cooperative agreement with ANACAFE, and an official designation of ANACAFE as the implementing agency for the project.

Under the grant to the GOG, AID will contribute to capitalization of the credit fund, and a limited amount of equipment and operating expenses for rural BANDESA offices located in the project area. The grant to ANACAFE will finance operating, training, vehicles and equipment, and information management costs of executing the project and provide financing for technical assistance, evaluations and financial reviews and audit.

The GOG will agree to make local currency available to capitalize the project credit fund, to be administered through a tripartite agreement between ANACAFE, the Central Bank and the Government of Guatemala. Four million quetzales from the 1989 PL-480 Title I Agreement have been committed as a first tranche of the Q25 million total the GOG will contribute to the credit fund. The remainder will be made available from future PL-480 Title I agreements or other local currency sources, at the option of the GOG.

2. AID Responsibilities

USAID/Guatemala's Office of Rural Development (ORD) will have overall responsibility for monitoring the project. ORD will select as Project Officer an experienced individual with sound agricultural and academic credentials, and a proven record of managing agricultural development programs. The Project Officer will serve as chairman of the Mission Project Committee, which will develop monitoring tasks and mechanisms in coordination with the project's internal management information system, for anticipating

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and resolving problems in an effective and timely way. The Project Committee will have representation from the Project Development, Private Sector, and Controller's offices. The Project Officer, with appropriate Mission staff, Ministry of Finance, and ANACAFE counterparts, will also assist in developing the yearly planning documents needed to allocate GOG resources to the project's credit trust funds.

AID will be responsible for negotiating and awarding a technical assistance contract under competitive bid to a U.S. firm having proven management skills in private/public sector agricultural development, and experience in resolving problems of development in countries such as Guatemala. ANACAFE personnel will participate actively in the contractor selection process. The Request for Proposal and the contracting process will be guided by the following considerations: (a) the firm must have demonstrable experience in management and sub-contracting; (b) to the extent possible, full participation will be expected of Guatemalan firms and individuals in research, follow-up and other aspects of implementation; and (c) the firm must have a demonstrated capacity to provide for the long-term positions of agricultural extension/training and rural credit delivery systems and for the broad array of short-term expertise (estimated 38 person months) required to accomplish the objectives of the project, and in participant training placement and monitoring.

3. ANACAFE Responsibilities

ANACAFE will establish a Project Management Unit which will be responsible for managing the project, including obtaining the participation of specific departments of ANACAFE in carrying out project activities.

The Project Management Unit will perform a wide range of functions that are essential to the effective operation of the project. Coordinating project activities, which include technification, training, credit, processing and marketing, will be the primary responsibility of the Director of the Project Management Unit (PMU). The working relationships developed by the PMU with the Board of ANACAFE, BANDESA, private financial institutions, and AID project management, and the PMU's strategic planning of project events and follow-up supervision and monitoring will be essential to the success of the project. The PMU will also be responsible for procuring all project-related equipment and vehicles (except for BANDESA equipment) and for contracting with a U.S. public relations firm to undertake the promotional campaign (est. cost \$150,000) to promote high quality Guatemalan coffees among U.S. wholesalers.

The PMU will rely on the project's management information system for gathering baseline and ongoing project data on small farmers, disseminating research and analytical information to project extensionists and small farm coffee growers, and for serving as the project's institutional memory. In addition to financial management of the project, the MIS system will track progress toward achievement of projected outputs and provide a basis for objective project analyses for the benefit of project managers when serious shortfalls or problems arise.

The specific roles of ANACAFE and the participating banks are detailed in Annex K which provides a description of the bilateral agreements to be negotiated and signed prior to the disbursement of loan funds from the Project Trust Accounts. (Also see pp. 31-32 for a list of ANACAFE's specific responsibilities in regard to the credit component.)

ANACAFE and the participating banks will have a mutually beneficial relationship which must be built on close coordination in the field. In addition to their technical and training responsibilities, ANACAFE extension personnel will be trained by the long-term credit advisor in loan feasibility analysis, the preparation of loan documentation, and the disbursement procedures of participating banks. Successful implementation of the credit component is directly linked to this pre-selection and pre-analysis process, and the banks will be encouraged to participate in the training of ANACAFE personnel. A loan monitoring system will be established in the ANACAFE Project Management Unit which will closely coordinate with the participating banks and the technical personnel working directly with the farmers.

ANACAFE will provide the number and appropriate types of personnel to manage the project and implement its various technical components. This will require that ANACAFE hire an additional 24 extension agents and seven individuals to staff the PMU (project general manager/administrator, an assistant administrator/coordinator project accountant, computer data specialist, and three clerical/secretarial support personnel). PMU staff will be hired during the first quarter of project implementation for the full eight years of the project; the 24 additional extension agents will be phased into ANACAFE beginning with the fourth year of project implementation. This will create a total cadre of 60 extension agents in ANACAFE (24 new agents plus 36 current agents).

Technical assistance will be provided by the U.S. contractor to complete the needs analysis for the coffee processing facilities. Once a decision is made on the number and types of facilities to be financed under the Project, ANACAFE will complete the individual feasibility studies. Actual construction will be undertaken by individuals or firms contracted by the individuals who have been extended credit. ANACAFE will then provide follow-up assistance to assure effective operation of the facilities.

4. Government of Guatemala Responsibilities

a. Ministry of Finance

The GOG will authorize the use of Title I currency generations, as outlined in the PP budget, to support the project's small farmer credit fund. The Government has committed Q4.0 million for FY 89 and an additional Q25.0 million will be committed over the LOP. As noted on pages 40-42, the Ministry of Finance (MOF) will represent the GOG in the creation of fiduciary trust accounts with BANDESA and participating private banks. The MOF which will transfer Title I funds to the Central Bank which in turn will open the trust funds in participating private banks and BANDESA.

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b. BANDESA

As noted above, BANDESA will manage one of the trust funds which comprise the credit component of this project. As in the case of the private banks, ANACAFE will do the first screening of potential borrowers. From that point on it will be the responsibility of BANDESA to undertake the credit analysis, process and follow-up on the loans, making sure that required funds are available on a timely basis, that loan repayments are made and that reports to AID, ANACAFE and the Central Bank are done accurately and on time.

c. Central Bank

The Central Bank will be responsible for the actual transfer of Title I funds to BANDESA and participating private sector banks. To assure success of this activity the transfers to the trust funds must be made in a timely manner. This is particularly true in the case of the private banks who generally are not comfortable working with the government and could lose interest in the project if trust funds are not replenished within a reasonable time.

5. Private Commercial Banks

As in the case of BANDESA, pre-screening of borrowers will be carried out by ANACAFE. From that point on, each private bank will be responsible for loan review and approval, follow-on farm visits to assist farmers and assure loan repayment, and the provision of quarterly reports to ANACAFE, the Central Bank and AID. In addition, the banks (and project-funded technical assistance personnel) will participate in training ANACAFE extension staff to assure maximum impact of project credit, and its repayment. Critical to long-term project success will be the application of funds from the banks' own resources to finance production credit beginning in project year five. It is this continuity of credit access that will assure the sustained, long-term impact of the project on small farmer coffee producers.

B. Implementation Schedule

The Small Farmer Coffee Project will be carried out over a period of eight years, beginning in July 1989. An illustrative implementation schedule is presented below.

The first year of project implementation will focus on developing and strengthening the management framework for the project with respect to coordinating activities with other project entities, formalizing interinstitutional operating procedures and responsibilities, arranging for and carrying out initial procurement, staff and extensionist training, and project monitoring. Most of the key management systems, particularly those related to monitoring, planning, and evaluations, and project activities will be established and operational by the end of the first year (i.e., mid-1990).

Shortly after the Cooperative Agreement is signed with ANACAFE, a Request for Proposal (RFP) will be issued for the technical assistance contract.

Once the ANACAFE Project Management Unit, corresponding extension staff, and long-term contracted technical assistance are in place and operational, project activities will focus on implementation of field activities, specifically the technification program and corresponding training programs.

Intensive implementation reviews of the project will be held on an annual basis. The USAID Project Committee will meet regularly to monitor progress and identify and resolve implementation problems. A principal focus of both the annual project reviews and the four proposed project evaluations (two internal and two external) will be the level and effectiveness of commercial bank participation in the overall credit delivery system. If small farm coffee growers are to become creditworthy, responsible borrowers as a result of the project, this should be demonstrable by the half-way mark (end of four years) of the project when private banks are expected to begin financing annual small coffee farmer production credit from their own resources.

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ILLUSTRATIVE IMPLEMENTATION SCHEDULE

DATE ACTIVITY

INITIAL START-UP PHASE

6/89 PP Authorized

6/89 Cooperative Agreement with ANACAFE and Project Grant Agreement with GOG signed.

7/89 RFP issued for Technical Assistance contract

7/89 CPs to First Disbursement completed by ANACAFE and the Financial Institutions.

7/89 Credit Fund Agreement and MOU signed between Banks, ANACAFE and MOF. Remaining CPs to disbursement completed.

9/89 ANACAFE management unit structured and all staff hired. Techpack defined and plan for training programs submitted (to whom?)

9/89 Procurement of vehicles, office equipment and project-related technification training materials initiated under ANACAFE host country procurement.

PROJECT YEAR ONE

11/89 Technical Assistance Contract(s) negotiated and signed.

11/89 First group of farmers applies for credit to install project nurseries.

11/89 Group identification, training, credit preparation and monitoring, planning of training sessions and workshop participants.

12/89 Development of work plan for CY 1990.

2/90 Semi-annual project review.

4/90 First group of small farm borrowers approved for credit by commercial banks and BANDESA.

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DATE ACTIVITY

- 7/90 Technification, training, processing and credit technical assistance provided to second major group of small farm growers.
- 8/90 Semi-annual project review held.
- 12/90 Development of work plan for CY 1991.

PROJECT YEAR TWO

- 2/91 Semi-annual project review.
- 3/91 Analysis of processing facilities needs initiated with short-term TA
- 4/91 Technification, training, processing and credit TA continues with major groups of small farmers. Specialty coffee feasibility study completed and recommendations acted upon.
- 6/91 Approximately 10 ANACAFE technicians depart for observational visits to Honduras and Costa Rica coffee projects.
- 8/91 Semi-annual project review.
- 8/91 First long-term participant (of 4 total) departs for MSc degree training in the U.S. or Latin America.

PROJECT YEAR THREE

- 12/91 Annual project work plan.
- 2/92 Semi-annual review.
- 4/92 Major groups of farmers identified for project assistance.
- 4/92 First external mid-term evaluation contracted and initiated.
- 6/92 Second (final) group of ANACAFE technicians departs on observational trips to Honduras and Costa Rica.
- 8/92 Semi-annual review.

PROJECT YEAR FOUR

- 12/92 Annual project work plan.

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DATE ACTIVITY

- 2/93 Semi-annual review.
- 6/93 Approximately 3,000 small coffee growers have adopted the technification methodology, received training in the application and proper use of modern technology, have been pre-qualified and approved for credit financing by local financial institution, and are processing their harvests at their group processing facility.
- 6/93 First internal review (replaces 8/93 semi-annual review)

PROJECT YEAR FIVE

- 12/93 Annual project work plan.
- 2/94 Semi-annual review.
- 8/94 Semi-annual review.
- 9/94 Procurement of specialty coffee processing facility, and hiring of appropriate staff.
- 10/94 Second external mid-term evaluation contracted and initiated.

PROJECT YEAR SIX

- 12/94 Annual work plan.
- 2/95 Semi-annual review
- 6/95 Approximately 4,500 small coffee growers have participated and increased their incomes as a result of the project.
- 8/95 Semi-annual review.
- 10/95 Second internal review

PROJECT YEAR SEVEN

- 12/95 Submission of annual work plan for final 18 months.
- 2/96 Semi-annual review prior to PACD.
- 4/96 Approximately 5,700 small coffee have increased their net incomes more than 50%, based on the production of one manzana of coffee, as a result of the project.

DATE ACTIVITY

PROJECT YEAR EIGHT

- 4/97 Final project evaluation contracted and initiated; recommendations and follow-up actions are presented in the final project report.
- 6/97 PACD.

C. Technical Assistance Plan

Long- and short-term technical assistance for the project will be provided by a single contractor selected via open competitive bid. The Mission has preliminary knowledge of a minority firm interested and capable of providing the required technical assistance. Prior to the issuance of the RFP, the Mission will review with ANACAFE the advisability and interest in contracting such a firm through the Small Business Administration utilizing 8a noncompetitive procedures.

Long-term TA, totalling an estimated 12 person years, is planned as follows:

Expatriate extension advisor for ANACAFE - 3 years.

Expatriate agricultural economist, with background in rural credit programs, for ANACAFE - 4 years.

Guatemalan speciality coffee marketing advisor for ANACAFE - 5 years.

Approximately 38 person months of short-term technical assistance is planned for ANACAFE. Fields include: baseline data development, extension, pest management, training, production, information management, and coffee processing.

See Table 11 for details on the costs and timing of long- and short-term technical assistance.

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TABLE 11: SMALL FARMER COFFEE PROJECT: Technical Assistance (U.S. \$)

LONG TERM	Year	CREDIT					EXTENSION			
		1	2	3	4	Total	1	2	3	Total
Salaries										
Base Salary		70,000	70,000	70,000	70,000	280,000	70,000	70,000	70,000	210,000
Post Differential (15%)		10,500	10,500	10,500	10,500	42,000	10,500	10,500	10,500	31,500
Overhead (80% Sal+Dif)		64,400	64,400	64,400	64,400	257,600	64,400	64,400	64,400	193,200
Sub-total		144,900	144,900	144,900	144,900	579,600	144,900	144,900	144,900	434,700
Allowances										
Quarters		15,510	15,510	15,510	15,510	62,040	15,510	15,510	15,510	46,530
Education		5,800	5,800	5,800	5,800	23,200	5,800	5,800	5,800	17,400
Sub-total		21,310	21,310	21,310	21,310	85,240	21,310	21,310	21,310	63,930
Travel										
To Post and Return		11,000			11,000	22,000	11,000		11,000	22,000
R & R		2,800		2,800		5,600	2,800		2,800	5,600
Home Leave			2,800		2,800	5,600		2,800		2,800
In-Country (at \$ 49/day)**		2,940	2,940	2,940	2,940	11,760	7,350	7,350	7,350	22,050
International (1/yr)		1,500	1,500	1,500	1,500	6,000	1,500	1,500	1,500	4,500
Household		25,000					25,000			
Sub-total		43,240	7,240	7,240	18,240	50,960	47,650	11,650	22,650	56,950
TOTAL		\$209,450	\$173,450	\$173,450	\$184,450	\$740,800	\$213,860	\$177,860	\$188,860	\$580,580
									TA TOTAL	1,321,380

* Four Member Families

** Day/yr: Credit 60
Extension 150

SHORT TERM (Person-months)

Year	1	2	3	4	5	6	7	8	Total
Production Tech and Processing	3	7	7	3	2	1			23
Management Information System	2	2	1	1					6
Specialty Coffee Unit	1	3	2	1					7
Project Implementation Unit	1	1							2
Total	7	13	10	5	2	1			38

COST/PERSON-MONTH

Consulting (22 days at \$250)	5,500
FICA (7.5% of consulting)	413
Overhead (80% of consulting)	4,400
International Travel	900
Per Diem (30 days at \$99)	2,970
Total	\$14,183

DISTRIBUTION:*

Production Technology and Processing (23)
Soils and Fertilization (2)
Pest Management (5)
Extension (3)
Training (5)
Production (3)
Processing (5)
Information Management (6)
Specialty Coffee Unit (7)
Project Implementation Unit (2)

* Numbers in parentheses indicate person-months

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D. Training Plan

Training under the project will be of two principal types: (1) in-country and offshore training for ANACAFE staff, and (2) in-country training for participating small coffee farmers, including para-technicians.

Under the first category, the following types of training were identified during intensive review:

1. Training for agricultural extension agents of ANACAFE (and, to a lesser extent, FEDECOCAGUA and FEDECOVERA) in coffee production technology, credit, effective communications strategies, and coffee processing and marketing.
2. Long-term training at the M.Sc. level for four ANACAFE technicians in agricultural economics and marketing; agricultural extension, agricultural mechanics, and tropical crops/pomology with specialization in coffee.
3. One-week observational trips by 20 ANACAFE technicians to coffee projects in Honduras and Costa Rica. (5 p.m.)
4. Training related to the specialty/gourmet coffee mechanism for processing and marketing. (5 p.m.)
5. Various other regionally sponsored training programs under the PROMECAFE/IICA and CATIE programs. (50 p.m.)
6. Local workshops, 1-2 day seminars and informal classes between extensionists and small farmers.

Training for small coffee producers will include the following:

1. Training for 8,100 small producers in utilization of the technification package.
2. Training in the utilization and management of appropriate facilities to process coffee to the parchment stage.
3. Training for 8,100 small farmer borrowers in on-farm financial management and application for commercial bank loans.
4. Training of para-technicians at the ANACAFE Buena Vista training facility in coffee production technology, credit planning and use, and coffee processing.

Table 12 provides details on the estimated timing and costs of project-funded training.

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TABLE 10: SMALL FARMER COFFEE PROJECT -- Training Plan and Calendar (U.S. \$ 000)

ACTIVITY	Year Source	1		2		3		4		5		6		7	
		AID	ANACAFE												
PARTICIPANT TRAINING															
Long term: At \$25,000/yr/degree				25		50		50		50		25			
Short term: At \$4,000/mo/ppt		20		40		40		60		20		20			20
Sub-total		20		65		90		110		70		45			20
IN-COUNTRY															
Technician															
Long: 4wks;20ppt;800/ppt/wk		6		6		6		6		6		6		6	6
Short: 2/yr;3dy;60ppt;850/ppt		6		6		6		6		6		6		6	6
Para-technician/Coordinator															
Long: 2/yr;2wk;20ppt;800/ppt/wk		6		6		6		6		6		6		6	6
Short: 6/yr;2dy;20ppt;840/ppt		5		5		5		5		5		5		5	5
Farmer: 3dy;var/yr;8ppt;840/ppt		20		14	50	67	45	55	107	56	107	102	62	119	47
Seminars/Conf: 1/yr at \$5000				5		5		5		5		5		5	5
Field days: var/yr;8ppt;86/pptee		6		7		13		19		19		20		20	20
Sub-total		50		50	50	105	45	105	107	106	107	150	62	165	47
TOTAL (By source)		70		115	50	195	45	215	107	176	107	195	62	185	47
TOTAL (Combined)		70		165		240		322		283		257		232	

E. Commodity Procurement Plan

The project will finance the following commodities: (1) field equipment (e.g., soil testing equipment) and extension and technical publications to be used in ANACAFE's training and extension programs; (2) office equipment and materials for the Project Management Unit to be established in ANACAFE; (3) support equipment (e.g., computers, audiovisual equipment) for ANACAFE's data collection, analysis and information dissemination programs; (4) a small amount of office equipment, materials and computers for rural BANDESA offices participating in the project; and, (5) vehicles for ANACAFE.

All commodities will have their source and origin in the U.S., Guatemala, or member countries of the Central American Common Market. Only U.S.-manufactured motor vehicles will be procured. ANACAFE will have procurement authority for all commodities financed under the project with the exception of \$45,000 worth of equipment for BANDESA which will be procured directly by USAID.

ANACAFE, as a 20-year old independent institution with a current annual budget of almost Q14 million, is fully capable of handling the level of procurement anticipated under the project. They practice open competition to the extent possible and their internal transactions are audited annually by both the GOG and a private CPA firm.

The estimate of 74 vehicles to be procured for the project (42 vehicles financed with AID funds and 32 by ANACAFE) is based on transportation requirements for an extension staff that will expand from 34 to 60 over the life of the project and for long- and short-term technical advisors, and the need to replace vehicles every four to five years because of the rough field use they will be given. ANACAFE has duty free privileges and ample experience in the procurement, documentation processing, control, and maintenance of a vehicle fleet. Increased coffee production and export revenues from the project will raise sufficient revenue for ANACAFE to cover all vehicle operating and maintenance costs.

VI. PROJECT ANALYSES (Summaries)

A. Technical Feasibility

The purpose of the project is to increase the income of small coffee farmers. Small coffee farmers number approximately 39,000 and are characterized as being inefficient and producing a relatively mediocre-to-poor quality product. They harvest old trees which should be replaced, and their plantations lack proper fertilization and are usually infected by disease. On the average their yields are less than seven cwt per manzana and, even though they utilize relatively low levels of inputs, their production costs average about Q.110 per cwt. Adequate processing facilities needed to improve the

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quality of and add value to the end coffee product are generally not available. Coffee is planted between 800 and 6,000 feet, on moderate to steep slopes along the east-west band of the central Highlands and in the mountainous areas of Huehuetenango, Quiche, Alta and Baja Verapaz, Izabal and El Progreso.

Small coffee farmers are a fairly homogenous group socioeconomically and share the same limited alternatives for increasing income. These alternatives fall into two basic categories - crop and/or technology diversification. The recommended strategy in the Small Farmer Coffee Project is technology diversification (technification) by partial or full renovation which will allow the farmer to adopt modern, highly effective coffee production techniques.

The primary constraints to a small farm technification program are the present lack of credit and inadequate capacity for providing technical assistance. Basically, the farmer needs to learn proper management techniques and acquire the resources to implement them. Other technical constraints - such as the availability of water, labor, agricultural inputs, and new coffee plants - are not limiting to increased production.

1. Alternative Strategies

Possible responses, as noted above, to increase the income of existing small coffee farmers include: (i) diversification out of coffee into other crops, and (ii) technification of coffee by either improved management of existing stands of coffee, partial renovation, or full renovation. The strategy adopted for this project is technification by full renovation which will permit the greatest increase in productivity and income.

Crop diversification is attractive to many planners who are concerned that coffee has a controlled market and is often in surplus on the world market. The correct response to this marketing concern is to reduce per unit cost of production and produce more of the type and quality of coffee that is in increasing demand in world markets. Farmers who should most seriously consider crop diversification because of marketing concerns are those producing at lower altitudes who cannot produce quality hard bean and specialty coffees. Fortunately, many small Guatemalan coffee producers have the potential to produce these types, given the proper support proposed by this project.

Diversification alternatives to small coffee farmers are fairly reduced because of agronomic limitations. Because of steeply sloping terrain, high elevation, and poor market infrastructure, it is difficult to diversify into temperate fruit and vegetable crops as is being done in other areas of the Highlands, or into melons or other vegetables which are options in the tropical lowlands. There are other tree crop options such as mangoes, macademia, cacao, and citrus, which were promoted in the past by an ANACAFE diversification program but proved to be poor substitutes for coffee because

of the presence of the mediterrean fruit fly, the long waiting period before commercial production, uncertain markets, and a complete lack of production experience on the part of the small coffee producer. Thus, there are currently no alternative activities with better long-run economic promise than coffee. Most alternative crops would involve similar market fluctuations and complex production technology; and, there is little institutional support or infrastructure for alternative crops. The complexity and inherent dangers implied by diversification into "miracle" activities are demonstrated by the Guatemalan cardamom experience which has currently caused financial ruin for thousands of small producers, and the difficulties that small farmer-oriented vegetable enterprises are experiencing. The monetary costs of mounting a program of research, training and extension to identify and verify an alternative crop(s) would be much higher than a program of assistance in coffee production based upon existing knowledge, institutions, and infrastructure, and the economic and social costs of failure would be catastrophic.

A concern raised in the New Project Description review by AID/W was that a complementary diversification option should be considered as a growing number of technified small coffee farmers may push untechnified farmers out of the market. Experience with the Honduras project has shown that diversification should be a second or third stage effort and only after technified farmers have been successfully capitalized. The primary effort toward untechnified farmers should be to assist them to technify; in the interim, they benefit from the increased labor demand on neighboring technified farms.

2. Technification Models

Almost all small coffee farmers currently have untechnified plantations which can be characterized as low input/low output systems, achieving yields of less than seven cwt. per manzana, at a high production cost of Q.110 per cwt. The primary technical constraint is that of old coffee trees at the end of their productive life and a lack of capital to purchase the necessary inputs to take advantage of the limited production potential these trees may still have. Limited capital also forces detrimental marketing arrangements, such as pre-selling their crop to "coyotes" or selling at the unprocessed "cherry" stage, which limits income even further.

Technification includes a broad range of practices based upon certain agronomic principles. Generally, technification includes the increase in foliar area and improvement of plant environment. Partial and complete renovation also emphasizes the introduction of improved varieties. Improved varieties have characteristics such as broad and numerous leaves, many buds, an ample root system, and relatively erect branches. Improvements in the plant's environment include: (i) increasing disposable solar energy, (ii) increasing availability of water, (iii) increasing nutrients, (iv) reducing competition and disease, and (v) improving pruning and plant formation.

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The first technification option, improved management of existing stands of coffee, concentrates on improvement of the plant environment and replacing of old trees with new improved varieties to the limit permitted by investment capital of the farmer. It represents minimal risk for the farmer since credit is not required and the major input intensified is the farmer's labor. This is the primary model utilized by the ANACAFE Grupos de Amistad y Trabajo. However, yield increases are relatively minor (less than 30%) and per unit production costs are only moderately reduced. This technification model was adopted by ANACAFE in the absence of capital to introduce new, improved plant varieties on a significant scale. Both ANACAFE and small farmers would prefer to adopt partial or full renovation technification models if the credit were available. The decision for either full or partial renovation can be made by the farmer and the extension agent based upon the condition of the current planting.

For this project, ANACAFE has developed a technification model easily adapted for either full or partial renovation for small farmers. This package consists of removing the old coffee, planting the newer semi-dwarf varieties selected for their high per-plant yield, planting at high densities, controlling nutrient deficiencies and pests, regulating shade properly and harvesting the crop in a manner that will assure the highest quality end product. This package is similar to those applied by small farmers in Honduras and Costa Rica. It is also the same as that being applied by large farmers in Guatemala with access to credit. Renovation will cost approximately Q.6,000 per manzana over seven years, resulting in production increases of over 300% from 7 cwt. to at least 30 cwt. per manzana and a reduction in per-unit production costs from Q.110 to Q.90 or Q.80 per cwt.

3. Technical Constraints to the Project

The two primary constraints to technification on small farms are lack of effective credit and technical assistance to the farmer. In order to overcome these constraints, the project places great emphasis on technician and farmer training. The existence of 7,700 small coffee farmers already organized into 435 Grupos de Amistad y Trabajo will greatly facilitate the training effort. Getting the materials for technification is not nearly as difficult as learning how to use them. Additional constraints, beyond credit and technical assistance could be availability of: (i) labor, (ii) new coffee trees, (iii) agricultural inputs, and (iv) water.

The labor needed for technification represents a small fraction of total coffee farm labor supply, and the demand for labor in technification comes after the coffee harvest - when there should be labor availability. Total labor requirements for renovating 4,500 manzanas would be equivalent to 1,750 full time laborers for a 90-day period. There are approximately 350,000 laborers participating in the coffee harvest.

The provision of high quality coffee seedlings will be crucial for the success of the project. High quality seed for the nurseries is readily available in country or from CATIE. The demand for coffee seedlings from this

Project will be more than what is commercially available presently in the country. The majority of the seedlings will be produced by selected members of each Grupo de Amistad y Trabajo. Individual loans will be extended to these members, who will produce enough seedlings for the whole group.

The most important agricultural input in the technological package will be fertilizer. While the number of transactions will be significant, the amount of fertilizer needed for the project is not overwhelming. The use of custom-blended fertilizers will be promoted under the project. Soil samples will be taken, and the formulas required can be produced locally in Guatemala.

Water is needed for use in pesticide spraying. Fortunately, this spraying coincides with the rainy season, and water need only be collected. Access to water will also be a determinant as to where processing facilities can be installed. Access to water for processing facilities should only be a problem in the San Vicente de Pacaya and Santa Rosa regions.

4. Conclusion

The strategy of technification is the most feasible solution to the small coffee farmer's immediate problems, and is the best basis for his long-term welfare. It will require, primarily, a significant commitment to training the small farmer and a reliable program of credit. With credit and training provided, technical constraints to the program are manageable.

B. Economic/Financial Analysis

The economic analysis looks at the feasibility and effect of the project at the farm, the project and the national level. The principal indicators examined are profitability of the renovation of traditional coffee areas, the rate of return to the renovation investment and to the project, the cost to ANACAFE on a production and beneficiary basis, and the total effect on export income and employment. Increased scope is given to the analyses by varying key parameters and testing the sensitivity of the project to these changes.

The Farm Level

The proposed renovation activity offers three potential advantages to the participating farmer:

- a. increased production,
- b. greater productivity, and
- c. higher prices.

The first two advantages are evidenced by greater total production, with improved yields and lower per-unit output costs. It is expected that yields will increase from the current average of 7.0 cwt./manzana (mz.) to 30 cwt. on the renovated farms. While it estimated that the costs of production/mz. will rise from the present level on typical traditional farms

of \$283.00 (see Table 1, Annex J) to \$875.00 (including interest payments) (see Table 2, Annex J) on the renovated farms, the cost per cwt. of coffee will drop from \$40.00 to \$34.00. Table 3 of Annex J indicates the comparative costs and benefits of the two production systems, the stream of net benefits over a 15-year period and a 23% internal rate of return to the farmer's investment. In varying the values of the two most important parameters, yield and price, it is seen in the following Tables that at reasonable levels of both, the IRR and net income are satisfactory:

IRR AT FARM LEVEL AT VARIOUS PRICE/YIELD COMBINATIONS

Yield/mz.	Price/Cwt. (\$)			
	50.00	60.00	70.00	80.00
20	(-)	(-)	.01	.13
25	.01	.10	.16	.25
30	.13	.20	.25	.33
35	.21	.27	.32	.39

NET INCOME AT VARIOUS PRICE/YIELD COMBINATIONS (\$)

Yield/mz.	Price/Cwt. (\$)			
	50.00	60.00	70.00	80.00
20	(-32)	168	368	568
25	218	468	718	968
30	468	768	1068	1368
35	718	1068	1418	1768

The foregoing figures can be compared to \$180.00 net earnings at current costs and \$70.00/cwt price on the traditional farm. It is seen that the possible fluctuations in price are easily compensated for by achieving yields that even approach those projected for the renovated area.

The major portion of the investment required for renovation is to be provided to the participating farmer through a medium-term loan at market interest rates, most likely for a term of six years and with a three-year grace period on capital repayment. No grace period is contemplated for interest payments, and to ensure that the borrowers have the capability to meet their obligation under the loan, there will be an analysis of each applicant to evaluate other income sources to be used while the renovated area moves towards full production. The payback schedule has incorporated a "balloon" mechanism which permits the farmer to amortize the debt in accordance with production of the renovated area; that is, as output increases so does the capital payback responsibility. The coefficients used, based on production projections, are 7%, 23%, 35% and 35% in years 3, 4, 5 and 6, respectively. In addition, the farmer is to use only a portion of each year's income from the renovated manzana for capital repayment. In this manner, there will be a positive economic and psychological effect on the farmer when he receives some income from the new production, avoiding the perception of "working for the bank". Table 4 in Annex J presents the loan amortization

schedule in which the loan covers investment and operating costs for the first four years of renovation, at 16% interest, a two-year grace period on capital repayment and at current farm gate prices. Under these conditions, the loan is repaid in the sixth year.

The Project Level

Table 5 of Annex J presents the internal rate of return (IRR) for the Project, in which all costs through fifteen years are included for the production and income obtained. Principal among these costs are production credit from project and bank funds, institution building and support, technical assistance and training. The fifteen year figures reflect the costs and production of the initial 8100 beneficiaries, i.e., those who initiated renovation during the eight years of the project. Coffee prices used are those currently in the market and allowed to increase by 2% per year, and the stream of benefits are net of the production under the traditional system that was replaced. Also included as a cost is the non-credit financed production cost of 75 person days of family labor. For consistency with other calculations, the IRR was computed on the 15-year basis. The IRR for the project over 15 years is 23%, net of possible income effects attributable to the processing and specialty coffee activities.

The behavior of the loan fund over a 15-year period is demonstrated in Tables 6,7 and 8 of Annex J. The initial five years are funded solely by project money, after which new areas are funded by capital reflows. Beginning in year six, it is estimated that the reflows could fund 1,200 mzs. per year without resorting to the reserve fund to cover uncollectible loans. The default rate on both principal and capital is set at 10%, and the tentative distribution of interest collected is as follows:

Participating Bank	6.0%
Bad Debt Reserve Fund	8.0%
ANACAFE	1.0%
Bank of Guatemala	1.0%

While it can be seen that the year-end cash balance is decreasing after year eight, it should be noted that the reserve fund is not utilized to replace uncollected capital, and at the end of a 15-year period, over \$11 million (plus interest) would have accumulated in the fund. In practice, the fund would not be allowed to accumulate, and would be used to replace uncollectable debt.

The National Level

The effect of the project at the national level is estimated with respect to its impact on export earnings and employment generation. Also, the analysis looks at the implications of the project for ANACAFE, in terms of cost per unit of additional production and per small farmer beneficiary.

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Table 9 of Annex J shows the increased export earnings gained from the additional production resulting from the project. For these calculations it is assumed that the quality of coffee is better than that of the traditional producer, thus gaining a premium in world markets (\$10.00 per cwt.). The current distribution of coffee among quota and non-quota markets is maintained; and, because of its higher quality, production under the project replaces inferior quality coffee for export (e.g., non-hard bean), which remains in the local market. Under these conditions, the additional production resulting from the project represents approximately \$100 million in increased export earnings over the 15-year period.

The changes in technology and production in the renovated areas cause large increases in employment opportunity. While this increase is primarily due to a greater demand for harvest labor, additional management practices also contribute to an overall increment of over 50,000 person years of employment generated over the life of the project (15 years), as shown in Table 9 of Annex J.

The major portion of the cost to ANACAFE is represented in areas in which it is already working and directed toward the same small farmer groups it has already established, and on which it expends about 80% of its extension effort. Referring to Table 10 in Annex J it can be seen that over the life of the project, and a post project period of seven years, ANACAFE will have expended over \$10 million and realized additional income of over \$2 million, leaving an apparent net cost to the institution of about \$8 million. This sum greatly overstates the real net cost, due to the reasons noted. If one were to project only that portion of the current ANACAFE budget dedicated to the Small Producer and Agricultural Affairs (extension) Divisions (\$1.2 million in 1988/89) through the 15-year period, it is seen that the institution would spend approximately \$18 million on the same activities required by the project beneficiaries which overlap the current ANACAFE target group. The expenditures over the project period and the resulting production increases translate to a cost of approximately \$6.00 per additional bag of exported coffee and about \$500.00 per beneficiary, the latter comparing favorably with the \$607.00 currently being spent per recipient of ANACAFE's technical assistance, who are farmers producing less than one-fourth of the yields estimated for project participants.

C. Social Soundness

The data for this study were gathered from field visits with small coffee producers in the departments of Santa Rosa, Alta Verapaz, Solola and Huehuetenango. Eight ANACAFE Grupos de Amistad y Trabajo, two FEDECOVERA cooperatives and two FEDECOCAGUA cooperatives were visited. Since this project plans to target independent producers affiliated with the ANACAFE Grupos de Amistad y Trabajo in its initial stage, 51 independent small producers belonging to these groups were interviewed individually. Conversations were also held with the ANACAFE groups and cooperative members as a whole. Data were additionally gathered from conversations with staff members of the relevant organizations in Guatemala City and in the field.

Despite its problems, most noticeably that it is extremely understaffed, the ANACAFE extension effort was found to be successful in motivating small coffee producers to adopt improved production techniques. This was witnessed, among other things, by the fact that 75% of the small producers visited had applied none of the recommended coffee production technologies before joining the ANACAFE groups, whereas 100% had implemented at least some of these technologies after joining the groups. Attendance at the monthly meetings with the extension agents is high, despite the large distances most farmers must travel. The farmers spoken with expressed great satisfaction with the program. Overall, working through the ANACAFE groups appears to be a viable and potentially very successful means of implementing this project.

Secure land tenure is of great importance in projects involving permanent crops such as coffee. Land tenure was found to be secure for the farmers visited, all of whom have actual title to their land or usufruct rights to municipally owned lands.

The use of production technologies was found to vary by department, with higher use of production technologies found among ladinos. Of the farmers visited, the indigenous small producers of Alta Verapaz and Solola were found to apply 13% and 4%, respectively, of the recommended amounts of fertilizer, while the ladino farmers of Santa Rosa and Huehuetenango were found to apply 64% of these amounts. This differential seems to reflect the fact that the indigenous farmers have less access to technology and resources. As indicated above, 100% of the members of the Grupos de Amistad y Trabajo, Ladinos and indigenous, have adopted some recommended technologies after joining these groups.

The degree of renovation of coffee plantations was also used as a measure of the adoption of production technologies. The lowest rates of renovation were found in Alta Verapaz and Solola, where over 90% of the farmers interviewed had renovated less than 50% of their land in coffee. Conversely, 75% of the small producers visited in Santa Rosa and 60% of those in Huehuetenango had renovated over 50% of their land in coffee.

Virtually all of the small producers visited claimed that the lack of access to affordable, long-term credit was their main obstacle to improved coffee production. High access to formal credit was found only in Solola, where 73% of those interviewed had obtained credit from BANDESA. A high degree of dependence on personal funds and loans from intermediaries was found in the other departments. Despite the increased facility of obtaining credit from BANDESA, these are generally annual loans, so that even those with credit from BANDESA noted that they could only maintain, but not renovate their coffee plantations.

Of the population of small producers spoken with, 43% had never had access to formal credit, and of these, almost half had applied for bank loans but had been turned down (mostly due to insufficient documentation), while the other half had never applied for bank credit at all. The reasons given for

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never having attempted to obtain bank credit were an unwillingness to pay interest, excessive red-tape, debt avoidance and others, such as access to credit from family members.

Apart from the lack of access to affordable, long-term credit, marketing was most often mentioned as the major problem faced by the small producers visited. The type of buyer sold to is generally a function of several factors, including the degree of processing of the farmer's coffee, distance from the nearest trade house or beneficio and whether or not the farmer has pre-sold his coffee out to an intermediary.

For most of the small producers visited, obtaining higher prices for their coffee appeared to hold priority over their preference for immediate payment and risk avoidance. For those with dry parchment coffee, the pattern of holding on to their coffee in anticipation of acceptable prices was the norm, accepting deferred payment and the risk of lower prices.

Additionally, all of those currently selling their coffee in cherry and wet parchment form said they would prefer to process their coffee and sell it as dry parchment, despite the fact that this would entail an additional waiting period.

A preference for marketing cooperatively was also shown. When asked what their main marketing problems were perceived to be, 35% of the farmers said that the lack of organization to sell their coffee as a group, and thereby obtain higher prices, was one of their main marketing problems. While the adoption of improved production techniques has led to increased production, this has not been reflected in higher prices. A marketing component should therefore be an integral aspect of this project.

Although the current method of renovating old plantations is to interplant new plants with old ones until initial production, virtually all of the farmers interviewed said they would be willing to cut down one manzana of coffee in order to participate in this project. The difficulty of obtaining long-term credit and the high degree of interest most farmers expressed in obtaining credit for renovation were reflected in the willingness to comply with this condition.

In conclusion, technified coffee production has been shown to provide the highest income potential per farm over other alternatives for small coffee producers. This analysis shows that the large majority of small producers have demonstrated their willingness to invest in the cultivation of coffee as a means of improving their economic condition, and exhibit a high degree of interest in renovating their coffee plantations. The primary limiting factor for most of these farmers is the availability of affordable, long-term credit.

D. Institutional/Administrative Analysis

With the passage in April 1969 of the Coffee Law (Ley del Cafe) Number 19-69 by the Guatemalan Congress, the legal structure and organizational design of the Guatemalan coffee industry was established. This law is the

legal instrument that has regulated and controlled the Guatemalan coffee industry since that time. The maximum authority for the industry, after the President of the Republic, is the Coffee Policy Council (Consejo de Política Cafetera), which is charged with responsibility for the direction, orientation, and development of coffee policy. At the same time, the Coffee Law determined that the execution of that policy should be vested in the National Coffee Association (ANACAFE).

Coffee production in Guatemala is found on about 43,700 farms, of which 39,700 are owned by small farmers, and account for 801,800 hundredweight of green coffee, or 19 percent of Guatemala's total output in 1986/1987. It is estimated that approximately 9,500 small farmers belong to 123 active and registered cooperatives, divided among FEDECOCAGUA, FEDECOVERA and UCONOFEC (Union of Non-Federated Coffee Cooperatives of Guatemala). This last group is organized more for marketing purposes than for production and acquires technical assistance directly from ANACAFE. Of the remaining independent small producers, about 8,000 are members of the Grupos de Amistad y Trabajo of ANACAFE. These are informal groups organized by ANACAFE through which most of its technical assistance to small coffee growers is channelled.

The implementing institution for the Small Farmer Coffee Project will be the National Coffee Association (ANACAFE), which will integrate the project into its existing administrative and technical structure. Project activities will focus primarily on the Grupos de Amistad y Trabajo, which currently are the target for approximately 80% of ANACAFE's outreach effort, and, secondarily, on selected members of the Federation of Agricultural Cooperatives of Coffee Producers of Guatemala (FEDECOCAGUA) and the Federation of Cooperatives of the Verapaces (FEDECOVERA). It should be emphasized that the members of these two federations may have access to the project's credit as individuals, but the project will not make credit available to the federations themselves as they are not financially stable (see below).

1. ANACAFE

Authority and Responsibility

ANACAFE is governed by a Board of Directors and operated by an administrative and technical staff, under the direction of a General Manager. Its executive strength lies with the Board of Directors and especially with its President. The concentration of power in the Presidency of the Board of Directors has consequently diminished the role of the General Manager to one of limited administrative activities. ANACAFE's by-laws establish two year terms for the 80% of the Board's positions that are controlled by the membership of ANACAFE, half of which, or eight seats, being elected or re-elected every year. Thus, in spite of his strong and dominant executive role, the President of ANACAFE normally remains in his position only two years. At the same time, over the past 10 to 15 years there have been frequent changes of the General Manager of ANACAFE. The resulting lack of continuity in the administrative structure of ANACAFE is a weakness and must be considered in the Small Farmer Coffee Project design.

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a. The Board of Directors

The ANACAFE Board of Directors is made up of twenty members, constituted as follows:

a. Two Directors named by the Coffee Policy Council, representing the interests of the non-registered (viz. small) producers;

b. Two Directors named by the President in representation of the national interest with regard to coffee;

c. Sixteen Directors elected by the General Assembly of coffee producers registered with ANACAFE. It should be noted that five regional coffee groups - ACOGUA, ACU, AEC, CARCOR and PROCAFE - have played a prominent role in the annual elections of the Board of ANACAFE. In this sense, there is some continuity on the Board in that each organization maintains representation.

b. Administration

The daily administration of ANACAFE is under the direction of a General Manager, who is supported by an Assistant General Manager and three Division Assistant Managers. As noted in the Table of Organization (See Annex H), ANACAFE operations are divided among four units:

- General Management Division;
- Administration and Finance Division;
- Export Marketing Division; and,
- Agricultural Affairs Division.

i. General Management Division

The Small Producers and Cooperatives Department, under the Assistant General Manager of ANACAFE, is of specific interest to the project. The original function of this Department was to re-register small coffee producers to eliminate fictitious names of producers from the rolls of ANACAFE which had been used in the past to market large farm production, to the detriment of the legitimate small producer. Once that activity was completed, the Department expanded its scope of operation to organize Grupos de Amistad y Trabajo and sponsor group leader training programs, and training in coffee production and crop diversification techniques for group members. This Department has shown itself to be dynamic and aggressive; through September 1988, it had registered 7,730 small producers.

ii. Administration and Finance Division

This division is responsible for ANACAFE's daily management, logistics and accounting; its staff is adequate to coordinate the integration of project administrative activities into the structure of the institution.

The principal contacts with the project would be in the areas of procurement, audit, and the coordinated programming of ANACAFE's budget with regard to counterpart and support activities.

iii. Export Marketing Division

This unit of ANACAFE is responsible for extending export permissions, registry of coffee contracts, and the quality control (coffee tasting) section. This division provides the major window for ANACAFE to the international coffee market, yet has been very traditional in its approach to marketing overseas. Essentially, the focus of "marketing" has been oriented toward the movement and control of product within Guatemala, and efforts to date have been more of passive reporting of international conditions than of an active role in creating markets for Guatemalan coffee and for ANACAFE's member producers and exporters. If a more dynamic role for ANACAFE in "selling" the Guatemalan product is envisioned, additional attention and expertise would be necessary to do so successfully.

iv. Agricultural Affairs Division

The Agricultural Affairs Division is split into the two departments of Coffee Research and Technical Assistance. The Coffee Research Department is involved in basic investigation into the principal aspects of coffee in Guatemala. In order to transfer the technologies and advances stemming from their research and professional contacts, Department technicians have a program of courses for coffee producers, technicians and farm administrators and a system to respond to inquiries from ANACAFE membership.

The Department of Technical Assistance and Cooperation is directly responsible for providing assistance to the coffee producer, primarily in the form of demonstrations and courses, through the Grupos de Amistad y Trabajo. The Agricultural Affairs Division is charged with the largest and most important role within ANACAFE; however, it has not shown particular aggressiveness in confronting the major problem facing coffee production in Guatemala, that of low productivity. Although a low budget may have been an important cause for its poor record up to 1986, since that date the Department has suffered a lack of innovative leadership and direction needed to produce more positive and dynamic results. This has been coupled with the conditions in the field and of the members of the Grupos de Amistad y Trabajo, who have made obvious improvements in productivity by adopting the principal cultural practices recommended by ANACAFE technicians but who have been constrained by economic limitations from incorporating recommended inputs into their production system.

c. Operations

i. Small Producer Activities

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In the production year 1980/1981, the Board of Directors of ANACAFE decided on a new priority in its technical assistance program so as to direct its efforts primarily toward the small producer, and secondarily to the medium and large sized farms. In order to carry out its principal objective of helping the small producer, Grupos de Amistad y Trabajo were formed, and the members were organized and trained in modern coffee production techniques. In the period from 1981 through September 1988, a total of 432 groups, with 8,007 members, were formed. The initial training imparted to each group is based on the demonstration method, using the chronological sequence of planting coffee as the basis. In a second stage, participants are offered courses related to general agriculture, basic administration, and methods for selling coffee and purchasing inputs. Credit is not available to the members of the Group as part of the program; yet, it has had relative success, with ANACAFE statistics showing an average yield of 9.6 hundredweight green coffee produced on the farms in the program for 1987/1988. This yield is close to the national average for medium and large farms.

ii. ANACAFE Income and Budget

The income of ANACAFE is derived from a 1% tax on the FOB value and a fixed charge of Q.0.25 per hundredweight of all green coffee exports. The one percent income on the export of coffee assures that ANACAFE will have sizable financial resources over the next years. During the current 1988/89 fiscal year, the ANACAFE budget totaled Q.13,947,000 (\$5,166,000), with Q.8,584,800 (\$3,180,000) estimated as income from the export of coffee.

ANACAFE is well suited from a technical point of view to supply the major input of personnel and support for project implementation and to identify the bulk of the beneficiaries for the project, particularly through the organized membership of the Grupos de Amistad y Trabajo. The most important unit in terms of project coordination will be the Agricultural Affairs Department; the structure of this department and its present work focus and methodology are well aligned to project objectives and operation. In reality, the project implies a more intensive and broader scope approach in the very areas in which the Department is already working. ANACAFE's Administrative and Financial Division will provide support in its areas of concern, especially in regard to coordinating institutional strengthening activities for ANACAFE.

2. FEDECOCAGUA

FEDECOCAGUA (Federation of Guatemalan Coffee Cooperatives) was started in March 1969 as a non-profit cooperative federation, and has a total of 47 affiliated cooperatives and nineteen pre-cooperatives, with a combined membership of about 6,720 producers. Principal activities are in the areas of commercialization, education and technical assistance. The Federation has seven agricultural technicians to attend to its members, who in some instances receive assistance from ANACAFE technicians.

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The Federations income is derived from the sale of the products it buys from the cooperative membership, particularly coffee. Figures for the 1987/1988 fiscal year show sales of Q13,461,300 (\$4,985,700). The Federation has had a poor operating record. Although it showed a small profit for the most recent reporting period, it has accumulated substantial losses and has substantial long-term debt.

FEDECOCAGUA has the organizational mechanism from which to draw a portion of the candidates for project beneficiaries provided that the technical assistance of the cooperatives be provided by ANACAFE. Due to the financial problems of FEDECOCAGUA, it is recommended that the credit assistance be channelled directly to the beneficiary in the Project, and not through the cooperative nor through FEDECOCAGUA

3. FEDECOVERA

FEDECOVERA was organized in 1979 with 32 cooperatives, all in the Verapaz area. At present, it has an effective membership of 25 cooperatives, with about 5,100 active affiliates. FEDECOVERA is more commercially oriented than FEDECOCAGUA, and its principal activities are the sale of coffee and cardamom, and to a lesser degree of tea and spices. In the fiscal year 1987/1988 coffee and cardamom sales accounted for 95 percent of the gross sales income.

The Federation has two technicians to assist in extension and technical matters for the cooperatives, but they have not been very effective given the large number of farms and vast areas for which they are responsible. The cooperatives that make up FEDECOVERA had an average yield for the 1987/1988 crop of 4.0 hundredweight green coffee, and expect the average for the upcoming crop to be 5.0 hundredweight; both yields substantially below those of the Grupos de Amistad y Trabajo and the national average.

Serious deficiencies have been detected and demonstrated in the FEDECOVERA administration, particularly in its financial management, though as in the case of FEDECOCAGUA, FEDECOVERA has an organizational structure from which candidates for project beneficiaries could be drawn, again, with the provision that technical assistance be provided by ANACAFE. Due to the financial problems of FEDECOVERA it is also recommended that the credit assistance be channelled directly to the beneficiaries of the project, and not through the cooperatives nor through FEDECOVERA.

E. Environmental Concerns

The project is expected to result in increased pesticide use as part of a limited pesticide package that will be employed under the technological package. Only a maximum of five different pesticides will be allowed for use by farmers participating in the project. This pesticide package is similar to ones employed under AID-financed projects in Honduras

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and Costa Rica and is backed by recommendations generated under the AID-financed PROMECAFE project. The primary pesticides will be used for control of coffee rust and the coffee bean borer. PROMECAFE is conducting research for improved control of both these pests, and the project will maintain close communication with PROMECAFE now that its headquarters has been shifted to Guatemala.

No credit funds will be disbursed until a detailed environmental impact assessment (EIA) is completed sometime in July 1989 and the recommendations fully incorporated into the project implementation strategy. The EIA is expected to result in specific recommendations on ways to minimize pesticide use and also the types and levels of training to be given to mitigate the effects of increased pesticide use. The EIA will also examine the effects of the project on land clearing and disposal of coffee processing residue.

Resources necessary to implement the types and quantity of training recommended by the EIA are included in the project budget.

F. Gender Concerns

The project is expected to have a direct and positive impact on women as potential beneficiaries of loans, as family members of farmers receiving credit and thereby increased family income generation, or as a result of increased labor demand on neighboring farms. A significant proportion of the harvesting, processing, and sorting of coffee beans is carried out by women. The social soundness analysis found a significant number of women members of the Grupos de Amistad y Trabajo who would qualify as direct beneficiaries under the project. Anthropological data from southern Mexico also demonstrates that women tend to participate to a greater degree in the production decision-making process in coffee than in traditional crops such as maize, because of the critical role of women's labor.

A detailed gender analysis is being undertaken to determine ways to maximize female participation in project implementation and as direct beneficiaries under the project. It will also attempt to identify potential negative impacts and possible measures that could be taken to rectify them or convert them into beneficial changes. The study will look at differential benefits or negative impacts among various groups of women, i.e., as coffee growers, as laborers on coffee farms, and in processing of the beans, as well as address the issue of how women can maintain control over the income they generate. Numerous studies indicate that where women maintain control over their income, benefits redound not only to women directly but also to children and the aged in the household.

Specific recommendations from the gender analysis will be fully incorporated into the project implementation plan, the training program (particularly for extension agent training), and into the extension methodology.

VII. CONDITIONS, COVENANTS, AND NEGOTIATING STATUS

A. Conditions Precedent to Disbursement for Specific Activities

1. Prior to any disbursement of project funds for purposes other than the contracting of technical assistance and the procurement of project-related goods and materials, ANACAFE will, except as the Parties may otherwise agree in writing, provide evidence that a Project Management Unit has been created within ANACAFE to assure proper functioning and coordination of the project within ANACAFE and with participating institutions;
2. Prior to any disbursement of credit funds for the technification of small farmer coffee crops, ANACAFE and AID shall reach written agreement on measures recommended in the Environmental Assessment to mitigate potential adverse environmental impacts caused by project activities.
3. Prior to any disbursement of credit funds under the project for the technification of small farmer coffee crops, or to the issuance by AID of documentation pursuant to which disbursement will be made, the Government of Guatemala will, except as the Parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID:
 - A tripartite agreement signed between the Ministry of Finance, ANACAFE and the participating financial institutions, for the administration of not less than the Quetzal equivalent of NINE MILLION TWO HUNDRED FIFTY THOUSAND UNITED STATES DOLLARS (\$9,250,000) in counterpart funding and up to an amount of ONE MILLION FIVE HUNDRED THOUSAND UNITED STATES DOLLARS (\$1,500,000) of AID Grant Funds. GOG counterpart funds will finance the cost of the investment in technification of small farm coffee producer beneficiaries.
4. Prior to any transfer of Project funds to BANDESA or to the issuance by A.I.D. of documentation pursuant to which disbursement to BANDESA will be made, BANDESA will, except as the parties may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D.:
 - A resolution of the BANDESA Board of Directors approving a plan to decentralize, in stages, the operations of the District Offices, Agencies and Cajas Rurales located in Regions I, II, VI, and VII in accordance with the actual regional distribution of the bank. This plan will include, but not be limited to, (1) an increase in the limits of loan approval authority in regional offices, Agencies and Cajas Rurales; decentralization of credit analysis, delivery and administrative processes; (3)

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decentralization of administrative and legal loan recovery processes and procedures; and (4) decentralization of accounting and financial systems.

B. Covenants

ANACAFE shall covenant the following:

1. To provide to AID within sixty days of the obligation of funds and every year thereafter, until project termination, an annual, time-phased action plan which describes all project activities planned for the year and planned resource levels (personnel, training, credit, and so on). The implementation plan for the first year shall also describe ANACAFE's implementation arrangements for the project, with a detailed description of counterpart contributions, including personnel and logistic support to the project.
2. To assign Guatemalan professionals with appropriate technical qualifications to serve as counterparts to all project-financed consultants;
3. To participate in external and internal project evaluations to be carried out over the life of the project. These evaluations will be the basis for preparing annual implementation plans and budgets, and shall be presented for AID consideration. The internal evaluations will examine the status of programmed targets, the supervision system, logistics and other elements of the project as a basis for recommending improvements in the project for timely implementation. Except as the Parties may otherwise agree in writing, the external evaluations will include at least the following aspects:
 - (a) Evaluation of progress toward achieving project objectives;
 - (b) Identification and evaluation of problem areas or constraints which impede achievement of outputs;
 - (c) Analysis of ways in which problem areas and constraints may be resolved.
4. Annual independent audits of each activity under the project, in accordance with standard auditing principles, shall be carried out with resources included in this Project Agreement. These audits should be carried out during the first or second quarter of each year. Said audits will in no event replace the periodic Project audits which must be carried out by the GOG Controller Office (i.e., Contraloria de Cuentas de la Republica de Guatemala).

5. An impact evaluation near the end of the project will be carried out with AID grant resources included in this Agreement. The consulting firm or individuals carrying out this evaluation activity will be selected by mutual agreement of the Parties.

C. Negotiating Status

The activities described in this Project Paper have been fully discussed with the appropriate ANACAFE, private bank, and GOG officials. ANACAFE, the private banks, and the GOG support the project as designed, and implementation may proceed upon execution of the Cooperative Agreement with ANACAFE and the Project Grant Agreement with the Government of Guatemala.

VIII. EVALUATION ARRANGEMENTS AND AUDIT PLANS

A. Evaluation

Four project evaluations are planned over the eight-year life of project. Of these evaluations, it is anticipated that the second and fourth (June 1993 and October 1995, respectively) will be internal evaluations, carried out by ANACAFE staff and/or locally contracted individuals qualified to evaluate small farmer coffee export programs. By so doing, ANACAFE will benefit from the involvement of its own project staff in a self-assessment of project constraints, as well as strong points, in regard to achievement of overall project objectives.

The first external evaluation after year two, and the third evaluation at the end of year six, will be contracted with a team of short-term expatriate and Guatemalan consultants, probably through an IQC arrangement. It is the intent of the Mission to contract the services of a minority-owned firm to carry out at least one of the external evaluations, in addition to the contracting of local Guatemalan professionals for the evaluations.

The evaluation scopes of work will focus on the quantifiable outputs as described in the project's Logical Framework, and to the extent possible, the end-of-project-status determination of the accomplishment of the project purpose. To provide a system of continuous monitoring and oversight throughout the life of the project, baseline data requirements will be established early on, most likely during the first quarter of project implementation. The USAID evaluation officer will be involved in this process. The key output of this process will be a framework for evaluation that is timely, well-conceived, focused, uncomplicated and manageable. Emphasis will be placed on continued monitoring and evaluation of BANDESA's progress toward the benchmarks set in its decentralization plan. Project disbursements to replenish the trust fund, opened in BANDESA under this project, will only continue as long as progress, considered by the Mission to be reasonable, continues.

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The first external evaluation, commencing after the end of implementation year two of the project (April 1992), will primarily be utilized to determine if the project is on the desired course. If not, the evaluation will assess the possibility of reprogramming certain resources, which may have no real opportunity of being used over the life the project, and address and provide relevant recommendations for overcoming critical problems/constraints. External evaluation number two (tentatively planned for October 1994) will serve as the main focal point for the USAID Mission and for ANACAFE in determining the potential for full achievement of project objectives.

The Project Officer will facilitate regular dialogue on a planned basis with ANACAFE's Project Management Unit, and will play an integral part in developing the project's yearly implementation plan.

B. Measuring Project Impact

The impact of the project on target farmers and their households will be assessed by means of a three-phased program consisting of:

- Initial baseline information gathering in the project areas;
- Periodic surveys during the life of the project; and,
- A final impact survey.

The objective of the baseline data bank will be to establish information describing the characteristics of farms, farm households, and rural communities to be affected by the project and relevant to its goals and purposes: cropping and livestock patterns and yields; soil conservation and water use; household incomes, purchases, expenditures and consumption; credit and technical assistance received; marketing patterns; family characteristics, education, literacy, and the roles of women and children. The information will be used to (1) aid in the design of project technification and training activities best adapted to local circumstances; and (2) provide a data base against which subsequent changes effected by the project can be assessed by surveys as part of the final impact evaluation.

The baseline data gathering will be an on-going process and will be initiated during the first year of the project. A plan will be developed to determine the most effective schedule for any needed surveys to be undertaken in each of the project areas. The final impact evaluation is planned for April/May 1997. The Project Management Unit, supported by project-funded technical assistance, will assist in the design of the basic information instruments, data processing programs and analytical measurements in order to standarize them throughout ANACAFE, AID and possibly within the participating financial institutions as well.

C. Audit and Financial Reviews

ANACAFE is audited each year by the official GOG Audit Institution, the Contraloria de Cuentas. Funds have been provided for mid- and end-of-project audits to be performed under the IQC for non-federal audits overseen by the Inspector General's Office. The Mission Controller's Office will conduct annual financial reviews either under the IQC mechanism or utilizing the its in-house financial analysts. In addition, it is expected that the major implementing institution, ANACAFE will undertake independent external audits on an annual basis and submit the audit report to the Mission's Project Manager and the AID Controller.

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ANNEX A. LOG FERRE

Goal	Indicators	Means of Verification	Assumptions
Increase the participation of Guatemala's rural poor in sustained, real economic growth.	Income of Guatemalan farmers increases 500% per manzana of coffee by 1997.	National Agricultural Statistics and ANACAFE records, Project MIS.	<ul style="list-style-type: none"> - The markets for coffee remain sufficiently high to enable small producers to increase their production and incomes. - Project inputs achieve desired effect.

Purpose	EOPS	Means of Verification	Assumptions
To increase small coffee farmer income by increasing production, productivity and product quality.	<ul style="list-style-type: none"> - Approximately 8,100 manzanas of coffee will have been replanted to high-yielding, export quality coffee, and new production practices will have been adopted by an estimated 8,100 small coffee growers. - At full production, farmers will be earning at least Q2,500 in net income per manzana of improved coffee per year, representing a five-fold increase over current annual net income (Q500). - Average annual small farmer coffee yields, on renovated manzanas in full production, will have increased from 7 CWT. per manzana to 30 CWT./manzana. 	<ul style="list-style-type: none"> - Project baseline data and periodic evaluations. Extension Reports, ANACAFE records, and MIS. 	<ul style="list-style-type: none"> - No major natural or man-made disasters affect coffee in this hemisphere. - Coffee Price internationally remains economical/profitable. - Demand for high quality coffee continues to grow at a greater rate than total demand. - ICO quota system represents a worst case scenario in the particular case of Guatemala, and its high percentage of quality coffee.

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Purpose	EOPS	Means of Verification	Assumptions
	<ul style="list-style-type: none"> - An increased percentage of small farmer coffee output will be marketed at the dry parchment stage, rather than at the lower-value cherry stage. - An effective small coffee farmer assistance program will have been institutionalized within ANACAFE, and evidence will exist to show that the program is being expanded to additional small coffee producers. - Small producer coffee renovation and production credit requirements are being met by private and public financial institutions in coffee producing regions of Guatemala, minimum 90% repayment rate can be demonstrated. - A pilot gourmet coffee export marketing and quality certification program will have been established and be functioning effectively to increase the sale of small producer output in the export market (U.S., Europe, possibly Asia). 		

Outputs	Indicators	How Verified	Assumptions
1. New production practices transferred to at least 8,100 small coffee producers.	Participating farmers are using new tech pack and are receiving required credit on a timely basis.	Production records, MIS. Extensionist reports. Bank reports. Project evaluations.	- Applied technology continues to be the most appropriate. - Banks participate effectively in program.
2. 800 small producers trained in improved coffee processing.	Training program on schedule and processing plants are constructed, and completed in conjunction with coffee harvesting and marketing schedules.	Baseline data, ANACAFE records and MIS, evaluation.	- Training is effective.
3. Four ANACAFE technicians trained to M.S. level in modern coffee technology.	Participant and third-country trainees complete education and return to ANACAFE.	- University records. ANACAFE records.	- Training received is appropriate. - Participants continue with the project.
4. Sixty ANACAFE extension agents trained in coffee production and credit analysis.	- Training completed per project plan.	- AID, ANACAFE records.	- Sufficient qualified trainees available. - Training content is appropriate and well presented.
5. 300 para-technicians trained.	- Training completed per project plan.	- AID, ANACAFE records.	- Same as No. 4.

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Outputs	Indicators	How Verified	Assumptions
6. ANACAFE, through a project management unit will be successfully coordinating all project activities.	<ul style="list-style-type: none"> - ANACAFE has established a Project office with sufficient personnel and equipment. - ANACAFE budget sufficient to cover project-related positions once project has ended. - Project not missing targets due to administrative shortfalls. 	ANACAFE reports, Project evaluations, MIS.	<ul style="list-style-type: none"> - ANACAFE continues to focus assistance on helping small coffee growers in Guatemala. - ANACAFE provides sufficient financial and personnel support to continue project performance.
7. Investments in processing plants initiated after completion of a needs analysis.	<ul style="list-style-type: none"> - Amount of credit extended to construct plants. - Number of processing plants constructed. 	Bank records, ANACAFE MIS, extensionists reports.	<ul style="list-style-type: none"> - Sufficient credit is available. - The appropriate number of plants are constructed. - Sufficient supervision is available to assure constructed and properly managed. - Coffee processing will result in the higher returns expected in the project paper.
8. Credit Trust Funds will be established in at least one commercial bank to finance the renovation of existing coffee plantings under the project.	<ul style="list-style-type: none"> - Creditworthiness of small coffee farmers established within the commercial banking sector. (90% of loan repaid as scheduled). - Banking agencies are channeling credit to 8,100 small producers selected under the project. 	Bank records, ANACAFE data, Project MIS.	<ul style="list-style-type: none"> - No natural disasters or unforeseen diseases affecting coffee plantings. - Commercial Bankers willing to participate after AID further terminates. - Large majority of borrowers repay as scheduled.

Outputs	Indicators	How Verified	Assumptions
9. Quality certificate developed and issued by independent institution to certify coffee quality and characteristics based on altitude, variety, fermentation and drying methods.	<ul style="list-style-type: none"> - Establishment of independent constitution. Agreement on criteria, and acceptance of criteria and certification, by US and other countries importers 	<ul style="list-style-type: none"> - Evaluations. Records of ANACAFE, and certifying institute. - Survey of importers. 	<ul style="list-style-type: none"> - Sufficient interest and resources to found and sustain new institute. - Appropriate criteria set. - Criteria and certificate acceptable to importers.
10. Promotion campaign established to promote high quality Guatemalan coffees with U.S. Wholesalers.	<ul style="list-style-type: none"> - Development and dissemination of promotional material 	<ul style="list-style-type: none"> - Evaluations. - Survey of importers. 	<ul style="list-style-type: none"> - Appropriate and effective promotional material prepared. - Materials effectively disseminated. - Promotion will affect the demand of importers for Guatemalan coffee.

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Inputs	Indicators	How Verified	Assumptions	
1. Credit Trust Fund	1.1 AID 1.2 GOG 1.3 Private Banks	\$1,500,000 \$9,250,000 \$1,000,000	AID Disbursement records and audit reports.	ANACAFE budget remains fiscally sound.
2. Technical Assistance	2.1 AID	\$2,188,000		PL-480 Title I funds become available from future Agreements to finance credit requirements.
3. Operating Costs	3.1 AID 3.2 ANACAFE	\$2,426,000 \$2,033,000		Private banks have future liquidity to finance production credit with own funds.
4. Training Costs	4.1 AID 4.2 ANACAFE	\$1,346,000 \$455,000		
5. Publications	5.1 AID	\$350,000		
6. Equipment & Vehicles	6.1 AID 6.2 ANACAFE	\$1,192,000 \$512,000		
7. Evaluations and Audits	7.1 AID	\$350,000		
8. Inflation	8.1 AID 8.2 ANACAFE	\$1,174,000 \$474,000		
9. Contingencies	10.1 AID 10.2 ANACAFE TOTAL	\$475,000 \$275,000 \$25,000,000		

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should reflect that BANDESA should not be further burdened with the administration of the project's Trust Fund. If the Bank's participation is necessary, its role should be complementary to, and relatively minor compared to that of private sector financial institutions.

Constraints to Private Sector Participation: Mention should be made in the PID that the difficulties of getting private sector institutions involved in providing credit to rural farmers will be studied during intensive review. As part of this analysis the following will be included:

The institutional analysis of the PP will review the infrastructure and organizational capabilities and interest of potential financial institutions to provide access to credit in the rural areas. A broad range of private sector institutions will be analyzed, including private banks, financieras, credit unions, and cooperatives.

Appropriate terms for interest rates, eligibility, collateral requirements, fees, etc. to promote the participation of private banks and other financial institutions in the project will be mentioned in the PID and analyzed in the PP.

3. Project Design. The project outputs and financial plan will be revised in the PID to reflect the following design decisions:

Project Purpose: The purpose statement should be changed to reflect a focus on coffee farmers' increased incomes and productivity instead of program development.

Components:

The diversification component and the elevation restriction for providing assistance to coffee farmers will be eliminated. Given the former change, the design team should reconsider the project's current title.

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The project design team will re-evaluate the advisability of using scarce funds to provide graduate training to ten technicians when the project requires a large number of technicians trained at a lower level. The option of sending ANACAFE technicians to third countries (e.g., Brazil or Costa Rica) will also be examined.

The need for additional processing facilities will be clarified.

Life of Project (LOP): Due to the fact that effective assistance to coffee farmers requires a long-term commitment and because the project impact can not be determined during the proposed four-year LOP, the design team will propose an extended LOP of 6-8 years.

Project Funding: DA funding for the project will be reduced from \$11.8 million to the \$5.5 million approved in the Mission's Action Plan. The project design committee will attempt to complement available DA funds by analyzing the feasibility of obtaining local currencies (i.e., PL-480 Title I and Section 108) and exploring alternatives to provide more local credit funds. If the final design provides a strong justification for project costs exceeding the \$5.5 million and if approved by the Mission, the Mission will request AID/W to change the authorization level approved in the Action Plan.

Other Actions

4. Target Population

The PP will provide a clearer definition of the target group, including the specification of the criteria to be used in selecting coffee farms for assistance (e.g., farm area in coffee, total farm area, infrastructure, agronomic conditions, etc.)

The project design team will incorporate into the PP methods to assure that the benefits of this project reach the numerous native language-speaking coffee farmers in the Guatemalan Highlands.

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5. Project Coordination

The project design committee will explore different alternatives for a coordinated and streamlined project management system. In addition, the necessity of a Steering Committee within ANACAFE will be re-evaluated by the project design team. The balance between effectiveness of project management and the continuity that the Steering Committee would provide should be explored further, and lessons from projects containing similar management structures will be considered in the reelaboration of this section.

6. Sustainability

The project design team will examine alternatives to assure the sustained benefit of this project within ANACAFE for Guatemalan coffee farmers, and will incorporate their findings into the PP.

Clearances:

Executive Review Committee

DIR, AJCauterucci Pell for
DDIR, PEWhite via [unclear]
PDSO, CHSchoux for CHS
ORD, GStraub [unclear]
PRM, RBurke R 3 10/26/88
ADM, EAker Pell for 10-26-88
OEPA, SSkogstad (info)
OPSP, FManteiga (info)
OHRD, LAyalde (info)

Distribution:

USAID Project Committee

ORD, BRudert, Chair
PDSO, RSteelman, Co-Chair
ORD, BLennon
ORD, RTsuji
OEPA, RReyes
CONT, APontaza

UNCLASSIFIED

PDSO, ANakatsuma:2434C

SC(2) - PROJECT CHECKLIST

Listed below are statutory criteria applicable to projects. This section is divided into two parts. Part A includes criteria applicable to all projects. Part B applies to projects funded from specific sources only: B(1) applies to all projects funded with Development Assistance; B(2) applies to projects funded with Development Assistance loans; and B(3) applies to projects funded from ESF.

A. GENERAL CRITERIA FOR PROJECT

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| <p>1. <u>FY 1988 Appropriations Act Sec. 523; FAA Sec. 634A.</u> If money is sought to obligated for an activity not previously justified to Congress, or for an amount in excess of amount previously justified to Congress, has Congress been properly notified?</p> | <p>This project was notified via GUATE 07145. The CN expired on 7/10/89.</p> |
| <p>2. <u>FAA Sec. 611 (a)(1).</u> Prior to an obligation in excess of \$500,000, will there be (a) engineering, financial or other plans necessary to carry out the assistance, and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?</p> | <p>a) Yes.
b) Yes.</p> |
| <p>3. <u>FAA Sec. 611 (a)(2).</u> If legislative action is required within recipient country, what is the basis for a reasonable expecta-</p> | <p>Not applicable.</p> |

tion that such action will be completed in time to permit orderly accomplishment of the purpose of the assistance?

4. FAA Sec. 611(b); FY 1989 Appropriations Act Sec. 501. If project is for water or water-related land resource construction, have benefits and costs been computed to the extent practicable in accordance with the principles, standards, and procedures established pursuant to the Water Resources Planning Act (42 U.S.C. 1962, et seq)? (See A.I.D. Handbook 3 for guidelines.) Not applicable.

5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and total U. S. assistance for it will exceed \$1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability to maintain and utilize the project effectively? Not applicable.

6. FAA Sec. 209. Is project susceptible to execution as part of regional or multilateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs. Not applicable.

7. FAA Sec. 601(a). Information and conclusions on whether projects will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.

This project will increase the efficiency and impact of small coffee growers in Guatemala. This will increase the quantity and quality of coffee exports, strengthen the private sector firms and individuals involved, including cooperatives, and greatly improve technical efficiency and agricultural practices. It will not have an effect on labor unions.

8. FAA Sec. 601(b). Information and conclusions on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).

8. The major thrust of this project is to improve the quantity and quality of Guatemalan coffee. To the extent this is successful it would make investment in Guatemalan coffee more attractive to U.S. entrepreneurs and will develop and strengthen business linkages between Guatemalan producers and U.S. marketers.

9. FAA Secs. 612(b), 636(h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized in lieu of dollars.

The project budget provides for the GOG to give a counterpart the Quetzal equivalent of \$9.25 million (Title I) to fund an important credit line. Our private sector counterpart ANACAFE will provide the quetzales equivalent of \$3.25 million. Of A.I.D.'s \$11.0 million input, \$7.1 will be in U.S.-owned L/C.

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10. FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release? No.
11. FY 1989 Appropriations Act Sec. 521. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity? No.
12. FY 1989 Appropriations Act Sec. 549. Will the assistance (except for programs in Caribbean Basin Initiative countries under U.S. Tariff Schedule "Section 807," which allows reduced tariffs on articles assembled abroad from U. S.-made components) be used directly to procure feasibility studies, prefeasibility studies, or project profiles of potential investment in, or to assist the establishment of facilities specifically designed for export to the United States or to third country markets in direct competition with U.S. exports, of textiles, apparel, footwear, handbags, flat goods No.

(such as wallets or coin purses worn on the person), work gloves or leather wearing apparel?

13. FAA Sec. 119(q)(4)-(6) & (10). Will the assistance (a) support training and education efforts which improve the capacity of recipient countries to prevent loss of biological diversity; (b) be provided under a long-term agreement in which the recipient country agrees to protect ecosystems or other wildlife habitats; (c) support efforts to identify and survey ecosystems in recipient countries worthy of protection; or (d) by any direct or indirect means significantly degrade national parks or similar protected areas or introduce exotic plants or animals into such areas?
- a) Yes. We will be providing environmental training in the safe usage of pesticides and other agricultural chemicals.
b) No. We are addressing long term environmental issues under other projects.
c) No (See b).
d) No
14. FAA 121(d). If a Sahel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (either dollars or local currency generated therefrom)?
- Not applicable.
15. FY 1989 Appropriations Act. If assistance is to be made to a United States
- Not applicable.

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PVO (other than a cooperative development organization), does it obtain at least 20 percent of its total annual funding for international activities from sources other than the United States Government?

16. FY 1989 Appropriations Act Sec. 538. If assistance is being made available to a PVO, has that organization provided upon timely request any document, file, or record necessary to the auditing requirements of A.I.D., and is the PVO registered with A.I.D.? Not applicable.
17. FY 1989 Appropriations Act Sec. 514. If funds are being obligated under an appropriation account to which they were not appropriated, has prior approval of the Appropriations Committees of Congress been obtained? Not applicable.
18. State Authorization Sec. 139 (as interpreted by conference report). Has confirmation of the date of signing of the project agreement, including the amount involved, been cabled to State L/T and A.I.D. LEG within 60 days of the agreement's entry into force with respect to the United States, and has the full text of the agreement been pouched to those same offices? (See Handbook 3, Appendix 6G for agreements covered by this provision). Yes.

B. FUNDING CRITERIA FOR PROJECT

**1. Development Assistance
Project Criteria**

- a. FY 1989 Appropriations a) No.
Act Sec. 548 (as b) No.
interpreted by
conference report for
original enactment).
If assistance is for
agricultural develop-
ment activities (spec-
ifically, any testing
or breeding feasibil-
ity study, variety
improvement or intro-
duction, consultancy,
publication, confer-
ence, or training),
are such activities
(a) specifically and
principally designed
to increase agricul-
tural exports by the
host country to a
country other than the
United States, where
the export would lead
to direct competition
in that third country
with exports of a sim-
ilar commodity grown
or produced in the
United States, and can
the activities reason-
ably be expected to
cause substantial in-
jury to U.S. exporters
of a similar agricul-
tural commodity; or
(b) in support re-
search that is intend-
ed primarily to bene-
fit U.S. producers?

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- b. FAA Secs. 102(b), 111, 113, 281(a). Describe extent to which activity will (a) effectively involve the poor in development by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, dispersing investment from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward a better life, and otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries.
- a) Yes. The small farmers who are the prime beneficiaries of the project, will receive technical packages and training that will increase their production and income. This higher production will require more labor for its care and harvesting. Much of the technical assistance will be provided by U.S. contractors.
- b) The members of two participating cooperatives will be able to receive the benefits of this project, though the project's main thrust is not cooperative development.
- c) Yes. As it will help small farmers improve their own lives.
- d) As this project will help the farmers and their families, men and women will benefit equally.
- e) This project will have ties to the regional Coffee Export Promotion Project (PROMECAFE) financed by ROCAP, AID's Regional office for Central America. PROMECAFE carries out, and disseminates the results of, research in coffee production, disease control and prevention. It also prepares educational and extension packages of coffee technology. This project's linkage with PROMECAFE will strengthen Guatemala's ties with other C.A. countries participating in the ROCAP project.

- c. FAA Secs. 103, 103A, 104, 105, 106, 120-21; FY 1989 Appropriations Act (Development Fund for Africa). Does the project fit the criteria for the source of funds (functional account) being used? Yes.
- d. FAA Sec. 107. Is emphasis placed on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses and small incomes of the poor)? Yes. For example small coffee processing plants will be set up to handle three or four farms instead of large regional plants.
- e. FAA Secs. 110, 124(d). Will the recipient country provide at least 25 percent of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed" country)? Yes
- f. FAA Sec. 128(b). If the activity attempts to increase the institutional capabilities of private organizations or the government of the country, or if it attempts to Yes

stimulate scientific and technological research, has it been designed and will it be monitored to ensure that the ultimate beneficiaries are the poor majority?

- g. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civil education and training in skills required for effective participation in governmental processes essential to self-government.

Not applicable.

- h. FY 1989 Appropriations Act Sec. 536. Are any of the funds to be used for the performance of abortions as a method of family planning or to motivate or coerce any person to practice abortions?

No.

Are any of the funds to be used to pay for the performance of involuntary sterilization as a method of family planning or to coerce or provide any financial incentive to any person to undergo sterilization.?

No.

Are any of the funds to be used to pay for any biomedical research which relates, in whole or in part, to methods of, or the performance of, abortions or involuntary sterilization as a means of family planning? No

i. FY 1989 Appropriation Act. Is the assistance being made available to any organization or program which has been determined to support or participate in the management of a program of coercive abortion or involuntary sterilization? No

If assistance is from the population functional account, are any of the funds to be made available to voluntary family planning projects which do not offer, either directly or through referral to or information about access to, a broad range of family planning methods and services? No

j. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise? Yes

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k. FY 1989 Appropriations Act. What portion of the funds will be available only for activities of economically and socially disadvantage enterprises, historically black colleges and universities, colleges and universities having a student body in which more than 40 percent of the students are Hispanic Americans, and private and voluntary organizations which are controlled by individuals who are black Americans, Hispanic Americans, or Native Americans, or who are economically or socially disadvantaged (including women)?

Not determined. This project will send 5 individuals to the U.S. for masters level training. They may be sent to HBCUS, but this will be clarified during project implementation.

1. FAA Sec. 118 (c). Does the assistance comply with the environmental procedures set forth in A.I.D. regulation 16? Does the assistance place a high priority on conservation and sustainable management of tropical forests? Specifically, does the assistance, to the fullest extent feasible: (a) stress the importance of conserving and sustainably managing forest resources; (b) support activities which offer employment and income

Yes. An EA complying with Regulation 16 is being prepared. The assistance will (a) support stable and productive farming practices; (b) help conserve forests by helping to increase production on lands already cleared. Since the project will not be implemented in tropical forest areas, the assistance (c) will not support research to expand knowledge of tropical forests; (d) will not undertake action to support biodiversity in forest areas or protect tropical forest ecosystems; (e) will not seek to increase awareness of tropical forest value; and (f) will not utilize the resources of USG agencies.

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alternatives to those who otherwise would cause destruction and loss of forests, and help countries identify and implement alternatives to colonizing forested areas; (c) support training programs, educational efforts, and the establishment or strengthening of institutions to improve forest management; (d) help and destructive slash-and-burn agriculture by supporting stable and productive farming practices; (e) help conserve forests which have not yet been degraded by helping to increase production on lands already cleared or degraded; (f) conserve forested watersheds and rehabilitate those which have been deforested; (g) support and training, research, and other actions which lead to sustainable and more environmentally sound practices for timber harvesting, removal, and processing; (h) support research to expand knowledge of tropical forests and identify alternatives which will prevent forest destruction, loss, or degradation; (i) conserve biological diversity in forest areas by sup-

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porting efforts to identify, establish, and maintain a representative network of protected tropical forest ecosystems on a worldwide basis, by making the establishment of protected areas a condition of support for activities involving forest clearance or degradation, and by helping to identify tropical forest ecosystems and species in need of protection and establish and maintain appropriate protected areas: (j) seek to increase the awareness of U.S. government agencies and other donors of the immediate and long-term value of tropical forests; and (k) / utilize the resources and abilities of all relevant U.S. government agencies?

- m. FAA Sec. 118 (c) (13). If the assistance will support a program or project significantly affecting tropical forests (including projects involving the planting of exotic plant species), will the program or project (a) be based upon careful analysis of the alternatives available to achieve the best sustainable use of the

The assistance will not support a program or project significantly affecting tropical forests.

land, and (b)/take full account of the environmental impacts of the proposed activities on biological diversity?

- n. FAA Sec. 118 (c) (14). Will assistance be used for (a) the procurement or use of logging equipment, unless an environmental assessment indicates that all timber harvesting operations involved will be conducted in an environmentally sound manner and that the proposed activity will produce positive economic benefits and sustainable forest management systems; or (b) actions which will significantly degrade national parks or similar protected areas which contain tropical forests, or introduce exotic plants or animals into such areas?
- a) No.
b) No.
- o. FAA Sec. 118 (c) (15). Will assistance be used for (a) activities which would result in the conversion of forest lands to the rearing of livestock; (b) the construction, upgrading, or maintenance of roads (including temporary haul roads for logging or other extractive industries) which pass through relatively
- a) No.
b) No.

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undegraded forest lands; (c) the colonization of forest lands; or (d) the construction of dams or other water control structures which flood relatively undegraded forest lands, unless with respect to each such activity an environmental assessment indicates that the activity will contribute significantly and directly to improving the livelihood of the rural poor and will be conducted in an environmentally sound manner which supports sustainable development?

c) No.
d) No.

p. FY 1989 Appropriations Act. If assistance will come from the Sub-Saharan Africa DA account, is it (a) to be used to help the poor majority in Sub-Saharan Africa through a process of long-term development and economic growth that is equitable, participatory, environmentally sustainable, and self-reliant; (b) being provided in accordance with the policies contained in section 102 of the FAA; (c) being provided, when consistent with the objectives such assistance, through African, United States and other FVOs that have

Not applicable.

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demonstrated effectiveness in the promotion of local grassroots activities on behalf of long-term development in Sub-Saharan Africa; (d) being used to help overcome shorter-term constraints to long-term development, to promote reform of sectoral economic policies, to support the critical sector priorities of agricultural production and natural resources, health, voluntary family planning services, education, and income generating opportunities, to bring about appropriate sectoral restructuring of the Sub-Saharan African economies, to support reform in public administration and finances and to establish a favorable environment for individual enterprise and self-sustaining development, and to take into account, in assisted policy reforms, the need to protect vulnerable groups; (e) being used to increase agricultural production in ways that protect and restore the natural resource base, especially food production, to maintain and improve basic transportation and communication net-

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works, to maintain and restore the natural resource base in ways that increase agricultural production, to improve health conditions with special emphasis on meeting the health needs of mothers and children, including the establishment of self-sustaining primary health care systems that give priority to preventive care, to provide increased access to voluntary family planning services, to improve basic literacy and mathematics specially to those outside the formal education system and to improve primary education, and to develop income-generating opportunities for the unemployed and underemployed in urban and rural areas?

q. FY 1989 Appropriations Act Sec. 515. If deob/reob authority is sought to be exercised in the provision of DA assistance, are the funds being obligated for the same general purpose, and for countries within the same general region as originally obligated, and have the Appropriations Committee of both Houses of Congress been properly notified?

Not applicable.

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2. Development Assistance
Project Criteria (Loans
only)

a. FAA Sec. 122 (b). Not applicable.
Information and conclusion on capacity of the country to repay the loan at a reasonable rate of interest.

b. FAA Sec. 620 (d) If assistance is for any productive enterprise which will compete with U.S. enterprises, is there an agreement by the recipient country to prevent export to the U.S. of more than 20 percent of the enterprise's annual production during the life of the loan, or has the requirement to enter into such an agreement been waived by the President because of a national security interest? Not applicable.

c. FAA Sec. 122 (b). Not applicable.
Does the activity give reasonable promise of assisting long-range plans and programs designed to develop economic resources and increase productive capacities?

3. Economic Support Fund
Project Criteria

a. FAA Sec. 531(a). Will this assistance promote economic and political stability? To the maximum extent

Not applicable.

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feasible, is this assistance consistent with the policy directions, purposes, and programs of Part I of the FAA?

Not applicable.

b. FAA Sec. 531(e). Will this assistance be used for military or paramilitary purposes?

Not applicable.

c. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made?

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DRAFT PROJECT AUTHORIZATION

Name of Country: Guatemala
Name of Project: Small Farmer Coffee
Number of Project: 520-0381

1. Pursuant to Section 103 of the Foreign Assistance Act of 1962, as amended, I hereby authorize the Small Farmer Coffee Project for Guatemala involving planned obligations of not to exceed Eleven Million Dollars (\$11,000) in grant funds ("Grant") over a five year period from date of authorization, subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to help in financing foreign exchange and local currency costs for the project. The planned life of the Small Farmer Coffee Project is eight years from the date of initial obligation.

2. The project ("Project") consists of assistance to small coffee farmers through the provision of technical assistance, training and credit. Its goal is to increase small coffee farmer income by increasing production, productivity and product quality.

3. The Project Agreement which may be negotiated and executed by the officer(s) to whom such authority is delegated in accordance with A.I.D. regulations and Delegations of Authority shall be subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as A.I.D. may deem appropriate.

4. a. Source and Origin of Commodities, Nationality of Services

Commodities financed by A.I.D. under the project shall have their source and origin in countries which are members of the Central American Common Market (CACM) or the United States Except as A.I.D. may otherwise agree in writing. Ocean shipping financed by A.I.D. under the project shall, except as A.I.D. may otherwise agree in writing, be financed only on flag vessels of the United States.

b. Conditions Precedent to Disbursement for Specific Activities

1. Prior to any disbursement of project funds for purposes other than the contracting of technical

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assistance and the procurement of project-related goods and materials, ANACAFE will, except as the Parties may otherwise agree in writing, provide evidence that a Project Management Unit has been created within ANACAFE to assure proper functioning and coordination of the project within ANACAFE and with participating institutions;

2. Prior to any disbursement of credit funds for the technification of small farmer coffee crops, ANACAFE and AID shall reach written agreement on measures recommended in the Environmental Assessment to mitigate potential adverse environmental impacts caused by project activities.
3. Prior to any disbursement of credit funds under the project for the technification of small farmer coffee crops, or to the issuance by AID of documentation pursuant to which disbursement will be made, the Government of Guatemala will, except as the Parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID:
 - A tripartite agreement signed between the Ministry of Finance, ANACAFE and the participating financial institutions, for the administration of not less than the Quetzal equivalent of NINE MILLION TWO HUNDRED FIFTY THOUSAND UNITED STATES DOLLARS (\$9,250,000) in counterpart funding and up to an amount of ONE MILLION FIVE HUNDRED THOUSAND UNITED STATES DOLLARS (\$1,500,000) of AID Grant Funds. GOG counterpart funds will finance the cost of the investment in technification of small farm coffee producer beneficiaries.

c. Covenants

ANACAFE shall covenant the following:

1. To provide to AID within sixty days of the obligation of funds and every year thereafter, until project termination, an annual, time-phased action plan which describes all project activities planned for the year and planned resource levels (personnel,

training, credit, and so on). The implementation plan for the first year shall also describe ANACAFE's implementation arrangements for the project, with a detailed description of counterpart contributions, including personnel and logistic support to the project.

2. To assign Guatemalan professionals with appropriate technical qualifications to serve as counterparts to all project-financed consultants;

Approved _____
Anthony J. Cauterucci
Director
USAID/Guatemala

Disapproved _____
Anthony J. Cauterucci
Director
USAID/Guatemala

Date _____

Clearances:

DDIR: PEWhite _____
PDSO: CHSchoux _____
PRM: TKellermann _____
ORD: GStraub _____
CONT: JHill _____
ADM: EWhitlock _____
OEPA: SSkogstad _____

RECIBO

'89 NOV 14 11:52



DR EDGAR A MOLINA FLAMENCO
PRESIDENTE
OFICIO
P-007-89/90

USAID/GUATEMALA ASOCIACION NACIONAL DEL CAFE
GUATEMALA, C.A.

Guatemala,
17 de julio de 1989

ORD
PDSO

Señor
Anthony J. Cauterucci
Director
A. I. D.
Ciudad de Guatemala

11196

RECIBO
11/24/89
ACTION

Estimado señor Cauterucci:

En nombre de la ASOCIACION NACIONAL DEL CAFE (ANACAFE) por este medio quisiera reiterar la decisión tomada por la Junta Directiva de incrementar la asignación de recursos humanos y financieros para lograr una mayor atención al grupo de pequeños productores. El ejecutar el proyecto de mejoramiento de productividad e ingresos del pequeño caficultor tiene como objetivo incluir a por lo menos el 30% de los integrantes de este grupo, de aproximadamente 45,000 productores en total. A este respecto, ANACAFE se compromete a invertir en ese rubro más de Q10 millones en recursos humanos durante el periodo del proyecto de 1989-1997, y requeriría una colaboración por parte del Gobierno de los Estados Unidos de Q27.7 millones (\$11 millones) para poder aumentar las actividades de asistencia técnica y capacitación, y conducir un programa de comercialización de café de calidad a los mercados de exportación.

*Antonio Torres
referred to PDSO
NAN*

ANACAFE es una entidad privada, que se financia con fondos generados por el propio sector cafetero, principalmente por los miembros de mayor producción. Por las implicaciones políticas y sociales, se ha tomado la decisión de enfocar nuestros esfuerzos en la tecnificación de la producción de café, dándole una fuerte atención al pequeño y mediano productor. Para lograr este objetivo, ANACAFE ha reorganizado la Subgerencia de Asuntos Agrícolas, aumentando el número de técnicos para que asistan a grupos de pequeños productores.

.../...

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ASOCIACION NACIONAL DEL CAFE
GUATEMALA, C. A.

DR. EDGAR A MOLINA FLAMENCO
PRESIDENTE

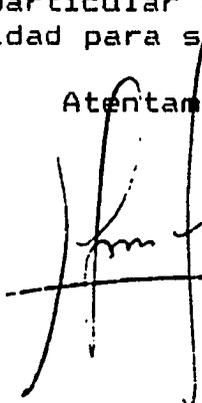
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.../..2

Nuestro programa para el pequeño productor, proyecta alcanzar unos 8,000 caficultores durante los próximos ocho años, con el objetivo de lograr que estos renueven sus plantaciones y logren como consecuencia, una producción de treinta quintales de café pergamino por manzana, comparado con los rendimientos promedios actuales de siete quintales. Entendemos que los fondos para financiar el programa de tecnificación del cultivo provendrán del Gobierno, a través de un fideicomiso manejado por los bancos del sistema, los cuales también aportarán fondos propios, que serán prestados a los caficultores que demuestren su capacidad de pago. ANACAFE se obligará a prestar la asistencia técnica y dará la supervisión para el uso adecuado de la aplicación de la nueva tecnología por parte de los beneficiarios.

Al finalizar el incremento de asistencia a que se refiere este proyecto, la Asociación estará en condiciones de atender a 1,200 pequeños caficultores cada año, otorgándoles asistencia técnica en forma continua durante cinco o seis años posteriores, mientras ellos perfeccionan su sistema de producción, así como asignará los recursos adecuados para mantener esa capacidad de atención al pequeño y mediano productor.

Sin otro particular a que hacer referencia, aprovecho la oportunidad para suscribirme de usted.

Atentamente,



EAMF/fmm

AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D C 20523

LAC-IEE-89-32

ENVIRONMENTAL THRESHOLD DECISION

Project Location : Guatemala

Project Title : Small Farmer Coffee

Project Number : 520-0381

Funding : \$10.5 million

Life of Project : Eight years

IEE Prepared by : Alfred Nakatsuma
USAID/Guatemala

Recommended Threshold Decision : Positive Determination

Bureau Threshold Decision : Concur with Recommendation

Comments : An Environmental Assessment for the project will be carried out focusing on issues identified in the IEE and EA Scoping Exercise, including pesticide use, soil and water conservation and environmental contamination.

Copy to : Anthony J. Cauterucci, Director
USAID/Guatemala

Copy to : Gordon Straub, ORD
USAID/Guatemala

Copy to : Alfred Nakatsuma, USAID/Guatemala

Copy to : Elizabeth Warfield, LAC/DR/CEN

Copy to : Frank Zadroga, ROCAP/San Jose

Copy to : IEE File

John O Wilson Date MAR -2 1989

John O. Wilson
Deputy Environmental Officer
Bureau for Latin America
and the Caribbean

INITIAL ENVIRONMENTAL EXAMINATION

Project Location : Guatemala
Project Title : Small Farmer Coffee
(520-0381)
Funding : \$10,500,000

I. PROJECT DESCRIPTION

The goal of the project is to increase the income of Guatemala's rural poor. This project will establish a program to design and transfer an integrated system of credit, technology, processing and marketing improvements to small coffee producers in order to increase their productivity and profits. This will be achieved by the implementation of the following project components:

1. The Credit Trust Fund will be used mainly to finance the planting of coffee for participating farmers.
2. The Coffee Renovation Program will be developed to assist farmers to improve their coffee production through the use of credit, training and technical assistance.
3. The Training Element will introduce new technical packages to participating farmers to improve coffee production and processing. In addition, selected technicians will receive graduate training in related areas.
4. Product Processing facilities will be built for coffee, where farmers will be taught the best methods of harvesting, fermenting and drying. These plants will be owned and operated by the participating farmer groups.
5. The Specialty Coffee Marketing Unit will assist in the formation of a small, privately managed processing unit to prepare products for the rapidly growing market for gourmet coffee. This unit will receive technical assistance from a marketing advisor.

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II. POTENTIAL ENVIRONMENTAL CONSEQUENCES

As proposed, the Small Farmer Coffee Project has potential negative environmental consequences that may result from the use of chemicals including fungicides, insecticides and fertilizers. Since the use of these chemicals must comply with A.I.D.'s safety regulations on type, amounts and preferred methods of application, it is recommended that an environmental assessment for pesticide/fertilizer usage under the technological packages for coffee be undertaken.

III. MAJOR ENVIRONMENTAL CONCERNS

The identified areas of concern are fungicide, insecticide and fertilizer procurement and use.

A team of environmental specialists will be contracted to perform the Environmental Assessment of this project. Under this contract, the team will:

- 1) Identify the critical pest management, fertilizer and pesticide use, handling and disposal problems;
- 2) Evaluate environmental, economic and social costs and benefits of the current trends and practices in pesticide use;
- 3) Identify specific measures to mitigate the potential negative environmental impact of pesticide use under this project.
- 4) Evaluate institutional capabilities and constraints for effective implementation of integrated pest management programs.

IV. CONCLUSIONS AND RECOMMENDATIONS

Under this Project, significant environmental impacts could result from the procurement and use of fertilizers, fungicides and insecticides. Therefore, the preparation of an Environmental Assessment is required per 22 CFR Section 216.3(b).

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USAID/Guatemala agrees to modify Project implementation plans to incorporate recommended mitigative measures for the Project, in accordance with the approved Environmental Assessment.

Concurrence:


Anthony J. Cauterucci
Mission Director


Date

6523R

BJ

TECHNICAL ANALYSIS

SMALL FARMER COFFEE PROJECT

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- A. The Technological Package and Production Budget
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- C. Major Technical Assistance (Extension) Problems
- D. Proposed Operational Mode for the New Technical Program
- E. Distribution of Credit Recipients
- F. Criteria for Selection of Small Coffee Participants in the Project
- G. Location of Participants in the First Operational Year
- H. The Training Program
- I. Three-Year Coffee Renovation Program: Technical Guidelines

A. THE TECHNOLOGICAL PACKAGE AND PRODUCTION BUDGET

1. Technical Production Problems and Technical Recommendations

Small farm traditional coffee plantings suffer from a number of problems that depress their yields to less than eight hundredweight of coffee in hull per year. The trees are usually over thirty or more years old, mainly of the low-yielding Typica variety, planted in very low planting densities, suffering from many diseases and insect problems, deficient in proper nutrition, unpruned and heavily shaded. In order to take advantage of recent research findings which increase the yields to between thirty to over sixty hundredweight of coffee in hull per year on a consistent basis, it is necessary to completely remove the present old plantings and introduce a package of practices that will permit them to overcome present production deficiencies and significantly increase yields and improve quality of the end product.

For this project, the technical staff of ANACAFE has developed a new technical package of integrated practices that builds on the best production research to date, in this and other countries, which will give these small producers the potential to increase yields and income. This package consists of removing the old coffee, planting the newer semi-dwarf varieties selected for their high per-plant yield, planting at high per-area densities, controlling nutrient deficiencies and pests, regulating the shade properly and harvesting the crop in a manner that will assure the highest quality end product.

The design of this Technological Package focuses on the use of proven high yielding varieties adapted to the ecology of areas producing semi-hard, hard and strictly hard bean coffee. The densities have been developed to attain between 12,000 and 20,000 orthotropic stems per hectare which has been shown by research to permit the highest yields. The fertilizer recommendations recognize the broad deficiencies of nitrogen, magnesium, boron and zinc prevalent in Guatemala as well as the low soil acidity of many soils. Control measures have been included to prevent the major diseases found in the seed bed, nursery and after the coffee is planted in the field. Where required to control specific nutrient or pest problems found in specific areas or on individual farms, the Regional Coffee Agents will make adjustments in these recommendations and provide suggested authorization to the banks for additional financing as necessary.

The Technical Package does not contemplate the use of chemical weed-killers at any stage in the production of coffee under this program, nor will they be authorized for loan financing. There is sufficient labor available throughout Guatemala at all times of the year for the production of the expanded amount of coffee envisioned in this program. As a result, the use of chemical weed-killers is unnecessary and not recommended.

The designers of this basic Technical Package of recommendations recognize that it is not possible to exclusively use one set of recommendations to solve all of the problems of production throughout the country. Differences in soils, micro-ecology, differences in the incidence of insects and diseases in different areas and in different years will necessitate some modification of the package to meet the special requirements of each area. However, the basic recommendations will follow the proposed Package.

The Technical Packages for the production of coffee in seedbeds, nurseries and in the field will be used uniformly by all of the three agencies participating in this project. The Regional Coffee technicians and possibly, in specific instances, the para-technicians, will be given instruction in the packages and the proper adjustments to make to solve specific problems.

The areas where this program will operate will be limited to ecological situations where only semihard, hard and strictly hard bean coffee can be produced. The reasons for this are several. These types of coffee offer the highest price in international markets. The differential in price terms at this time over New York Spot prices for "C" contract is from \$6.00-\$11.00 per cwt. for semihard bean coffee; \$12.00-\$18.00 for hard bean; and from \$16.00-\$24.00 per cwt. for strictly hard bean coffee. Second, the demand for these qualities of coffee is high and growing in international markets. Third, these coffees offer the potential for the small grower to enter the specialty coffee trade where the financial returns are even higher (from \$30.00 to \$50.00 per cwt.) than shown above and where the demand is growing at over 15% per year in the U.S. (highest growth area in the industry). Too, in the areas where these types of coffee can be grown there are few other crops that can be grown and even fewer, if any, that offer as high a return on investment with as large an area that can be planted to a single crop.

2. Cost of Production per Area of the Technological Package

The budget for the basic Technological Package includes the amount that will be needed for labor, equipment and chemicals for the seedbed, nursery and field production package. The costs for labor are those presently experienced in the field. The per-day cost for labor is in accordance with national labor laws at this time. The costs for equipment and chemicals are based on current market prices in Guatemala City retail outlets with a small upward adjustment for transport of the materials to the areas where this program will operate. The Technological Package budget includes costs for all of the essential practices recommended. Total cost for the package is very close to that presently used in Honduras.

In areas where one or more of the problems budgeted for in the cost analysis are not found, the loan amount and the field recommendations will be adjusted accordingly. For instance, if the soil pH is above 5.5, the recommendation to apply dolomitic lime can be eliminated. Likewise, if the area does not have magnesium, boron or zinc deficiencies or a specific disease

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or insect problem for which a chemical is budgeted, these recommended elements will not be applied and the loan authorization for each small farm loan involved can be reduced accordingly.

It should be noted that the amount of each production loan is less than the actual cost estimate for production. This is due to the fact that the loan amount for the renovation of each manzana of coffee has been reduced after the production of the nursery trees by 75 person-days per year. It was felt by those involved in design of the project that the small farmers should not expect that a rehabilitation loan provide all of the labor and input costs of the new renovated area. As a consequence, the labor amount has been reduced accordingly.

B. ORGANIZATION OF THE TECHNICAL ASSISTANCE (EXTENSION) COMPONENT

1. Present Method of Instruction

Of three organizations that are providing technical assistance to groups of farmers at the present time, two have a central office located in Guatemala City. ANACAFE and FEDECOCAGUA's Technical program leaders are located in the central Office while the Technical Assistance team leader for FEDECOVERA is located in Coban. OCONOFEC (the organization of non-federated cooperatives), the other major Guatemalan coffee cooperative organization that works with small farmers, does not have a technical staff of its own. It relies on ANACAFE's Technical personnel to provide training for its members. Thus in the rest of this presentation, it should be understood that the ANACAFE Technical group is serving both independent small producers and those that are members of OCONOFEC.

The technical field staffs of ANACAFE and FEDECOVERA, who actually provide the hands-on training and guidance to farmers, are located in Regional Offices located throughout the production areas they serve. In the case of ANACAFE, they have established seven Regional Offices, FEDECOCAGUA has 6 Regional Offices, and FEDECOVERA has one officer located in Coban and the second in the Polochic Valley.

Policy guidance, overall management and operational guidelines for the day-to-day operation of each regional field office and its staff in all three agencies, are provided either by the Board of Directors or the manager of each agency or both. They set policy for their farmer assistance programs, the goals that they wish attained each year, and approve the budget for the overall effort.

Day-to-day management of the technical assistance programs is the responsibility of the head of the technical group in each institution. This person guides the technicians, provides or organizes the staff training program and oversees the operations of field staff.

The number of groups of farmers that each technician is responsible for assisting varies within the three agencies, regions of the country, the

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distance between the groups of farmers that they assist and the length of time that the group has been formed. Usually, those groups that have been functioning for over three years receive less support than groups that have been organized for one or two years. Each field agent is responsible for assisting from ten to twenty groups in addition to carrying out other functions for the agency.

In addition to the large number of groups that each field agent must be responsible for, the agent is usually required to provide other assistance. ANACAFE field agents are required to assist in determining the estimated annual yield of coffee for Guatemala for the I.C.O. reports, provide assistance to medium and large farmers with visits to their farms to solve special problems that they may have, prepare displays for the annual fairs, etc. The ANACAFE Technical Office estimates that their 34 field agents can devote only half of their time (i.e., 17 person/years per year) to assisting small farmers. As a consequence, they are not able to visit the farms of the individuals in each group. Almost all instruction is through the group.

Similarly, the field agents of FEDECOCAGUA are required to hold meetings on cooperative management, cooperative operations and the principles of the cooperative movement, collect data on production, record the area on which their farmers are producing coffee every year, and provide assistance to other crops that member farmers are producing.

The two field agents of FEDECOVERA must work with the 34 cooperative farms of their member cooperatives. In addition, they are required frequently to mediate differences among the farmers in individual groups, teach them about the cooperative movement, inspect processing plants, order and distribute fertilizer and other materials as well as undertake many other activities that are not directly concerned with the production and processing of coffee. Too, since the farms that they assist are located at some distance from one another, with very poor roads and communications in some instances, it often takes them considerable time to cover the area that they are charged to assist.

2. Present Training Programs

The training provided by the three groups varies in content and breadth of instruction. The general model has consisted of short courses, usually of one day to one week in length. They normally start by bringing the group together and presenting a general introductory short course on coffee including how to plant a seedbed, the best varieties to grow in their area, and the management of the new seedbed to prevent disease and insect problems. Lectures to the group are further reinforced with field demonstrations and having the farmers actually perform the operations that are essential for success in a centrally located farmer's field.

When the coffee is ready for transplanting to the plastic bags in the nursery, they are again brought together and taught the process of preparing the soil, how to disinfect it and the correct way to transplant the seedlings.

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In areas where nematodes are a major problem, they are also taught how to graft Arabica coffee on Robusta rootstock. A field trip may be planned to take the small farmers in the group to the farms of members to see first hand their results and problems if the field agent has the time. Usually there are only three or four group sessions in the first year.

When the coffee is ready for field planting, they hold another session with the farmers to teach them how to remove the old coffee, stake the area for the new types of coffee and actually transplant it. Again, discussions in the group are followed by carrying out the practices in a demonstration on one of the farmer's fields. At different time intervals, the technical agents will hold meetings with the group to teach members how to apply pest control methods, how to regulate the shade in their plantings, what types of fertilizer to apply and whether it should be applied to the soil or by spraying the coffee leaves.

As the coffee comes into production in the demonstration plot, the group is taught how to harvest and process their coffee to the wet pergamino stage (i.e., coffee in hull dried to below 12% bean moisture). Thus far the farmers have received little training on when, where and at what price they should sell their coffee. There is no source of reliable information, either published or on the radio, that transmits market information to the small growers in any of the regional dialects.

The farmers are expected to apply those instructions given in the group sessions on their farms. Usually the farmer will renovate or inter-plant a small plot on his farm, using the recommendations of the field agent. In most cases, since they do not have any access to credit, their efforts are limited to renovating only about one-sixth to one-third of an acre on their farm.

ANACAFE, at its Buena Vista Experiment Station near Retalhuleu on the Pacific Coast, has been carrying out training sessions periodically for its field agents. At least two courses or workshops are held annually. At these sessions, field agents learn of new research findings from the Research Section and periodically hear talks on special topics by technicians from other countries. Frequently, they also discuss their own experiences and problems.

Likewise, at the Buena Vista Station, ANACAFE holds short courses for farm managers. These courses present the best information available and are held both in the classroom and in the field. This program has been highly successful and fills a commitment to the larger farm owners to provide them and their farm managers with access to better production methods.

ANACAFE is a member of PROMECAFE, the regional coffee improvement agency. This organization which includes all of the countries in Central America, Panama and the Dominican Republic, provides guidance on the principles and training methods for the "Grupos de Amistad y Trabajo" system, conducts research on the control of Coffee Rust by both chemical and genetic

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means, carries out research on the Coffee Berry Borer and conducts more basic research on tissue culture and other topics. This Program is supported by the member countries and ROCAP. National coffee research and extension technicians from ANACAFE usually attend PROMECAFE meetings and workshops which are held several times a year.

C. MAJOR TECHNICAL ASSISTANCE (EXTENSION) PROBLEMS

1. At The Technical Production Level.

At the present time, the three organizations are making different technical recommendations to the farmers they assist. As a result, the farmers assisted by one organization may use different chemicals for the control of particular diseases or insects; planting distance recommendations and plant populations per area vary considerably. Some use soil testing to determine the fertilizer needs while others are using the suggestions of input suppliers. Too often, they are using either too much of a given nutrient (i.e., wasting money) or not correcting the major or minor element deficiencies seen in their farmers' fields which often results in over-production and the death of the trees. Some are planting seed from selected trees or reputable sources of a given variety, while others use seed from almost any source, thus not knowing the purity, yield or other characteristics that are essential for successful coffee production. Consequently, the results, though better than might be expected, fall far short of the potential.

The yields of parchment coffee, on a manzana basis, is from four to eight hundredweight using traditional methods. Where the groups have been working together for several years and following the recommendations of the field agents faithfully, the yields of their small plots of renovated coffee frequently approach twenty hundredweight per manzana. Higher yields are possible but the recommendations to attain these levels require higher out-of-pocket investment. At the present time, most small farmers do not have the funds to invest in their plantings.

There is credit available to the larger farmer if this individual has good credit standing and is willing to make a guarantee of over 130% of the value of the loan to the bank. Small producers do not have this guarantee potential and cannot secure loans for the improvement of their planting. Some funds are available for crop harvest costs to some small producers, usually not more than Q.150.00 - Q.200.00 per person per year from BANDESA, the Government bank. Some small producers interviewed during the preparation of this paper reported that private lenders are charging over 100% per annum for credit.

2. Coffee Processing Problems

Only ANACAFE has technicians specialized in the processing of coffee. These three "specialists" must provide assistance to farmers from the smallest to the largest. Since there are an estimated 3,500 coffee processing plants

in the country, the three processing technicians are spread too thin to provide the training and follow-up that the small grower needs for success.

ANACAFE Processing Staff have published plans for individual, group and larger plants and annually publish articles in the ANACAFE magazine on what should be done before the next harvest to assure that the processing plant does not break down during the harvest.

Field agents of FEDECOVERA and FEDECOCAGUA must also provide assistance on this important subject, in spite of little training in the field. As a result, each small and medium processing plant is losing much coffee and considerable profit every year. One plant visited, processing the crop for several dozen small producers, was losing over Q.300 per day in income for lack of a moisture tester, lack of traps to collect the coffee going out with the pulp, and inadequate equipment to return the single bean ripe cherries back with the export coffee. These problems could be corrected for less than Q.2500 total investment with technical assistance and some training of the plant operators.

3. Problems At The Organizational Level

There is little contact and coordination among the three groups of technical personnel. Some working in FEDECOCAGUA worked several years ago in ANACAFE and use some of the technical procedures in vogue at the time they were employed by ANACAFE. However, the three groups of technicians are not meeting on a periodic basis to learn the results of current research, whether done in Guatemala or in other countries, do not receive the same training nor have they met to update their recommendations to producers as a coordinated group.

In the existing technical programs, with the exception of ANACAFE, which has a small library and uses PROMECAFE to secure technical reports and articles that come to their attention, there is little information available to these technicians on the latest discoveries of coffee research or the most successful production and processing practices being used in other countries. ANACAFE does not as yet have the outstanding bibliography on coffee that has been developed by PROMECAFE for use on their computers. This excellent work, which brings together over 7,400 different citations with summaries, will be extremely valuable to both their research and field technicians, as a source of up-to-date references and material for the publication of bulletins and other information for Guatemala's small and large coffee farmers.

Similarly, the three institutions do not have simple technical bulletins available in either Spanish or the several dialects spoken in this country to give to small farmers. While ANACAFE has a publications section which produces annual reports, summaries of the movement of coffee from this country, and a monthly magazine distributed to many of the larger producers, there is no publications office in ANACAFE or in any other institution serving the coffee industry which produces and distributes either written or visual aids of use to small farmers.

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ANACAFE has produced a very comprehensive, well illustrated and quite technical book on coffee, which is just now being distributed to both technicians and progressive medium and large farmers. This excellent text is too advanced for use by the majority of small farmers in the country and is not available in any dialect. Since a high percentage of the small producers in this country speak little Spanish, in its present form the manual will be of very little value to these people. It will, however, serve as an excellent reference and source of material for the publication of much simpler bulletins and pamphlets that can be referred to and used by small growers in the future.

As noted above, none of the agencies involved in the proposed project has publications or visual aids which have been developed for the generally poorly educated small farmer. There is no group in any of the three agencies involved in the project that is capable of or directly charged with the responsibility for the preparation of technical publications or visual aids although these are important tools to reinforce group training and should be prepared for those who speak Spanish as well as the major dialects.

D. THE PROPOSED OPERATIONAL MODE FOR THE NEW TECHNICAL PROGRAM

1. Project Management Unit and Administrative Council

The collaborative effort of ANACAFE, FEDECOCAGUA and FEDECOVERA to improve the training, production, processing and marketing of quality coffee of 6000 small farmers will build on the progress of these three institutions to date. They have been working with a growing number of small producers throughout the country. The oldest groups have been receiving assistance for up to six years, but the majority of the farmers have been receiving assistance for less than two and one-half years.

The Management Office for the Project will have full responsibility for all operational phases of the program. This Office will have an Administrative Council composed of five outstanding people involved in some phase of the coffee industry, nominated by the Board of ANACAFE with the concurrence of AID.

The Council will be presided over by the current President of ANACAFE and four respected persons, supportive of the development of small farmer coffee production and of the project, elected for four-year terms. These officers may have their membership renewed, if approved by the Board of ANACAFE and AID. It is expected that these four persons would be selected from the major production, processing marketing and input supply industries and the banking institutions. AID will have one nonvoting member who will attend all of the sessions of the Council and provide the operational link with USAID.

The reason for proposing a separate Administrative Council to direct project operations of the three participating agencies and the credit fund is due to the fact that the Board of ANACAFE is composed of twenty members, half of whom are reelected or changed every year. Due to this rapid change in the

Board's composition over time, and the varied interests of its members, it would be difficult if not impossible to maintain continuity of both purpose and operations of this program. As a result of discussions with key members of ANACAFE and others, it is proposed that oversight of the project be vested in a small Administrative Council committed to the goals and objectives of the program and with enough management longevity to assure, to the extent possible, that the project fulfills the needs of small farmers, utilizes the resources of the existing institutions involved and carries out all of its obligations effectively and efficiently. The Administrative Council will operate almost independently of the Board of ANACAFE but will provide the Board with annual reports and quarterly updates on progress and problems.

The Administrative Council will have the authority to approve annual project budgets, monitor the progress of the project, review annual reports, make changes in project operations with the approval of AID, select the Management Office's staff and set salaries, prepare or approve a semi-annual report to the Board of ANACAFE, and assure the continued collaboration and coordination among the three institutions providing technical assistance to producers, the Banks involved in the project, and the marketing unit. All disbursements from funds supplied by AID will be issued over the signature of the Project Manager with the countersignature of the President of the ANACAFE.

The Project Management Office will be headed by a Project Manager having experience in the coffee industry, proven managerial capacity and preferably experience in managing AID projects. This person will have overall responsibility for directing the operations of the program, providing coordination among the various elements of the project, reviewing the progress of the various elements of the program, reporting to the Project Council, directing the work of the staff of the Management Unit, identifying problems and assuring that they are solved in an efficient manner. The Project Manager will attend the meetings of the Administrative Council as a nonvoting member and follow up on the discussions and decisions of the Council. The Project Manager will be the principal contact between project operations and AID.

A four-person staff of highly qualified technical specialists will work under the Project manager. These specialists will be responsible for providing guidance in (1) coffee production, (2) credit, (3) communications and training, and (4) market economics. These specialists will, under the supervision of the Project Manager, provide guidance to the three agencies providing technical assistance to small producers, participating Banks, and the specialty coffee marketing unit. They will work closely with the technical staff of ANACAFE, FEDECOCAGUA and FEDECOVERA in assuring that the project is on target, fulfilling its goals, identifying problems in a timely manner and assisting the participating institutions in finding solutions so that the producers, banks and marketing unit operate effectively and complete all assigned tasks within the agreed time-frame for the project.

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2. Role of the Management Unit's Staff

The Senior Coffee Production Specialist will work with the technical units in the three organizations on a day-to-day basis to achieve the farmer assistance and production goals of the project. This person will assure that the chemicals purchased by project participants are in conformance with U.S. regulations and that the technical recommendations are adhered to. He will collaborate with the Communications Officer on the training program and with the Credit Officer to assure proper coordination between the farmer and the source of credit. Any changes needed in the technical recommendations, scheduling of the number of participants and producer expenditures not contemplated in the Project Paper or via PILs from AID, of a technical nature that affect production, will be reviewed and approved in the technical context by the Senior Coffee Production Specialist.

The Credit Officer, working under the Project Manager, will be responsible for assuring that credit is provided to the producers in an effective manner by participating banks in accordance with the Project Paper and AID PILs. This person will work closely with the participating banks to assure that the proper documentation is complete on each loan, loan disbursements are made on time and collections are current. The Credit Officer will also review requests for funds by participating banks, determine the amount that should be disbursed and advise the Project Manager as to the actions necessary both with the banks as well as AID on all aspects of the loan portfolio. Working with the Coffee Production Specialist, this officer will make such changes in the amount lent to participants, where changes must be made in the individual loans due to special production problems requiring expenditures of loan funds by the producer. In collaboration with the Communications Advisor, the Credit Officer will incorporate training and publications on the use of credit into the educational programs for technicians, para-technicians and farmers.

The Communications Officer, under the guidance of the Project Manager, will be responsible for the training element of the project. This includes the training of national production technicians, para-technicians, processing technicians and the trainees sent out of country. This person will coordinate with the head of the ANACAFE technical group in scheduling the courses, reviewing the credentials of the instructors proposed by ANACAFE, assuring that all courses are properly announced and the training is carried out in a proper and timely manner, and reviewing the results of the training program. In addition, this officer will work with the ANACAFE technical materials publication section to assure that bulletins, reports, training materials and visual aids are prepared and distributed in an effective manner.

The Project Marketing Economist will conduct surveys of the costs and benefits of the program from all aspects, including the cost of production, processing and marketing of coffee to both conventional and specialty markets. This officer will collect the baseline information from each loan recipient on economic, social and other criteria, analyze the results and publish the findings for use by the Administrative Council in its program policy role and

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as a guide to the technical and administrative personnel of the Project. The Marketing Economist will also oversee the operation of the specialty coffee marketing unit, provide technical assistance to it and monitor its progress. This officer will work with the ANACAFE market news reporter to make information available to participating farmers, processors and the specialty marketing unit on the latest prices for coffee in world markets, changes in market demand, etc., in both Spanish and the most important dialects.

e. The Field Technical Staff

The existing field technical staff of each organization collaborating in the program --ANACAFE, FEDECOCAGUA and FEDECOVERA -- will be the front line leaders in this program. They will be the principal contact with the farmers and processing plant loan recipients. They will provide training to producers, supervise the construction of processing plants and train farmers and processors in the marketing of coffee for both the normal export channels and the gourmet trade. The Technical Staff of the three organizations involved in the program are composed of Perito Agronomos and Ingeniero Agronomos exclusively.

In order to reduce the present excessively heavy and varied workload of these key technicians so that they can provide the much more intense assistance to the program's small farmers and in order to expand their effectiveness, additional technical advisors will be employed by the program through each institution. In 1989 and 1990, the following staff will be hired under the project (see Technical Staff Composition Table, below).

At the present time, technicians working with groups cannot provide the follow-up in the farmers' fields that is needed. Based on the experience of the Honduras/AID Coffee Project, this program will employ, in addition to technical advisors, the services of para-technicians to reinforce the hands-on assistance that will be provided to farmers. The technical staffs of the three agencies have visited the Honduras Coffee Project at first hand and are fully convinced that para-technicians can increase their effectiveness and provide the individual attention needed by the small farmers in their fields.

The selection of para-technicians will be undertaken through discussions between the farmer groups being assisted and the Regional Coffee Technicians. They will identify the best local farmer leaders, ascertain their interest in providing assistance to the farmers in two to four groups of nearby participants and make the final decision by mutual consent. There will be two para-technicians working under the supervision of each Regional Field Technician when the project is completely operational (beginning of 1991) and personnel are fully deployed.

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TECHNICAL FIELD STAFF COMPOSITION

AGENCY	1989		1990		TOTAL
	PRESENT	NEW*	PRESENT	NEW	
ANACAFE	17**	4	21	4	25
FEDECOCAGUA	7	3	10	2	12
FEDECOVERA	2	3	5	2	7
	<u>26</u>	<u>10</u>	<u>36</u>	<u>8</u>	<u>44</u>

The para-technicians will receive training as described below, assist the Regional Technicians in the group training sessions, and visit each participating farmer at least once per month as follow-up to the group instruction. This individual will work about two weeks in each month and preferably will be a loan recipient also. The para-technicians will report to the Regional Technician any problem that small farmers are having in applying project recommendations and identify any problems that the farmer is having in the field which may need special viewing by the Technician or special treatment recommendations. The para-technician will also report any farmer who is not complying with the technical recommendations or is not applying the materials on the renovation plot in accordance with the project plan.

The number of para-technicians who will be employed to assist participating small farmers is as follows:

AGENCY	1989 NO. PT's	1990 NO. PT's	TOTAL No. PT's
ANACAFE	42	24	66
FEDECOCAGUA	18	10	28
FEDECOVERA	6	10	16
	<u>66</u>	<u>44</u>	<u>110</u>

* "New" represents the number of new perito or Ing. Agronomo technicians that will be employed under the project to assist farmers improve their production of coffee using the recommendations developed for this program. Two additional technicians will be employed to strengthen ANACAFE's capacity to assist farmers in using processing credit properly.

** Estimate of the time that ANACAFE Technical staff assists small farmers. Actually there are 34 field technicians employed by ANACAFE.

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4. The Technical Operations Plan

The three institutions participating in the project have identified the groups of farmers whom they think, at this time, are ready to renovate their coffee and meet the criteria for participation in the project. Tentative lists of the groups, their present size, area in coffee, location and probable level of participation in the program have been prepared. In the first year of the project, it is expected that some 1500 farmers can begin to receive the benefits of this effort. Since the farmers could not be contacted during the preparation of the Project Paper, there can be some changes in the location of the groups; however, it is expected that these revisions will be minimal.

At the start of the program, the farmers in each group will be appraised of the project, its goals, conditions and benefits. Producers will be asked for their interest in participating in the program. A list of those interested and who fulfill the criteria set out for participants will be provided to the local agency of the participating banks for their review and preliminary approval. The farmers who are approved in phase one will be asked to provide the documentation required for granting a loan under the terms of the Project. When approved, the Regional Technical Officer for the three institutions will be advised by the banks. The borrowers will then be able to secure the first tranche of their loan in accordance with loanable cost estimates.

The farmer training program will build on and continue the training already started by the three agencies. Courses of one or two days in length each month will be given to each group in accordance with the growth cycle of coffee in each area, following the Training Plan and the Technical Package developed for this program by the ANACAFE Small Farmer Technical Staff.

Group training will be conducted at a central point in the area where each group is located. The principal instructor for each group will be the Regional Coffee Technician with the assistance of the para-technicians. Where there are special problems or the training plant calls for instruction in credit management, control of special pests, use of chemicals, etc., other staff of the ANACAFE Research Section, agents of the participating banks, or outside advisors may be called on to provide this training.

Once every three months, the technician and the farmers will visit the farms of those in the group who are renovating their planting to see first hand their progress and discuss changes, modifications or improvements that should be made.

The Regional Coffee Technician in each area will meet with the representative of the local participating bank or the bank's central office staff periodically (at least once each four months) to discuss the progress that the client farmers are having, their participation in the training sessions, etc. They will discuss any problems that are occurring that would reduce the capacity of the farmers to repay their loans. If necessary, the

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bank will follow up on these discussions with their clients to assure that they are complying with the terms of their loan. Disciplinary action will be taken by the bank as indicated.

Some 30 farmers will receive loans for the construction of new processing plants during the first five years of the project. An additional 20 existing processing plants will be upgraded. New and upgraded plants will be located in areas which presently lack adequate facilities or are unable to process the amount of coffee that will be produced by project participants. These processing plants will be owned by a project participant who is renovating coffee; he will be expected to provide processing services to several neighbor participants as well as processing his own coffee. In some cases, the processing plant may be owned by the group but will be operated by only one member in order to maintain the integrity of the end product.

In some areas, there are existing plants that, with some low-cost modernization, could considerably improve the quality and yield of exportable coffee. ANACAFE Coffee Processing Technicians will locate up to twenty of these plants, determine what improvements will be needed, estimate costs and recommend them to the banks for financing.

The reasons for not encouraging the construction of processing plants on each small farm is due to the difficulty of maintaining the highest quality of the end product possible and the inability to gain efficiencies of scale with the processing equipment available. It is almost impossible to secure consistent, high quality coffee in processing plants that can only handle 30-50 cwt. per year. Too, the fact that these plants would be human-powered by the owner, after spending all day in the field picking coffee causes the operators to use measures that will significantly reduce the quality of the end product. This quality reduction can reduce the value of the end product by 25% or more per hundredweight.

Training will be given to all processors who already have good facilities and to new processing plant operators on all phases of processing that will assure the quality of the end product. Farmers participating in coffee renovation will be taught how and why it is important for them to harvest and transport their coffee to the processing plants in the best manner.

4. The Technical Communications Staff

As noted above, there is at the present time no group in any of the participating agencies charged with the responsibility of preparing simple bulletins, training aids, visual aids or news briefs (for use on radio or television) or other materials that can be transmitted to participating small farmers or others not participating in this program on any phase of coffee production processing or marketing. The project will assist ANACAFE in creating a small group of well-trained staff to assume this responsibility.

The Technical Communications Group will consist of an editor, a mass media communications officer and a visual aids specialist. They will work with

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the technical officers and the ANACAFE research team in selecting topics for which materials will be developed. These materials will consist of simple bulletins on subjects that may include: how the coffee plant grows, selection of seed for planting, nursery management, the identification and control of specific diseases and insects, the harvest of coffee and its processing. In addition, they will tape record good production practices, specific problems and other topics that will complement the classroom teaching of technicians, para-technicians and farmers.

During the first year of the Project, this group will prepare a minimum of five bulletins, targeted at the small farmer in either Spanish or one or more dialects and one general production film. In the second and following years they will prepare from five to ten publications or translations of bulletins to dialects for use by participating farmers plus at least three visual aids films.

Since there is currently no systematic publication of coffee market prices in Guatemala, starting in the second year, this group will prepare weekly prices on the different grades of coffee and a brief discussion of the movement of coffee in the international market in both Spanish and two or more dialects. Since ANACAFE has access to the latest market price and volume information from both the English and U.S. markets on almost a minute-by-minute basis, this aspect of the program will be greatly facilitated.

In carrying out this important task, the team will be assisted by the Senior Communications and Training Officer assigned to the Project Management office and short term specialists as required.

E. DISTRIBUTION OF CREDIT RECIPIENTS

The PID for the Small Farmer Coffee Project indicated that the project would finance 4,000 small farmers to renovate one manzana of old coffee each within the first five years. The proposed plan was to finance the complete removal of the old, poor-producing coffee and replace it with new high yielding varieties, planted at the new, high density rates, controlling weeds as well as pests, reducing shade and fertilizing properly. The PID proposed that 800 manzanas be renovated in the second year of the project(1990), 1200 manzanas in the third year(1991) and 2000 manzanas in the fourth year (1992).

Upon further study of the progress and capacity of the existing assistance efforts of ANACAFE, FEDECOCAGUA and FEDECOVERA, using the "Grupos de Amistad y Trabajo", it has become apparent that their progress to date exceeds the initial analysis of the situation and permits more aggressive planning than initially considered.

ANACAFE is currently working with over 8400 small producers in groups. Of this total, some 5000 have been receiving training for at least three years and applying most of the new techniques on small plots on their farms. FEDECOCAGUA is now assisting some 74 groups of small producers, each having from 20-60 participants. Most of these people have attended courses for two

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years or more. FEDECOVERA, similarly, has been working with 24 cooperative farms on which there is some 4800 manzanas of coffee and over 1200 cooperative-farmer members.

The technical assistance provided to these groups consists of the equivalent of at least 17 person years per year of Agronomo time provided by ANACAFE, seven full-time technicians working through FEDECOCAGUA, and two technicians through FEDECOVERA. These full-time technicians are very heavily overloaded, workwise and participantwise, but have done a remarkable job of stimulating small farmers to accept new ideas, teaching them how to apply newer production methods on their own small farms and stimulating small growers to use the new knowledge learned.

It is evident from the impressive progress these Guatemalan organizations as well as their farmer clients have made to date, that the base from which this project starts far exceeds that of the USAID/HONDURAS program at its initiation. The initial credit disbursement rate will, in fact, be accelerated by strengthening the existing system through (1) increasing the number of field technicians in ANACAFE, FEDECOCAGUA and FEDECOVERA, (and thus reducing the present workload of each technician); (2) concentrating at least half of the ANACAFE technical agents on working exclusively with small farmers under this program, and (3) supplying para-technicians to provide continuity, monthly follow-up solution of special problems of each farmer on their own farms. This will permit the incorporation of 4,000 small farmers into the program in two years rather than three, as previously proposed, allow for earlier repayment of the loans, and permit the roll-over to be reloaned again within the proposed eight-year LOP.

Under the new schedule of lending to 4000 small farmers during the first two years of the project, 1500 participants would be incorporated into credit and more intensive assistance program the first year (1990) and 2500 farmers the second year (1991). The breakdown of these projected goals would be:

AGENCY	1990	1991	TOTAL
ANACAFE	900	1700	2600
FEDECOCAGUA	400	600	1000
FEDECOVERA	200	200	200
	1500	2500	4000

This distribution is based on considerations such as the number of existing individual farmers and cooperatively operated farms collaborating with each organization at the present time, present and proposed staff increases (both technicians and para-technicians) and the demand for participation in the program by small farmers associated with each institution.

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Starting in 1993, the first borrowers would begin to repay their loans. This will permit the project to again select new loan candidates to be incorporated into the program in 1994. A conservative estimate of the number of new loans that can be authorized annually thereafter would be approximately:

New loans in 1994:	400
New loans in 1995:	600
New loans in 1996:	<u>1000</u>
	2000

F. CRITERIA FOR SELECTION OF SMALL COFFEE PARTICIPANTS IN THE PROJECT

1. Criteria for Independent Growers

The following criteria are proposed for selecting independent producers to participate in the Project:

1. The farmer has more than one but not more than seven manzanas of land, of which at least one manzana is in coffee.
 2. The farmer lives on the farm and derives at least fifty percent of family income from the sale of products produced on the farm.
 3. Part of the farm in coffee produces less than ten cwt. of semihard, hard or strictly hard bean, pergamino coffee per manzana per year.
 4. The farmer has no loans outstanding for more than one year and is considered a good credit risk by banking institutions.
 5. The farmer must agree to attend monthly meetings of the "Grupo de Amistad Y Trabajo" and follow the instructions and investment plan for the production of coffee under the program as set out by the Regional Coffee Advisor and the project.
 6. At least fifteen members of each Grupo de Amistad y Trabajo will become participants in this project.
 7. Each prospective participant in the project will have legal title or a recognized document for the land that he/she farms, thus assuring that the farmer has control of the land.
 8. The farm must have good infrastructure (roads, water, etc.) and conditions for the production, processing and marketing of the expanded amount of coffee to be produced under the project.
2. Criteria for Group Farmer Participants (FEDECOVERA cooperative farmers only)

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Since the farmers situated on the old INTA coffee farms have chosen to operate their farms collectively, rather than as separate farms, the above criteria will not be applicable. The following are suggested criteria for selecting group or collective farmers to participate in the project:

1. The farm must produce semi-hard, hard or strictly hard bean coffee.
2. The collective farming groups will have at least an equivalent amount of old coffee to the amount being renovated under the project. The average production of pergamino coffee produced will not be more than ten cwt. pergamino per manzana.
3. All farmers live on their farm and derive over fifty percent of their income from the sale of farm products.
4. The group must have a legal title or other legal document assuring control of the land for at least twenty years into the future.
5. Evidence will be provided to assure that the group of prospective participants does not have any outstanding debts in excess of one year and is considered a good credit prospect by banking institutions.
6. At least fifteen but no more than thirty farmers from each cooperative farm will be approved for participation in the program each year. Those chosen on each farm will have a clearly defined area of the total farm to renovate and they will have the agreement of the other farmers of the farm cooperative in writing, permitting them full responsibility to manage this land and follow the recommendations of the Project.
7. The participants will agree to attend monthly training sessions and fully carry out the recommendations of the Regional Coffee Agent and the project.
8. Prospective participants will provide assurance that all loan funds will be spent exclusively on the renovation of the identified land they will control.
9. Each participant will assume full responsibility for the repayment of the loan.
10. The area selected for renovation on the farm must have adequate infrastructure and production conditions for coffee.

G. LOCATION OF PARTICIPANTS IN THE FIRST OPERATIONAL YEAR

All three agencies that will participate in the program have been requested to identify the groups that best fulfill the above criteria. Groups were to have at least fifteen interested and creditworthing members so that

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the assistance program could start with fairly large numbers of participants in each group. It was felt that this number of active members would provide efficiency in both the training and credit programs.

All of the tentatively selected groups are presently receiving technical assistance from their parent organization as described above but none are receiving loans for production and all are located in areas that have the capacity to produce semi-hard, hard or strictly hard bean coffee.

At the start of the program, each group will be brought together for a presentation and discussion of the project's several components. Members will have the option to join the production element of the project and qualify for a renovation loan. If at least fifteen persons agree to join the program, the group will begin the process of qualifying for loans.

From four to six groups located in the same area will each nominate a person to serve as the para-technician for the area. The final selection will be made by the Regional Coffee Officer from the list of nominees provided by the groups. The final selection will be reviewed by the groups themselves in order to obtain a consensus. Those selected will then begin to attend the training courses for para-technicians given by ANACAFE.

H. THE TRAINING PROGRAM

1. For Farmers

The training program for participating groups of small farmers will utilize the same guidelines and technological package in the three institutions collaborating in the project.

The actual training sessions will be carried out in the central meeting location of each group on a given day of each month unless changed by mutual consent between the group and the technical officer. All participants are expected to attend all of the training sessions. Absence from a given number of sessions will be grounds for recommending that an individual be dropped from the program by the bank.

The Regional Coffee Agent will serve as the training officer for four to six groups. This individual will be assisted by the two para-technicians selected and trained to assist the groups. The training sessions will begin in the morning and include talks, presentation of visual aids to reinforce the presentations, and demonstration of the practices in the field in the afternoon with the active participation of the farmers themselves.

The training program for small farmers has been developed by the technical section of ANACAFE with the advice and agreement of the project designers. The general format of the farmer training program is based on the approximate time of the year that each practice should be carried out in the farmers' fields and the growth cycle of the coffee tree. Some variation in this schedule will be necessary due to differences in the amount of rain and

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duration of the rainy season throughout the country. Due to the prevalence of different diseases and insects in different areas, the program content may also vary from area to area in this regard. However, the main elements will be the same for all small farmers regardless of their parent organization.

The training plan for small farmers has been designed to cover the main technical elements required to successfully renovate coffee. The plan is time phased so that the farmer will receive the proper training for each practice more or less in the month when that practice must be carried out on the farmer's field.

During the ensuing month the farmers will carry out the actions that have been taught to them by the Regional Coffee Agent. The para-technician will visit each participating farm during the month to observe the progress the farmer has made and make suggestions where indicated. Should the para-technician find unforeseen factors that need special attention, he will contact the Regional Coffee Agent for instructions. As necessary, they will go to the farm where the problem exists so that the diagnosis can be corroborated and the proper instructions given to the farmer.

At least every three or four months, the group, together with the Regional Coffee Agent and the para-technician, will come together and visit the farms of those in the group who are participating in the program. This will permit the farmers to discuss the progress that each farmer is attaining and compare their results with their neighbor's. It will also exert peer pressure on each farmer to carry out the recommendations properly since each individual knows that he will be on stage every few months.

It is expected that some 600 individual group meetings will be held for the 100 plus groups that start in the program the first year. In the second and following years, ANACAFE field staff members will provide some 1900 days of group training per year, FEDECOCAGUA's field staff will hold over 600 group meetings, and the FEDECOVERA field staff will hold over 280 group meetings, per year.

The training plan for farmers will include all essential phases in the selection of seed for the nursery, laying out the nursery, transplanting the seedlings to plastic bags in the nursery, control of pests in both the seedbed and the nursery, removing the old coffee, laying out the field to prevent erosion, planting the young trees, their proper fertilization and pest control, and weeding as well as temporary and permanent shade management. As the trees come into production, the farmers will receive training in proper harvesting and the reasons for doing it properly.

2. Training for the Construction and Management of Processing Plants

Those receiving loans for the construction of processing facilities or the upgrading of older facilities will receive training from the ANACAFE Coffee Processing Technical Group in how to lay out their processing plants in accordance with appropriate technical guidelines.

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The Processing Technicians will provide on-the-spot supervision of each plant as it is constructed and afterwards, so that each processor uses the best methods and equipment for processing their own and their neighbors' coffee. They will be assisted in laying out the new plant, ordering the appropriate equipment, constructing the facilities, installing equipment properly, and testing all parts of the plant before it is used by the processor.

Just before the first coffee comes into the new or upgraded plants, each processing plant owner will be required to take a course of instruction on the factors of coffee quality, the coffee cherry, how to maintain these factors during processing, how coffee solids are lost, the wet and dry classification of coffee on parchment, drying, measuring moisture in the bean using a moisture tester, storing the coffee and its proper transport. Several months later as the coffee begins to produce, the processors will be instructed in factors affecting the market price for the coffee and how to use available information on prices in determining how, where and when to sell their product.

3. Training the Para-Technicians

The para-technicians will be farmer-leaders who are themselves participating in the coffee renovation program. They will be selected by their peers as individuals who are respected in the community and speak the dialect of the area as well as Spanish. They will devote approximately one-half of their time to assisting their neighbors in all phases of coffee renovation using the credit provided through the participating banks. Since the loans must be repaid, it is important that the farmer be given all assistance possible to assure success on their farms. It is thus important that the para-technicians receive the proper training in order to carry out this responsibility. The para-technicians are key to the success of the entire project.

The para-technician training program, which has been prepared with the active collaboration of ANACAFE, consists of an introductory course covering all aspects of the growth of coffee, the production of seedlings and nursery management. This will be followed by instruction in laying out the new plantation, planting the young trees, cultural practices, pest control and harvesting and processing of the final product. The objective of the first two weeks is to present an overview of the process of production and its relationship to the preparation of the final quality product. Other training courses will introduce the main principles of extension, inter-personal relationships, credit management, major nutritional and pest control practices, and processing the cherry to maintain the inherent quality of the coffee. During his first year in the program, the para-technician will receive some five weeks of intensive training. Second-year training will concentrate on further improving knowledge of coffee, including the solution of specific production problems.

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Since para-technicians will be entering the program in both the first (1989-1990) year (66 para-technicians employed) and second year (44 para-technicians employed), the courses given the first year will be repeated for the new para-technicians and similarly repeated during the third year for second-year para-technician entrants.

Para-technician training will be carried out at ANACAFE's Buena Vista Training facility. The principal instructors will be the project training staff of ANACAFE assisted by the research specialists of this institution and outside consultants as required. During the first year, there will be at least three short courses for para-technicians and, in the second and following years, a minimum of four courses per year. Para-technicians of all three organizations participating in the program will be trained together.

4. Training Program for Technicians

(1) In Guatemala

During the first year of the project, ten technicians will be hired and in the second year, an additional eight technicians will be employed. This is in addition to existing technician staff in ANACAFE, FEDECOCAGUA and FEDECOVERA who are currently assisting small farmers associated with these organizations. At present, ANACAFE has some 34 field technicians who spend at least half of their time working with small farmers. FEDECOCAGUA has seven technicians working with small producers in cooperatives associated with this federation. FEDECOVERA has two technicians working with its member cooperatives. All of these technicians require additional training.

The focus of the training plan for technicians now working with small farmers in "Grupos de Amistad y Trabajo" will be on updating their understanding of coffee and the new Technological Package that will be used by all three participating agencies. In addition, the new Perito Agronomos and Ingeniero Agronomos hired each year will receive in-depth training in all phases of coffee production and processing as well as the project's Technological Package for seedbeds, nurseries and field planting.

Training of technicians, which has been designed with the collaboration of ANACAFE Technical Staff, will take place primarily in Guatemala at the Buena Vista Training Center. The principal trainers will be the senior staff of the Research and Extension divisions of ANACAFE with invited specialists from other centers of excellence in Costa Rica, Colombia, Brazil, El Salvador and Honduras. In areas where the PROMECAFE has specialists (e.g., entomology, plant breeding and varieties, extension methods), these experts will be invited to assist in the training of national technicians. The classes will be mainly lectures and workshops with field application of the new techniques being learned.

The training program has been developed to correspond to the coffee growth year with the specific type of training held some one or two months before the work is to be carried out in the field.

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The training of technicians is designed to prepare them to handle a wide range of problems in the field including the production of nursery trees, field planting, cultural practices, processing, credit management, extension methods for groups, inter-personal relations, etc. Some five weeks of training will be given to all technicians in the first year and about four weeks per year thereafter. At least four courses will be given in the first year and from three to four in succeeding years for every technician.

(2) Observational Trips

Since there are two similar successful programs in Honduras and Costa Rica, it is planned that at least 10 technicians have a chance to visit these programs in the second year and an additional 10 in the third year. Each trip is scheduled to be one week in length. This experience will give technicians a chance to compare their work with others and learn from the successes and failures of the Honduran and Costa Rican programs. It will also permit them to see the way that coffee is being grown in other competing countries so they can bring back useful ideas for the Guatemala Project.

(3) On-the-Job Training for new Technicians

In addition to the formal training program in coffee outlined above, new technicians during their first year will work under the supervision of an older, more experienced field technician. They will be given responsibility for training farmers in no more than two groups and will assist the older technicians in the training of their groups so that their formal training is reinforced by working alongside more experienced technicians on a day-to-day basis.

After one year, new technicians will be expected to carry a full load of from four to six groups of 15 to 25 farmers each. Periodically, the Area Supervisor of field technical staff of each participating institution will visit the new technicians and their groups to observe at first hand the work that they are doing and to identify any additional training needed.

(4) PROMECAFE Workshops and Training Sessions

PROMECAFE has several meetings, workshops and training courses that are important to this program. Unfortunately, the program for 1989 has not been completed and is not available at this writing. Guatemala usually sends several of its senior staff to these sessions. However, too often technicians (especially those from FEDECOCAGUA and FEDECOVERA) have not been able to take advantage of these excellent courses due to budget constraints.

It is proposed that, in addition to the people sent by ANACAFE to PROMECAFE courses and workshops, the project finance at least ten technicians from other organizations each year, for five working days per person.

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(5) Graduate Training

None of the technicians or program leaders in the existing small farmer training programs have any advanced training above the Ingeniero Agronomo degree. Today's rapidly evolving systems of production, processing and marketing require that technicians have training beyond just a general course in agriculture. This project will begin the process of upgrading the technical skills of the staff working with small farmers. Five technicians will be sent to U.S. or Latin American graduate schools for degrees at the M.Sc. level. Two technicians will be sent in 1988/89, two additional people will be sent in 1990/91, and one in 1991/92 in order not to deplete the technical staff excessively during any one year. One student will be sent to study in each of the following fields: (1) Agricultural Economics; (2) Agricultural Extension; (3) Agricultural Marketing; (4) Agricultural Mechanics and (5) Tropical Crops/Pomology with a specialization in coffee.

(6) Other Training and Coordination Activities

In addition to the training activities described above, the project will also include the following coordinating mechanisms which will provide training opportunities:

General Meetings: Each quarter, the total group of technicians working in the program will meet to review problems and exchange information on their progress. (Est. one to two days per quarter)

Regional Meetings: Technicians and para-technicians in each region will meet every month to coordinate activities in the project. (Est. one day per month)

Credit Meeting: Every three months, the technicians will meet with Credit Agents to review progress and problems of the loan portfolio. (Est. one day per month)

Management Meetings: Regional supervisors will visit each technician at least every quarter to review their progress and problems.

Coordination Meetings: At least quarterly, Project Management Unit Staff will meet with the supervisors of the three institutions to review progress and problems among and between them, their staff and the farmer participants. Problems will be identified and solutions proposed.

Other Staff Meetings: At least quarterly, the heads of the technical section of each organization will meet with the head of the Communications Program, the Processing Unit and Project Advisors to review progress and plan and coordinate future activities.

I. THREE YEAR COFFEE RENOVATION PROGRAM: TECHNICAL GUIDELINES

1. Seedbed and Nursery Operations

(a) The Seedbed

- Seedbed Production of Plants

The seedbed will produce the number of coffee plants of high production potential required for planting one manzana of coffee in the field. The variety may be either Cataui or a high yielding selection of Bourbon. The variety selection will be made by the local coffee program technician and the farmer depending on the location and the availability of improved seed of new varieties tested in Central America.

Should Cataui, Pache or Caturra be planted, the amount of seed required will be seven pounds, adequate for planting 4000 bags in the nursery with two plants per bag. If an improved Bourbon is selected (elite Bourbon or Tekisic), due to its larger plant size, five pounds of seed will be required to plant about 3000 bags in the nursery.

Any of the following varieties can be used in this program:

SEMI-DWARF TYPES: Cataui, Caturra and Pache
TALL TYPES: Bourbon, Bourbon-Timor Hybrid selections,
Catimor and Tekisic.

In areas where nematodes are a problem, the Regional Coffee Agent will authorize the use of one of the above cotyledonary grafted varieties on robusta rootstock. In this case, the Project will authorize the farmer to plant six lbs. of Robusta coffee in addition to the above improved variety and teach or contract the grafting for the farmer.

- Preparation of the Seedbed

The area for the seedbed will be cleaned of all weeds and old coffee. Any old shade trees will be pruned or removed. Sand will be added to the soil to make a well drained seedbed. The beds will be one meter wide and 15 cm. above the level of the surrounding soil for proper drainage. If more than one bed is needed, the distance between beds will be 40 cm. to facilitate cultural practices.

After the beds are constructed, the soil in the bed will be treated to prevent any insect or disease from attacking the young coffee plants during their germination. A solution of CAPTAFOL, at the rate of one-half ounce per gallon of water, will be applied to each square meter of soil surface with a watering can or knapsack sprayer. The soil surface should be completely moist after this application.

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The following day, fifteen grams of a good insecticide, such as Carbofuran, will be incorporated into the surface of the soil per square meter of seedbed surface.

- Planting the Seed

Seven days after the beds are treated, shallow furrows about 4 cm. deep and 10 cm. apart will be made across the beds. The seed will be planted approximately one cm. apart in the row, preferably flat side down. The seed will be covered with a thin layer of soil not more than one and one-half the thickness of the seed. When covered, the beds will be carefully watered and then covered with a layer of grass or banana leaves to conserve moisture.

- Watering the Beds

The seedbed will be watered every other day unless it has rained. It will be important to keep the beds moist but not very wet to promote germination without the seed rotting.

- Removing the Ground Cover

Approximately 40-60 days after the seed is planted, it should begin to germinate. When approximately 70% of the seed has germinated, the vegetative covering of the beds is removed. A small shade structure is erected over the beds to provide about 50% shade without touching the young plants. When the plants are completely erect, the shade over the beds should be gradually removed and the young plants exposed to full sunlight.

- Disease Control

One of the most serious diseases of young seedlings is DAMPING OFF (Rhizoctonia sp.). This disease attacks the young seedling at the soil level causing strangulation of the main stem. It can be prevented by the application of CAPTAFOL FERBAM or FERMATE (Ferro Dithiocarbamate) at the rate of two ounces of Captafol and 10 cu. cm. of a good spreader-sticker per four gallons of water, or one and one-half to two ounces of Fermate or Ferbam per four gallons of water and 10 cu. cc. of spreader-sticker applied with a knapsack sprayer to the soil surface. As the seedlings emerge, the spray should be applied so as to wet the young plant stems at the soil level.

(2) The Nursery

- Site Selection and Conditioning the Nursery Area

As with the Seedbed, the area to be used for the nursery should be located near a source of water and preferably near the farm house. Both the seedbed and nursery area must be surrounded by an appropriate fence to keep out chickens and other animals.

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The selected area will be cleaned of all weeds, shade trees and other material so as to present a clean area for the nursery.

There should be at least two meters of clean land around the seedbeds and the rows of nursery bags.

- Bag Size

The bags to be used in the nursery will be of black polyethylene, seven inches in diameter and twelve inches deep. Each bag will have several holes in the bottom of the bag for drainage. At least 4,000 bags will be needed to supply 3500 bags for the initial planting of the semi-dwarf varieties plus 500 extra bags to permit replanting and the elimination of bags having poorly developed or abnormal plants before they go to the field. In the case of the Bourbon types of coffee, at least 3300 bags will be needed to supply the required amount of trees to the field, have adequate amounts available for replanting, and allow for elimination of defective plants in the nursery.

- Filling the Bags

The bags should be filled with a loam soil without stones and sticks. If the available soil is not of the recommended texture, it should be mixed with sufficient sand and organic matter to meet the recommended conditions. All soil, sand and organic matter should be screened through 1/4" wire mesh screening before using. After screening the soil, the bags are filled to the top and lightly compacted.

- Bag Placement in the Nursery

The orientation of the rows of bags in the nursery will depend on the site selected for the nursery, the form of irrigation and the slope of the field. Where the slope is over 5%, the rows of bags of seedlings will be arranged across the slope, to the extent possible, on the level. Each row will be two bags wide and as long as convenient. There will be at least 40 cm. between rows of bags to facilitate cultural practices. Preferably, at least two thirds of the bags will be surrounded by soil to maintain moisture around the bags and prevent them from falling over.

- Desinfection of the Soil in the Bags

After the bags are located in the nursery, they will be treated with a fungicide such as a copper oxide or a copper oxychloride at the rate of two ounces per four gallons of water. The soil should be somewhat moist before application to permit the disinfectant to penetrate into the soil for several inches.

One day later, each bag should be treated with one gram of a good granular nematicide (e.g. CARBOFURAN) and again watered lightly to dissolve the chemical into the soil.

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- Planting the Bags

One week later, the bags are ready to plant. The young seedlings should be transplanted at the "soldadito" stage (i.e., before the leaves begin to spread). At this stage they are erect but still have the coffee hull covering the new leaves.

The seedlings will be carefully lifted from the seedbed and completely submerged in a solution of CAPTAFOL at the rate of one ounce per four gallons of water. They will then be covered with a damp cloth during their transport and until they are planted in the bag. A hole, several inches deep, will be made in the soil in each bag and two well developed plants will be planted in each hole. After transplanting, the soil around the roots will be carefully compressed to assure that the roots are in complete contact with the soil.

- Nursery Shade

After the young seedlings are transplanted to the bags, temporary shade should be planted between every other double row of coffee bags. Two or three seeds of Gandul (Cajanus cajan, Crotalaria (Crotalaria spectabilis, or Tefrosia (Tephrosia candida) will be planted every 40 cm. in the row.

- Fertilization of Nursery Plants

Initially, fertilization of the young plants will be by the liquid application of a complete fertilizer to the soil in the bags. Thirty-eight ounces of 20-20-0 or 18-46-0 is dissolved in four gallons of water. Forty cubic centimeters of the dissolved solution is applied to each coffee bag in the nursery as soon as the first set of true leaves is fully developed. An equivalent application is made of this fertilizer solution each month during the following four months.

Foliar application of an appropriate major and minor element foliar spray solution will be made as recommended by the Area Technical Advisor.

- Pest Management

When the young plants have developed their first set of true leaves, monthly foliar application of fungicides must be started. Two pounds of either CAPTAFOL or DIMETHYL DITHIOCARBAMATE fungicide is dissolved in 200 liters of water. The trees are sprayed, alternating each month, with one of these two compounds, using a knapsack sprayer. Starting in the sixth month, to these fungicide sprays, two pounds of an appropriate foliar fertilizer mixture (e.g. 20-20-0 or 20-20-20) and 125 cc. of a good spreader-sticker will be added to the 200 lbs. of fungicide solution. All nursery trees will be thoroughly sprayed each month, covering both the upper and lower surfaces of the leaf.

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- Pest Control

During the first five months, the young trees will be sprayed every thirty days with CAPTAFOL or FERRIC DIMETHYL DITHIOCARBAMATE, as indicated above. Starting in the sixth month after initiating the foliar pest control, to either of these fungicides, when applied, a complete fertilizer such as 20-20-20 will be added at the rate of two pounds per 200 lts. of water plus 125 cc. of a good spreader-sticker applied with knapsack sprayer.

Should the Leaf Miner (Leucoptera coffeella) appear on the leaves, apply FENTION at the rate of 500cc. per 200 gallons of water with a knapsack sprayer.

For the control of aphids attacking the leaves, apply MALATHION EMULSABLE CONCENTRATE (55%) at the rate of 500 cc. per each 200 lts. of water as a foliar spray.

- Watering the Nursery

The young trees should never suffer for lack of water. If the prevailing rainfall is inadequate, the trees should receive supplemental water either by hose or watering can. During dry periods, the bags should be watered every third day or as often as required for the soil in which they are growing.

- Weeding the Nursery

The soil in the bags of coffee should be kept free of weeds at all times. Weeding should be by hand in the bag. In the area between the rows of coffee, the weeds should be controlled using a short machete.

- Other Cultural Practices

At least once per month, the soil surrounding the young trees should be scratched or the top of the bags squeezed to prevent the formation of a hardpan on the soil surface.

Periodically, as the shade plants grow and in accordance with the amount of light falling on the soil, the temporary shade should be lightly pruned to permit the young trees to have good access to light.

2. First-Year Field Operations

- Elimination of Old Coffee

In the total area to be financed by project credit, all old coffee in the manzana to be renovated on each participating farm is to be removed completely, the area clean weeded and the shade pruned. This work will be carried out starting 15 days after harvesting the old coffee. All existing coffee will be either cut by machete level with the ground, or the trees will

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be pulled out of the ground. All old coffee, once removed from the ground, will be removed from the field.

- Shade Management

If the amount of shade in the selected area is too dense (e.g., over 40%), the number of shade trees will be reduced to the recommended level. Only Inga sp., Gliricidia sp., Gravelia sp. and Erythrina will be used for permanent shade in the new plantation. The amount of shade to be used will be:

1. For coffee below 4000', shade trees will be spaced at 9 x 9 meters apart or 123 trees per manzana.
2. For elevations between 4000' and 5000', the distance between shade trees will be 10 x 10 mts. or a total of 100 trees per manzana.
3. For elevations above 5000', the shade will be planted 12 x 12 mts. or 70 trees per manzana.

All shade trees not removed during the clearing of the area to be replanted will be stumped to 4-5 mts. above the soil surface and pruned to only the second level branches that are properly spaced around each tree. If it should be necessary to plant new shade trees in areas that are inadequately covered, these areas will be first planted to Cuernavaca and new permanent shade of Inga sp. This procedure will be amplified in the section on "Shade Establishment".

If the selected area does not have the recommended shade species, all existing shade will be removed and new shade trees (permanent and temporary) will be planted. The recommendations will be presented in the section titled "Establishing Shade".

- Soil Sampling

In the months of January or February, soil samples will be taken to determine future application of fertilizers. The sampling procedure will follow the recommendations of ANACAFE's Soils Laboratory. Since several samples will be taken per area, they will be mixed, air dried and sent to the ANACAFE Laboratory for analysis and recommendations returned to the farmer.

- Field Layout

The new coffee will be planted preferably East to West in accordance with the topographic conditions of the selected area. All rows must run across the slope using accepted conservation practices.

The distance between the holes for coffee in the row will be as follows:

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1. FOR SEMI-DWARF VARIETIES: 2 x 1 mts in the row (5000 holes per hectare).
2. FOR TALLER VARIETIES: 1.20 x 2.40 mts. (3472 holes per hectare).

- Digging the Coffee Holes

Holes for planting will be made preferably two months before the coffee is to be planted in order to condition the soil in the hole and for the control of diseases. The dimensions of the holes will be 0.40 x 0.40 x 0.40 mts. These dimensions may vary in accordance with soil characteristics. Variations in the size of holes will be approved beforehand by the Regional Coffee Technician.

- Transport of Coffee from Nursery

The coffee should be moved from the nursery to the location where it will be planted as soon as the Spring rains (May or June) are sufficiently reliable to assure that the young trees do not dry out before they are planted. The Regional Coffee Technician in each zone will determine the appropriate time to move the bags of coffee from the nursery to the field.

- Planting the new Coffee

After the bags of coffee have been placed next to each planting hole at the time of planting, the bag itself will be carefully removed. Three ounces of Triple Super Phosphate will be spread across the bottom of each planting hole and covered by about 2-4 cm. of soil. The coffee seedlings and their ball of soil will be placed in the hole and carefully surrounded with loose soil. The new trees will not be planted deeper than they were in the nursery. The new soil around the ball of soil containing the new coffee trees will be carefully compressed to remove excessive air spaces near the roots of the coffee.

Ten days after the coffee is planted in the field, it will be treated with five grams of CARBOFURAN, applied in a circle around the two plants in each hole to control nematodes and other soil insects.

- Establishing the Shade

Since all of the shade trees have been pruned, or if not Ingas, removed, it is essential that shade be provided to the young coffee. Three types of shade cover will be used:

1. Temporary
2. Semi-permanent, and
3. Permanent shade

The temporary shade will be planted between every row of coffee. Two or three seeds of Gandul (Cajanas cajan) or Tefrosia candida will be planted every meter in the row.

Semi-permanent shade will be planted at a distance of 4 x 4 or 5 x 5 mts. between rows of coffee. The species that will be used for this purpose will be Cuernavaca (Solanum bansil) or Caster beans (Ricinus comunis).

The types of permanent shade that will be used will be:

1. Inga (Inga salapensis)
2. Cushin (Inga laurina)
3. Paterna (Inga paterna)
4. Gravelia (Gravillia robusta)
5. Pito (Erythrina sp.)

The number of new permanent shade trees that will be planted will depend on the number of old shade trees that have been left in the field, the light exposure of the field and the elevation.

In general, the recommendations will be:

1. For plantings below 4000' elevation, permanent shade will be planted at a distance between trees of 9 x 9 mts. (123 trees per hectare);
2. For elevations above 4000' but less than 5000', the permanent shade will be planted at 10 x 10 mts. (100 trees per hectare);
3. For elevations above 5000', the shade will be planted at a distance of 12 x 12 mts (70 trees per hectare)

- Cultural Practices

Weeding will be carried out using either a machete or a hoe. Timing will depend on the rainfall, growth of weeds and the size of the young coffee trees. Usually, at least four weeding will be carried out. Should the weed growth be excessive around the young plants the farmer may, at the suggestion of the Regional Coffee Agent, clean a ring of about one meter in diameter around each group of two plants.

- Fertilization

The first soil surface application of 20-20-0 fertilizer (2 oz. per plant) will be made just after planting the coffee. The second application of two ounces of 20-20-0 will be made in August-September. The third application of fertilizer, before the end of the rainy season, will be made using Urea (1 1/2 oz. per plant) or Sulfate of Ammonia (3 oz. per plant). All applications of fertilizer chemicals will be applied in a circle inside of the drip of the coffee trees around the two plants in each hole. If the planting

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is on a slope of greater than 7%, the application will be made applying the bulk of the fertilizer in a half-moon on the upper side of the slope above each two plants.

The soil analysis and visual observations made by the Regional Coffee Agent or the para-technician will determine if additional magnesium, boron, zinc or other element will be applied during the first year after planting. The Regional Coffee Agent will determine if these applications will be made by foliar or soil applications, or both.

Boron deficiency will be corrected using SOLUBOR at the rate of one to one and one half pound per every 200 lts. of water applied with a knapsack sprayer.

Zinc deficiency will be corrected using NU-Z at the rate of two pounds per 200 lts. of water. Two applications will be made during the first year (July and September) of each required element. Where possible, all foliar applications to correct boron, zinc and magnesium deficiencies, will be made in conjunction with the application of pesticides.

Magnesium deficiency will be corrected using either Magnesium Sulfate (foliar application at the rate of 2 pounds and Calcium Nitrate or hydrated lime at the rate of 2 pounds dissolved in 200 lts. of water) or Magnesium Oxide or a similar material applied either by foliar means or to the soil. Dolomitic limestone may be used where the soil acidity is below pH 5.5. The amount to be applied will depend on the soil analysis. Usually, the amount of Dolomitic Limestone will depend on the pH of the soil and its base exchange capacity. Normally several tons are applied broadcast over the soil surface every other year.

- General Pest Control Measures

Forty days after the coffee is planted to the field, the disease control program will begin. The first application will consist of 3 pounds of COPPER OXYCHLORIDE or COPPER OXIDE fungicide, 2 pounds of foliar application grade 20-20-0 and 125 cc. of a good spreader-sticker dissolved in 200 lts. of water. This spray is applied to both surfaces of every leaf on each coffee plant.

Thirty days after the initial application, the trees are treated with FERBAM at the rate of 2 pounds plus 2 pounds of foliar grade 20-20-0 and 125 cc. of spreader-sticker.

Each thirty days after the first application, the coffee is again sprayed with COPPER OXYCHLORIDE and spreader sticker until at least four applications have been made. These foliar applications are used to control Cercospora (Cercospora coffeicola), Anthracnosis (Colletotrichum coffeanum) and Rust (Hemeleia vastatrix).

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- Nematodes

Nematodes are found in limited areas within almost all producing regions of Guatemala. In some areas of Guatemala, nematodes have become a limiting factor in the production of Arabica coffee. In these locations, it is necessary that coffee of the desired Arabica variety be grafted on Robusta rootstocks. In each area of the Project, the Regional Coffee Agent will make the determination whether nematodes are a problem and if the desired variety should be grafted on Robusta. Should this become necessary, the Agent will instruct the farmers in how to graft coffee and the post grafting care of the nursery trees or secure the services of a qualified person to do the grafting of the young seedlings.

- Specific Pest Problems

In some areas, there are specific pest problems that must be controlled that are not common to the entire coffee area of this country. Several of these are:

PHOMA (Phoma Costaricensis). Should this disease become a problem, the Regional Coffee Agent will recommend the application of CAPTAFOL (Difolatan) 5% at the rate of one and one-half to two pounds of the fungicide plus 125 cc. of a good spreader-sticker per each 200 lts. of water. Alternately, CAPTAN (Orthocide) applied at the rate of two pounds, with 125 cc. spreader-sticker in 200 lts. of water or CHLOROTALONIL (Daconil, Bravo Termil or Exoterm) at the rate of one and one-half pounds, with 125 cc. spreader-sticker in 200 lts. of water. applied to all of the coffee trees with a knapsack sprayer.

OJO DE GALLO (Mycena citricolor) is usually found in areas where the shade over the coffee is excessive and/or the rainy season has been very heavy and the cloud cover has been heavy for extended periods. The disease can be controlled by reducing the shade and applying CHLOROTALONIL (Daconil, Bravo, Exoterm or Termil) at the rate of one and one-half pounds plus 125 cc. spreader-sticker in 200 lts. of water.

COFFEE RUST (HEMELEIA VASTATRIX) has not been a major problem in most producing areas recently in this country. It can, at lower elevations, become serious in certain years. Too, it is not uniform in the same coffee planting. In some areas, this disease can be very heavy in certain years, yet in other parts of the farm may not be found at all.

The best control for the long term will be the use of resistant varieties. However, at this time, there is inadequate information on the best types to use throughout the country. Certainly, the Catimors should be introduced where coffee rust is persistent. The farmer must know how to identify the disease and frequently survey the planting to identify spots of infection at an early stage. These areas must be immediately sprayed with Copper fungicides (oxychloride or oxide) at the rate of one and one-half to

two pounds, depending on their copper content, per 200 lts. of water. Monthly applications will be made until the infection is controlled.

- Coffee Insect Control

Leaf Miner (Leucoptera coffeella) is a serious problem in some areas of Guatemala in certain years. It is most prevalent in locations where the air is dry and warm. This insect has many predators and chemical control should be only used after consulting the Regional Coffee Advisor.

When chemical control is indicated, apply:

Malathion 500 cc.
Spreader-sticker 50 cc.
Water 50 gals. (200 lts.)

or

Lebicide (50%) 250 cc.
Spreader-sticker 50 cc.
Water 50 gals. (200 lts.)

The Broca (Hypothenemus hampei) has become a limiting factor in coffee production in many areas of Guatemala during the past 15 years. It reduces the crop and, by damaging the fruit and invading the seeds, decreases the quality of the final product.

This insect problem will be controlled by first picking all fruit at the end of the harvest season both from the tree and from the ground and removing them from the field and burning them if infested. The chemical control, if the previous sanitation measures are taken, will be for preventing the insect from entering the planting. This will consist of applying with a knapsack sprayer the following: ENDOSULFAN (Thiodan, Thiodex or Malix) at the rate of 600 to 750 cc., plus 50-100 cc. of spreader-sticker in 200 lts. of water. Two to three applications applied at monthly intervals starting in April will usually control the problem.

2. Second-Year Field Operations

- Soil Sampling

During the months of January and/or February, soil samples will be taken of the renovated area. The compound samples made from sub-samples taken in several locations in the planting will be mixed, air dried and sent to the ANACAFE's Soils Laboratory for analysis.

- Shade Management

A soon as the rains begin, the temporary shade of *Crotalaria* or other species will be eliminated between the rows of coffee.

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- Replanting Coffee

The plantation should be very carefully inspected, tree by tree, one month before the rains begin (March or April). Where the coffee planted the last year has not grown well or has died, the dead plants should be removed and new holes 40 x 40 x 40 cm. dug.

As soon as the rains have begun in May or June, new replacement coffee trees will be planted in these holes making sure that they are planted at the same depth as they were in the coffee bags. The fertilization of these trees will be the same as the previous year for new plantings.

Ten days after the replanting is completed, the new replants will be treated with five grams of CARBOFURAN 5%, applied in a circle around the new plants.

- Cleaning the Planting

At least three hand weedings will be made during the second year of the new planting. The timing of these cleanings will be determined by the amount and size of the weeds in the planting and the frequency of rain.

- Fertilization

The first application of fertilizer to the soil will be made as soon as the rains begin. The formulas will contain mainly Phosphorous and Nitrogen (e.g. 20-20-0 or 16-20-0) but may include magnesium and the minor elements as indicated by the soil analysis and the growth of the trees. Two ounces of fertilizer will be the normal application rate but this may be modified by the soil analysis.

The second application will be made during the months of August or September using a complete formula. The rate and formula will be determined by the recommendations from the soil analysis. At least two ounces of fertilizer will be applied at this time per planting hole.

The third application will be made before the beginning of the dry season using either Urea or Nitrogen Sulfate at the rate of 1.5 to 2.5 ounces per planting hole. All applications to the soil will be made inside of the drip of the coffee trees.

If the planting lacks Magnesium, it will be corrected using both foliar and soil applications during the first year and soil applications during the second and succeeding years. The foliar application will be either using SULFOMAG at the rate of three pounds per 100 gallons of water, or the combination of Sulfate of Magnesium (three pounds), Hydrated Lime (three pounds) dissolved in 100 gallons of water. The young plants will be sprayed for the first time in March or April, the second application will be made in July and, if necessary, a third application will be made in October. Soil applications of Magnesium Sulfate or Dolomitic Limestone will be made

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concurrently in accordance with the soil analysis recommendations and the growth of the young coffee.

If the planting has a deficiency of Zinc, the trees will be sprayed with NU-Z at the rate of four pounds per 100 gallons of water. One application should be made about one month before the rains begin and the second during July.

In the case of Boron deficiency, the trees will be sprayed with SOLUBOR or POLY-BOR at the rate of two pounds per 100 gallons of water. The first application will be made in March or April and a second application will be made in July or August.

- Pest Control

Two weeks after the initiation of the rainy season, the first application of fungicides will be made. This application will consist of 3 lbs. of COPPER OXYCHLORIDE or COPPER OXIDE, two pounds of foliar grade 20-20-0 and 125 cc. spreader-sticker dissolved in 200 lts. of water.

Thirty days later, a second application of the same combination of chemicals will be applied.

Should Broca (Hypotenemus hampii) appear, an application of ENDOSULFAN 35% applied at the rate of 750 cc. with 125 cc. spreader-sticker dissolved in 200 lts. of water will be applied with a knapsack.

3. Third Year Management Program

- Shade Management

All semi-temporary and permanent shade will be pruned soon after the coffee has flowered. Any branches of the shade trees that touch the coffee will be cut. The shade will be pruned so that the branches on each main trunk are evenly distributed area-wise. All sprouts on the trunks of the shade trees are to be removed at this time.

- Weed Control

All weed control will be done manually. Hand weeding of the planting will be done at least three times and, in most areas, four times during the year. The timing of weeding will depend on the height and density of the weed cover in the planting. No chemical weed-killers will be recommended for use in the new plantation.

- Fertilization

The first soil fertilization will be applied in May or early June using a complete fertilizer in accordance with the soil analysis and visual observation of the growth of the coffee.

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The second application will be made in August or early September using a complete formula. The last application to the coffee during the year will be made just before the end of the rainy season using a high nitrogen content fertilizer such as Urea, Ammonium sulfate or Ammonium nitrate.

Foliar applications of both major and minor elements will be applied about one month before the coffee flowers in June, and the third application will be made in late August or early September.

If lime or dolomitic limestone is needed, it will be applied at the beginning of the rainy season in accordance with recommendations from the soil analysis.

- Pest Control

Fifteen days after the beginning of the rainy season, the first application will be made using 3 lbs. of COPPER OXYCHLORIDE or COPPER OXIDE, 2 lbs. of foliar fertilizer (e.g. 20-20-0 or 20-20-20) and 125 cc. of a good spreader-sticker dissolved in 50 gals. of water.

Thirty days later, the same three products will be again sprayed on the coffee.

Should an outbreak of Broca appear, the coffee will be sprayed with ENDOSULFAN 35% at the rate of 750 cc. plus 125 cc. of a spreader-sticker dissolved in 50 gals. of water. All parts of every tree will be thoroughly sprayed at each application.

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SOCIAL ANALYSIS

SMALL FARMER COFFEE IMPROVEMENT PROJECT

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TERMS AND MEASURES USED -

ACRONYMS

ANACAFE - Asociación Nacional de Café
FEDECOVERA - Federación de Cooperativas de las Verapaces
FEDECOCAGUA - Federación de Cooperativas de Café de Guatemala
BANDESA - Banco Nacional de Desarrollo Agrícola

COFFEE TERMINOLOGY

Cherry Coffee - Unprocessed coffee, including the coffee bean and the outer pulp. It is red when ripe and approximately the size of a cherry.

Wet Parchment Coffee - Coffee which has had the outer pulp removed, but has not been dried.

Dry Parchment Coffee - Coffee which has had the outer pulp removed and has been dried. Approximately 4.5 measures of cherry coffee produce one measure of dry parchment coffee.

MEASURES

1 manzana = 7,000 square meters (1.75 acres)
1 cuerda = 1/16 manzana *
1 caballer a = 64 manzanas (450,000 sq. meters)
1 quintal = 100 lbs.

* The number of cuerdas per manzana varies by region. The most commonly used measure is 16 cuerdas per manzana, which will be used for the purposes of this paper.

I. Introduction

Since it was first exported in 1853, coffee has become Guatemala's main export commodity and economic mainstay. In 1987, Guatemala exported approximately 3.5 million cwts. of coffee, representing slightly over one third of the country's total export revenue during that year. This percentage is often higher, as was the case in 1986, when coffee exports accounted for 48% of Guatemala's export revenue, due to a drought in Brazil and the subsequent higher prices coffee commanded that year.

Despite a very successful export crop diversification program, coffee is still Guatemala's largest export commodity, representing over three times as much actual export revenue as bananas, the country's second largest export crop, in 1988. Coffee also represented four times as much of the percentage value of Guatemala's foreign income as bananas in that year, underscoring its importance to the Guatemalan economy.

In addition to its importance as an export commodity, coffee is currently the largest source of employment of Guatemala's rural labor force, due to its intensive use of labor. There are an estimated 43,700 coffee producers in Guatemala, with an estimated 394,000 manzanas of land in coffee. With an estimated 245 person-days of labor required for the care, harvesting and processing of one manzana of technified coffee, coffee production could provide full-time work for approximately 300,000 people.

The Small Farmer Coffee Improvement Project is aimed, as its title implies, at small coffee producers, i.e. those with an annual production of under 50 cwts. of coffee in parchment form. It is estimated that of the approximately 43,700 coffee producers in Guatemala, 39,700, or 90.7% fall into this category. Of these, about 30,227 are independent producers and 9,471 belong to one of 123 cooperatives. Despite the fact that they represent the bulk of the producers in the country in absolute terms, these small producers cultivate only 23% of the land currently in coffee. This disproportionate land tenure situation, coupled with the lower productivity of these small farmers, due to a variety of factors such as poor soil quality, old, low-yielding plants, and the lack of funds with which to purchase much needed fertilizers and pesticides, has created a situation in which small producers, representing 90.7% of all coffee producers in the country, currently contribute less than 19% of Guatemala's total coffee production.

The Small Farmer Coffee Improvement Project will assist small producers by providing them with credit to completely renovate one manzana of coffee. In its initial stage, the project will focus on 6,000 small producers, and will provide them with credit for the

purchase of seedlings, fertilizers, pesticides, labor and the equipment necessary to achieve high coffee yields of approximately 30 cwts. parchment per manzana by the fifth year of the project. An additional component of this project will be the continued, and in some cases initial provision of technical assistance, to be provided by ANACAFE (the National Coffee Association), and the cooperative federations, FEDECOVERA (the Cooperative Federation of the Verapaces) and FEDECOCAGUA (the Guatemalan Coffee Cooperative Federation).

Since 1981, ANACAFE has channeled a major portion of its technical assistance to small producers through the "Grupos de Amistad y Trabajo" program. By November, 1987, this program had organized and provided assistance to 435 groups with more than 7,800 members, and an average farm size of 2.18 "manzanas" per farmer.

This program organizes groups of ten to thirty small producers and trains them in modern coffee production technology. The groups are informal and the participation of the farmers is voluntary. No fees are charged and participants receive training in every aspect of technical coffee production as well as the basic elements of social promotion.

In addition, ANACAFE has provided its group members with other important services, such as medical care and assistance in obtaining loans from BANDESA (the National Agricultural Development Bank). As a result, ANACAFE appears to enjoy a very high degree of respect, and more importantly, trust, among the small farmers whom it serves.

Social soundness analysis in general functions in a symbiotic relationship with development projects. The nature and type of project determines the focus of the social analysis of that project, while in turn the social analysis should help to orient the sociocultural fit of the proposed project. Since the current project is designed to assist small coffee producers, especially members of the ANACAFE "Grupos de Amistad y Trabajo", it was decided to interview members of these groups, which entailed field visits to eight different villages in the departments of Alta Verapaz, Santa Rosa, Sololá and Huehuetenango. All of the groups visited are classified as either "A" or "B" by ANACAFE, indicating a relatively high degree of adoption of production technologies as recommended by ANACAFE extension agents.

In addition, visits were made to two FEDECOVERA cooperatives in Alta Verapaz and two FEDECOCAGUA cooperatives in Huehuetenango. Members of the ANACAFE groups were interviewed individually, while meetings with the cooperative members took place with the group as a whole.

A total of 51 ANACAFE small-producer group members were interviewed (9 in Alta Verapaz, 20 in Santa Rosa, 12 in Sololá and 10 in Huehuetenango). This somewhat low figure is in part due to the distances and long travel times involved in getting to the villages, and in part due to linguistic problems, which necessitated translations in some areas, greatly reducing the amount of time available for interviews. (See Annex II for visits made and persons interviewed.)

II. Sociocultural Context

A. Historical Context

By way of introduction to the relationship of the Small Farmer Coffee Improvement Project to the beneficiary group, a short history and analysis of ethnic differences is presented below.

The population of Guatemala at the time of the Spanish Conquest has been estimated at about one million people, divided into several ethnic groups, mostly varied groups of Highland Mayan in speech and heritage. The native population of Guatemala dropped to perhaps ten or twenty percent of what it had been in the years just after the Conquest, as the European diseases decimated the people. Estimates for the year 1650 put the total population of Guatemala at no more than 200,000, still nearly all indigenous. By 1778, this figure had increased to just about 380,000. The present population is estimated to be about eight million, about half of whom are indigenous.

In most cases, the Indians continued to occupy the same areas after the Conquest as they had previously. Because of the low and very slowly growing population, the Indian situation changed little in the centuries of the Spanish colony and not much more in the first hundred years of Guatemala's independence. The Spanish presence in much of the Indian area was token, usually a priest and a small detachment of soldiers, with the priest wielding the greatest influence. Under these circumstances a Guatemalan Indian culture grew up which represented the confluence of three basic elements: the autochthonous pre-conquest Mayan culture, with roots in the general Mesoamerican civilization, the Spanish Catholic culture of the 16th to 18th centuries, and the subsistence base of the Indians.

This subsistence agricultural base of corn, beans and other crops grown on plentiful land was ample enough to comfortably maintain the Indian populace, produce grain surpluses and incidentally, maintain civil tranquility for the most part among the colonized Indians. The Spanish colonial contribution was found primarily in a religio-civil social organization based on obligatory

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service in the cofrad as, religious brotherhoods taken from the Spanish but elaborated to fulfill the civic needs of a town's population. The religious forms which grew up in this context represented a syncretism of Spanish Catholicism and autochthonous religious beliefs and practices. At the same time, the Indian population maintained and developed their own cultural traits through the stubborn retention of elements of their own cultural heritage, although at times it was at the insistence of the Spanish that the distinguishing cultural traits were established and conserved. In sum, the Mayan Indians acquired an ethnic identity both then and now that distinguishes them from the Ladinos, the ethnic group represented by the descendants of the Spanish colonizers.

B. Ethnic Context

Ethnic groups can be defined and described using a variety of criteria, such as beliefs, rituals, economic base, dress, food and so forth. The Indian-Ladino situation in Guatemala is no exception. One of the more obvious and important elements of this ethnic culture in Guatemala is language. Nearly all Indians speak languages of the Mayan family as their first and sometimes only language, and very few Ladinos can speak or understand these languages. Thus, speaking a Mayan language is a strong factor in the ethnic identity of the Indians. Dress is another indicator of Indian identity. Nearly all indigenous women and some indigenous men wear distinctive traditional dress, while Ladinos use current Euro-American clothing styles.

World-view is another cultural area in which the Indian culture differs strongly from that of the Ladinos. The traditional Indian orientation toward the world is one of adjustment, adaptation and coming to terms with the physical and human reality found there. On the other hand, the Ladino approach is aggressive, in an effort to control and dominate the universe, and force is a legitimate means of control.

One of the most important aspects of indigenous culture is the relation of the individual to the group. In contrast to the western European emphasis on individualism, the Indian culture stresses that the individual exist as a member of the group and that the individual prosper as the group prospers. The function of the individual is thus to promote the groups and not his own personal interests. This tends to produce communities with less social conflict than those in which the individual is supreme. The traditional Indian society is usually unstratified, and leadership is considered, usually within the confines of the cofrad a, obligatory but temporary and open to all who follow the patterns and precepts which regulate Indian society. Group decisions are arrived

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at through consensus rather than fiat or majority vote. This contrasts with the strong individual leadership of Ladino culture, based on personal characteristics, coupled with loyal, subordinate followers.

In contrasting the Indian and Ladino cultural orientations, it should also be pointed out that much of the rural Ladino population has a considerable Indian admixture, due to the fact that many so-called Ladinos have roots in villages and districts that were clearly Indian no more than a century ago. Thus, the cultural orientation of many Ladinos contains elements of Indian culture, which may include among other things the strong communal orientation which characterizes Indian culture.

With the exception of the department of Santa Rosa, and parts of Huehuetenango, the producers on whom this project will focus are primarily indigenous. These groups speak a variety of indigenous languages, and range in language ability from the completely monolingual, such as the Kekch speakers of Alta Verapaz, to areas in which some Spanish is spoken and understood, as in Sololá, to areas in which most people are fairly bilingual, as in Huehuetenango.

One finds a somewhat anomalous situation in Huehuetenango, in that the population of the department is approximately 80% indigenous, but only about 20% of the coffee producers in this region are indigenous, according to the ANACAFE regional director for Huehuetenango. When queried on this, he claimed this was a result of the fact that most of the indigenous farmers of the region do not have land suitable for coffee, rather than any cultural or traditional biases against coffee or other cash crops.

C. Economic Context

The economic situation of the target population is a difficult one. The project's beneficiaries share many of the same characteristics commonly attributed to subsistence farmers. Their current low farm productivity does not generate significant income surpluses to purchase off-farm goods and services or invest in badly needed farm improvements on anything but a very small scale. The social and economic indicators of most of the small producers interviewed are similar to the altiplano farmer, with the exception that small coffee producers are less likely to receive assistance from government and social agencies to better their lot.

Additionally, due to the altitudes at which they are located, and the broken and extremely hilly plots they cultivate, these farmers do not have the range of production diversification options available in other parts of the altiplano. Most of these

farmers depend on coffee and a very small range of cash and subsistence crops for their livelihood. Some of these, such as the farmers of Alta Verapaz have seen their real income plummet in recent years, due to a sharp decline in the price of cardamom, on which most have been heavily dependent. This has led to an even greater dependence on coffee for these farmers.

For this group, technified coffee production provides the highest income potential per farm over other available technologies. In the farmers' favor is the existence of tried and true technology packages capable of substantial increases in production and productivity, and established and secure markets and marketing channels. The primary limiting factor is the lack of access to low-cost, long-term credit.

III. Current Organization of Coffee Production

A. Regional Production

Coffee is currently produced in all but two of Guatemala's departments. While, as seen in Brazil, it can be grown at virtually any altitude, the quality of the coffee produced is in direct proportion to the altitude at which it is grown. Thus, higher, export-quality coffee, classified as semi-hard, hard, and strictly hard are grown at elevations of 3,500 feet and above. While these high-elevation areas are located in most parts of Guatemala, water is relatively scarce in most of the eastern parts of the country. As such, a more conducive combination of altitude and rainfall is found in the western highlands, primarily in the departments of San Marcos, Huehuetenango and Sololá. The departments of Alta Verapaz and Santa Rosa also produce large amounts of good quality high-elevation coffee. Of the above-mentioned areas, most small coffee producers are located in the departments of San Marcos, Huehuetenango, Sololá, Santa Rosa and Alta Verapaz.

B. Individual vs. Cooperative Production

As mentioned, the small coffee producers of Guatemala are organized in both individual and cooperative production. Of the estimated 39,700 small producers, 30,200, or 76% are individual producers, while the remaining 9,400, or 24% are organized cooperatively.

Individual producers and cooperatives farm 72% and 28% of the total land in coffee held by small producers respectively. Interestingly, their yields are 73% and 27% of the total amount produced by small farmers respectively. On the surface, this high correlation would seem to suggest that neither form of organization is more conducive to higher productivity than the other.

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Of the independent producers interviewed, virtually all farm their land individually, with help from members of their nuclear families (mostly older sons still living at home) and hired laborers. None appeared to be in any sort of quasi-communal situation, i.e. farming with members of their extended families or on communal lands with other members of the community.

The three principal cooperative organizations involved in coffee production are FEDECOVERA, FEDECOCAGUA and UCONOFEC (the Union of Non-Federated Cooperatives of Guatemala). Of these, cooperatives belonging to FEDECOVERA and FEDECOCAGUA movements were visited. These two cooperative federations are markedly different in almost all aspects of coffee production, as discussed below.

1) FEDECOVERA

FEDECOVERA is comprised of 32 affiliated cooperatives, all of which are located in the departments of Alta and Baja Verapaz. The membership of FEDECOVERA is entirely indigenous, consisting of members of K'ekch -speaking groups. In addition to coffee, the FEDECOVERA cooperatives produce and market cardamom, cacao, achiote (annatto) and allspice.

Perhaps the most outstanding feature of the FEDECOVERA cooperatives is the fact that almost all the land held by the cooperatives is communally owned and worked by the cooperative members. This situation finds its roots in the mid-19th century, when large numbers of German immigrants arrived in Guatemala and settled in the Verapaces. These immigrants soon planted large and successful coffee plantations, using the local indigenous population as hired labor.

In 1944, towards the end of World War II, the Guatemalan government changed its status from that of neutral to Allied. Most of the Germans and their descendants in the Verapaces were Nazi sympathizers, and they were consequently expelled by the Guatemalan government, and their lands expropriated. These lands were subsequently turned over to the peons working them, with the stipulation that they be farmed communally, and not split up into individual farms, a situation which exists until the present day.

FEDECOVERA was formed in 1979 with three aims: to market coffee, to protect the land tenure of its member cooperatives, and to provide production credit to its member cooperatives. There have been problems with the affiliated cooperatives of FEDECOVERA, due, it seems, largely to a lack of education in cooperativism. Most of these cooperatives have not done well enough to provide their

members with dividends on profits, so that most members receive only a daily wage for working on the cooperative's lands. This has resulted in a lack of understanding of the purpose and function of the cooperative, and most members apparently see themselves as hired laborers, and nothing more, with no real understanding of the purpose and function of the cooperative.

In addition to the cooperative's communal lands, the members of the FEDECOVERA cooperatives farm individual plots of land, on which they grow subsistence crops, as well as coffee and cardamom. The current situation appears to be one in which most members devote their energies to their individual plots, working on the cooperative's lands when they need extra cash. Most members appear to sell their coffee outside of the cooperative, where they receive better prices.

2) FEDECOCAGUA

The sixty-seven cooperatives and pre-cooperatives affiliated with FEDECOCAGUA are organized along much more traditional lines than those of FEDECOVERA. The main purpose of these cooperatives is to provide their members with production credit and marketing facilities, and processing facilities in some cases.

The members of the FEDECOCAGUA cooperatives all own and cultivate their land individually. In addition, approximately 50% of the FEDECOCAGUA cooperatives also have communal lands on which they grow coffee and other crops. The "Esquipulas" cooperative, located in La Libertad, Huehuetenango, has 695 cuerdas of land owned and operated by the cooperative, of which 115 cuerdas are in coffee. Cooperative members and outside laborers are paid a daily wage to work on these lands. The cooperative members receive no dividends from crops grown on these lands, and all the revenue is ostensibly put back into crop production.

IV. Characteristics of Small Coffee Farms

Each of the coffee-producing regions in Guatemala has its own idiosyncracies regarding language, dress and other customs. This is also true regarding the various aspects of coffee production, processing and marketing, which vary greatly from one area to the other, and even between different groups in the same area. These differences are sometimes a function of cultural practices, as will be seen in the case of women's land rights in Sololá, and sometimes a function of historical factors, as was seen in the case of the FEDECOVERA cooperatives of Alta Verapaz.

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While there are many commonalities that unite the small producers of the different regions of Guatemala, there are many differences as well. In the interest of presenting a clear picture of the range of situations in which these farmers find themselves, the different characteristics of the coffee farmers interviewed will be presented by region inasmuch as possible, rather than discussing all the farmers as a whole, which would be misleading and counterproductive to the purpose of this analysis.

A. Land Tenure

With the obvious exception of the communally owned lands of the FEDECOVERA and FEDECOCAGUA cooperatives, all the farmers interviewed have secure land rights, i.e. actual title to the land or usufruct rights to municipally-owned lands. Virtually none were found to be farming on rented land. This varies by region, so that in Alta Verapaz and Sololá most farmers have usufruct rights to municipally owned land, while in Huehuetenango and Santa Rosa a much higher degree of land ownership was found.

The fact that secure land rights exist is of paramount importance to the success of this project, as the literature has shown that without secure rights to the land they farm, small farmers are in general unwilling to make long-term investments in and improvements on their land, the nature of which are required by this project.

Of the areas visited, the land tenure situation of the Quiché-speaking inhabitants of the southern part of the department of Sololá (municipality of Santa Catarina Ixtahuacán) is somewhat unique. It was found that the women of this region have equal land inheritance and ownership rights as the men. When they marry, these women do not turn their land over to their husbands, but instead continue to cultivate it separately from their husbands' lands. The ANACAFE office in Mazatenango estimates that women comprise approximately 20% of the membership of the "grupos de amistad y trabajo" in this region. Providing credit to the women of this region could be an ideal opportunity to help not only the small coffee farmers of this area, but to improve the economic and social standing of the women of this area as well.

B. Farm Size and Area in Coffee Production

The following figures on total farm size and area in coffee production are based on information gathered from interviews with 51 small coffee farmers, and should not be considered statistically significant in terms of their application to the population of small producers as a whole. Figures on total land planted in coffee per group are available from ANACAFE, however data on landholdings in

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crops other than coffee were not available. In the absence of more conclusive data, it is hoped that the information presented below will be helpful in providing a general picture of average farm size and area in coffee production for the different areas visited.

Of the farmers interviewed in Alta Verapaz, the average farm size was 5.6 mz., with 1.25 mz. (22%) currently in coffee. In Santa Rosa, the average farm size was 7.8 mz., with 3.7 mz. (47%) in coffee. Average farm size in Sololá was 4.9 mz., with 3.5 mz. (71%) in coffee, and in Huehuetenango, average farm size was 8 mz. with 3.5 mz. (44%) in coffee.

Of the FEDECOVERA cooperatives met with in Alta Verapaz, the Samác cooperative claimed to have a total of 50 caballer as (3,200 mz.) of land, of which 891 cuerdas (55.7 mz.) are currently in coffee. This represents only 1.7% of the total landholdings of the cooperative. This figure may be somewhat misleading however, because much of the land in that area is either uncultivable or is being used for the members' individual crops.

The Chicó j cooperative shows a somewhat similar land-use pattern, with 60 caballer as (3,840 mz.) of total landholdings, of which 600 cuerdas (37.5 mz.) are in coffee. This represents an even smaller percentage of land in coffee (0.97%) than the Samác cooperative. A similar caveat must be used here, since much of the cooperative's land is either not cultivable or is in members' individual crops.

Of the FEDECOCAGUA cooperatives visited in Huehuetenango, the R o Azul cooperative in Jacaltenango claimed to have a total of 2,226 mz. of members' landholdings, of which 374 mz. were in coffee, representing 16.8% of total landholdings.

The Esquipulas cooperative in La Libertad claimed to have a total of 1,430 mz. of members' landholdings, of which 389 mz. are in coffee, representing 27.2% of the total. This cooperative also has 43.5 mz. of communally held land, of which 7.2 mz., or 16.6% are in coffee.

C. Use of Production Technologies

ANACAFE recommends a wide range of production technologies to the small producers whom it serves. These range from the use of chemical inputs, such as fertilizers, pesticides, herbicides and fungicides, to the proper care of coffee plants, including the use of high-yield varieties, proper spacing between plants, weed control, pruning and shade management.

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In none of the areas visited was any single producer found to be applying the full range of production technologies as recommended by ANACAFE on the entire extent of his coffee plants. As is common with small farmers everywhere, the use of production technologies was found to be adapted in a variety of different ways, in accordance with the possibilities available to the individual farmer.

As such, the majority of the small producers interviewed apply fertilizers and pesticides to only a portion of their coffee plants, generally only the newer, high-yield variety plants. The older plants are generally left neglected, or are applied with token amounts of fertilizer and pesticide.

Of the area in coffee that was provided with fertilizers and pesticides, it was extremely rare to find anyone applying the full amount of the generally recommended 75 lbs. of fertilizer per cuerda. When asked why they weren't applying the full amount of chemical inputs, the response was consistently that there was not enough money.

When asked why pesticides were not used, it appeared to be more a matter of not being able to afford them, rather than resistance based on fears of health problems or harm to farm and household animals, as was thought might be the case.

Table 1. Fertilizer Use by Department

Department	Pounds per Cuerda	As Percentage of Recommended Use
Alta Verapaz	9.6	12.8%
Santa Rosa	48.2	64.3%
Sololá	2.9	3.9%
Huehuetenango	48.1	64.1%

As the above table shows, of the farmers visited, those in the areas of Sololá and Alta Verapaz show the lowest use of fertilizers, where several farmers were found to apply no fertilizers or pesticides whatsoever, a situation not found in Santa Rosa or Huehuetenango. Those that do use these inputs generally apply them only to new coffee plants, and then in much lower quantities than recommended. In Santa Rosa and Huehuetenango the pattern of applying fertilizers and pesticides only to newer plants was largely followed, except that most seemed to apply larger amounts, and some (albeit few) even applied the recommended amounts.

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The use of fertilizers and pesticides on the cooperatives follows a similar pattern. Both of the FEDECOVERA cooperatives met with claimed they apply chemical inputs only to new coffee plants, due to a lack of sufficient funds. One of these cooperatives claimed it had received instructions from the FEDECOVERA office in Coban to apply fertilizers only to new coffee plants of up until one year of age, and then to desist, due to a lack of funds for the continued application of fertilizer.

The other production technologies recommended by ANACAFE have been largely adopted by most farmers, although again, to varying degrees. By far the most widely and enthusiastically accepted of these technologies has been the introduction of new, high-yield variety coffee plants. Virtually every farmer interviewed has introduced new plants, if only on a few cuerdas of land, and both of the FEDECOVERA cooperatives met with had renovated approximately half of their land in coffee.

Table 2. Percent of Land in Coffee Renovated by Department

% Land Renovated	Alta Verapaz	Santa Rosa	Sololá	Huehuetenango
0-25%	28.6	15.0	58.3	20.0
26-50%	71.4	10.0	33.3	20.0
51-75%	---	5.0	8.3	30.0
76-100%	---	70.0	---	30.0

As the above table shows, the farmers of Alta Verapaz and Sololá show the lowest incidence of renovation of their land in coffee. In Alta Verapaz, 28.6% of the farmers met with have renovated up to 25% of their land in coffee, while the remainder (71.4%) have renovated 26-50% of that land. None have renovated more than 50% of their land in coffee. The figures are somewhat reversed in Sololá, where 58.3% have renovated only up to 25% of their land in coffee, 33.3% have renovated from 26-50%, 8.3% have renovated between 51-75% of their land in coffee, and none have renovated more than 75%. This range is somewhat more evenly distributed for Huehuetenango, while the figures for Santa Rosa are skewed towards the high end of the scale, where 70% have renovated 76-100% of their land in coffee.

In general, the average percentage of total land in coffee that has been renovated is 28% for Sololá, 33% for Alta Verapaz, 59% for Huehuetenango, and 78% for Santa Rosa. Broken down by ethnic group, the data show that the indigenous and ladino farmers have renovated 29% and 72% of their land in coffee respectively.

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The most common manner in which new plants are introduced is to interplant them with older, less productive plants. The new plants begin to produce in quantity by the third year, at which time the older plants are removed. This method entails little or no loss of production while the new plants are still too young to produce optimally.

Of the production technologies recommended by ANACAFE, pruning seems to have met with the most initial resistance by most farmers. Pruning is generally done all the way to the ground, entailing a loss of production for one year, with new and increased production in the following year. Resistance to this on the part of the farmers is understandable, since it entails a period of reduced production. According to ANACAFE, although the farmers are at first hesitant to prune their trees, after seeing the results on the demonstration plot they are generally willing to adopt this practice.

D. Access to Credit

Not surprisingly, the lack of access to affordable, long-term credit is a problem faced by every independent producer and cooperative member spoken with. When asked what the obstacles to improved production were perceived to be, virtually every producer spoken with mentioned the lack of affordable credit as the largest problem he or she faced. Loans from intermediaries are currently provided at interest rates of 20% to 60%, such that most of the farmers spoken with found the current bank rate of 16% acceptable.

Access to credit was found to vary from region to region. ANACAFE has helped many of the members of its groups obtain short-term, low-cost loans (generally at 10-12% interest) from BANDESA. This has been of great benefit, especially since most of the members of these groups were formerly at the mercy of middlemen, charging much higher rates of interest. Most of these small producers would probably not have gotten BANDESA loans without the help of ANACAFE, attested to by the fact that most of the small producers who do not belong to ANACAFE groups are still largely dependent on loans from intermediaries.

While short-term, one year loans have become much more readily available to the majority of the small producers in the ANACAFE groups, long-term credit remains elusive for most. Of those interviewed, only a handful had managed to obtain long-term loans for the renovation of their coffee, or for other uses.

Table 3. Sources of Financing for Coffee Production by Department

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Source of Financing	Alta Verapaz	Santa Rosa	Solola	Huehuetenango
Own Funds	77.8	36.8	9.0	30.0
Intermediary	---	21.1	---	20.0
BANDESA	22.2	10.5	72.7	20.0
Credit Coop.	---	10.5	---	---
BANDESA & Intermed.	---	21.1	---	---
BANDESA & Own Funds	---	---	9.1	---
Own Funds & Intermed.	---	---	9.1	20.0
Other	---	---	---	10.0

The above table shows the variation in sources of financing coffee production for the different regions visited. As can be seen, the small producers of Alta Verapaz found to have the lowest use of formal and informal credit, where 78% were found to be relying only on their own funds for coffee production. Of those with no access to credit, only one had previously attempted to obtain bank credit, but had been turned down, due to a lack of sufficient documentation. The rest expressed no interest in obtaining credit, most claiming this was because they did not want to have to pay high rates of interest, which, perhaps significantly, they refer to as "impuestos" (taxes). Additionally, most claimed there was too much red-tape involved in applying for a loan.

While the farmers in Santa Rosa were found to have much greater access to credit than those in Alta Verapaz, their situation is still rather difficult. Of those interviewed, 37% had obtained short-term loans via either BANDESA or the local credit cooperative. Interestingly, this was the only area in which participation in credit cooperatives was found.

Despite this access to bank credit, 42% of the farmers spoken with in Santa Rosa were forced to seek credit with intermediaries, generally at 20% annual interest (although several claimed to be paying 5% monthly, or 60% annual interest). Four of those with credit from BANDESA were found to be taking loans from intermediaries as well, claiming the BANDESA loans were not sufficient to cover their costs.

Credit from intermediaries is given in the form of an advance on the farmer's coffee crop. Credit from intermediaries has several disadvantages for the small farmer: he is forced to pay exorbitantly high rates of interest on the loan; he must sell the contracted-out portion of his crop to the intermediary, who either offers lower than market rates for his coffee, cheats him on the weight, or both; and he often receives part of the loan in the form of fertilizers and pesticides, for which he is generally charged higher than market prices, on top of which he must pay interest.

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The farmers spoken with in Huehuetenango were also found to have difficult access to credit, where only 17% had access to BANDESA loans for their coffee, and 33% were forced to seek loans with intermediaries.

In contrast with the above, of the small producers interviewed in Sololá, 69% had access to credit from BANDESA, and only 8% had had to take loans from intermediaries.

The farmers of this group claimed that the other small producers in the village not belonging to the ANACAFE group were still largely dependent on local middlemen for credit, again indicating the benefits and importance of the ANACAFE small producer program, not only in terms of technical assistance, but in terms of assistance in gaining access to low-cost credit as well.

In general, 22 (43%) of the 51 small producers spoken with had never had access to bank credit. Of these, eight (36%) had applied for bank credit but had been turned down, usually for reasons of insufficient documentation, and fourteen (64%) had never applied for bank credit at all. The reasons given for never having attempted to obtain bank credit were: unwillingness to pay interest (4), excessive red-tape ("tramites") (4), unwillingness to go into debt (3) and other reasons, such as access to credit from family members (3).

Of the 29 who had had access to formal credit, seven (24%) admitted to having problems paying the loan back on time, claiming this was a result of poor health or bad harvests. At the time of the interview, all claimed they had no delinquent loans.

Problems of loan repayment were not an issue for those with informal credit from middlemen, since the farmers contract out to the middlemen and the amount of the loan, including interest, is deducted from the payment at the time of sale.

The FEDECOVERA cooperatives receive production credit from the Federation, although as seen, this is not sufficient to meet the cooperatives' needs. These cooperatives are administered by their members, and do not appear to be very well equipped to manage their books. Both cooperatives visited did not have data on how much they owed the Federation, claiming that only the Federation knew this. There seemed to be certain problems of mistrust on the part of the cooperatives in this regard. Both of the cooperatives met with claimed the Federation at times informed them of debts they had not been aware of, the implication being that these debts did not really exist and the Federation was making them up.

The FEDECOCAGUA cooperatives receive production credit from FEDECOCAGUA, which is passed on to the cooperative members in the

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form of an advance on their crops. Each member contracts a portion of his expected harvest out to the cooperative, and receives an advance of Q90 per cwt. of parchment coffee, which is paid in three installments. The Federation lends this money to the cooperatives at an interest rate of 16%, and this is subsequently lent to the cooperative members at rates of 18-20%.

The cooperative members are meant to receive loans only via the cooperative, for to have other loans, e.g. from BANDESA, would be seen as duplicitous. When asked whether these advances from the cooperative were enough to meet their needs, the members of both cooperatives met with claimed they were not. When further questioned as to whether any had indeed obtained loans from outside the cooperative, the members of one cooperative claimed that none had, while one or two members of the other cooperative met with claimed they had indeed received loans from BANDESA. The others in the group seemed genuinely surprised at this, which would indicate that most really do not receive outside loans, rather than simply not wanting to admit to that, as was initially thought might be the case.

E. Access to Technical Assistance

As mentioned, of the estimated 39,700 small coffee producers in Guatemala, ANACAFE provides technical assistance to approximately 8,000, organized in 435 "grupos de amistad y trabajo", comprised of ten to thirty members each. In addition to ANACAFE, two cooperative federations, FEDECOCAGUA and FEDECOVERA, provide technical assistance to small producers. Their technicians try to reach members with improved production and processing methods, however the number of extension agents is limited and they have too little training to accomplish the desired results. Although the combined extension effort of ANACAFE and the cooperative federations is substantial, an estimated 17,00% farmers receive no significant technical support at all.

The ANACAFE extension program is identical in all parts of Guatemala, and all the groups visited seemed to be receiving technical assistance of the same caliber. The extension agents met with all seemed competent, reliable and devoted to their work, and all the group members spoken with appeared to be satisfied with the quality of the technical assistance they were receiving. The extension agents' devotion to their work does not seem to be taken for granted, and as mentioned, they appear to enjoy a high degree of trust and respect among the group members.

ANACAFE is very understaffed, and each extension agent is responsible for providing technical assistance to an average of 28 small producer groups and large farmers (who receive individual attention). Despite this heavy case-load, the extension agents generally manage to visit the groups once a month.

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As mentioned, the "grupos de amistad y trabajo" consist of ten to thirty small farmers. One of the group members is selected as group "coordinator", and is responsible for notifying the group of meetings with the extension agent. In addition, part of the coordinator's land is used as a demonstration plot. Meetings with the group are held on this plot, where the extension agent demonstrates the proper care of coffee plants in accordance with the time of year. Members are expected to apply the techniques learned on the demonstration plot on their own coffee plantations. The extension agent is also expected to make occasional visits to group members on their own land. These visits tend to be infrequent however, due to the time involved, and the distance and inaccessibility of many of the members' plots.

Despite this, the ANACAFE extension effort has been successful in terms of motivating small coffee producers to adopt improved production techniques, witnessed by the fact that 38 (75%) of the small producers met with had applied no production technologies before joining the ANACAFE group, whereas all had adopted new technologies as a result of joining the group. As a result, overall small producer yields have increased by 29% since the ANACAFE small producer program began.

In addition to their own extension agents, some of the FEDECOVERA cooperatives also receive technical assistance from ANACAFE. This assistance is also organized in the form of small groups, but there appear to be problems associated with this, as the same group members do not consistently show up at meetings with the extension agent.

Of the FEDECOCAGUA cooperatives visited, one claimed to be receiving technical assistance from both FEDECOCAGUA and ANACAFE extension agents, each of whom arrives once a month, i.e. two visits per month. It was claimed that thirty to fifty members attend these meetings, which are held at different demonstration plots around the cooperative.

The other FEDECOCAGUA cooperative visited claimed to be receiving no technical assistance from either ANACAFE or FEDECOCAGUA, which the members said was a very serious problem. They seemed very relieved to hear that technical assistance was to be a part of the present project. When further questioned on technical assistance, one member of the group claimed that he belonged to an ANACAFE small producer group. Again, the other members present at this meeting seemed surprised at this, making it appear that this is the exception rather than the rule for most of the members of the cooperative.

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F. Sources of Income Other than Coffee

Probably the most common element uniting the various groups of small producers met with is the fact that virtually all exhibit a very high degree of dependence on agriculture, deriving all or almost all of their income from coffee and other crops. It is here that any similarities end however, for apart from coffee there are large variations in the types of crops grown, and the degree of dependence on cash and subsistence crops. In general, 43% of the farmers spoken with said their income from coffee was enough to support their families, while 57% said it was not enough.

The highest degree of dependence on cash crops was found in Alta Verapaz, where, in addition to coffee, virtually all the farmers met with produce a range of cash crops including cardamom, sugar cane and bananas (which serve the additional function of providing shade for the coffee plants). In addition, virtually all the farmers spoken to grow corn and beans for household consumption. Only about half said that the income they derived from coffee was sufficient to support their families, but most seem to grow enough corn and beans for their own needs.

The degree of dependence on cash crops was found to be very low in Huehuetenango, where, apart from coffee, only two farmers were found to be growing sugar cane, while the rest produce only corn and beans for household consumption. Most claimed they do not produce either enough coffee or corn and beans to meet their families' needs, and as a result many were found to have non-agricultural sources of income.

A high degree of dependence on cash crops was found in Sololá, where of the twelve farmers interviewed only five grow corn and only one grows beans. Apart from coffee, most depend mainly on cardamom and bananas, which here too are used to provide shade for coffee plants.

Table 4. Sources of Off-Farm Income by Department

Source of Income	Alta Verapaz	Santa Rosa	Sololá	Huehuetenango
Commercial	22.2	---	25.0	20.0
Ag. Labor	33.3	5.0	16.7	30.0
None	44.4	35.0	58.3	40.0
Other	---	10.0	---	10.0

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As the above table shows, the lowest degree of dependence on non-farm income was found in Santa Rosa, where agriculture is the sole source of income for 85% of those spoken with. Conversely, Alta Verapaz and Huehuetenango showed the highest degree of dependence on non-farm income, with approximately 60% of those in both areas reliant on non-farm sources of income.

As mentioned, one of the outstanding features of Sololá is the high degree of women's participation in coffee production. Most of the small producers in this area claimed they did not produce enough coffee to meet their families' needs. Of the men interviewed however, only two had outside jobs. Conversely, of the three women present at the meeting, all had set up small businesses to supplement their families' income, selling basic food items, bread and other baked goods, and prepared meals.

G. Coffee Processing Facilities

Coffee processing facilities vary in the different areas visited. In Alta Verapaz and Santa Rosa the farmers interviewed do not process their coffee at all, selling it in "cherry" form, which commands the lowest price. Coffee is sold in this form in Santa Rosa largely because of a lack of sufficient water with which to process the coffee. In Alta Verapaz the situation is more one of lack of resources and organization.

In Solola and Huehuetenango the farmers sell their coffee in parchment form. Most appear to have their own, or easy access to, coffee processing facilities, albeit very rudimentary for the most part. All of the farmers spoken with in Huehuetenango sell their coffee in dry parchment form. Oddly however, the members of one of the groups met with in Sololá sell their coffee in dry parchment, while the other group sells in wet parchment, which does not command as high a price. Although both groups seemed to be of the same economic level, the farmers who sell their coffee in wet parchment apparently do so partly because they do not have adequate drying space, and partly because they want to sell their coffee as soon as possible, and do not wish to wait the extra several days it would take to dry it completely. As a result, these farmers receive between Q100-120 per cwt. less for their coffee than those selling in dry parchment.

H. Marketing

Apart from the lack of access to affordable, long-term credit, marketing was most often mentioned as the major problem faced by virtually all of the small producers met with.

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While marketing strategies and possibilities were found to vary markedly from region to region, and even within the same region, none of the farmers spoken with were satisfied with their present marketing arrangement.

The following table provides information on the farm gate price received for different types of coffee according to the type of buyer. As can be seen, these prices vary from department to department and depending on the type of buyer.

Table 5. Average Farm Gate Price (in quetzales) per Quintal by Type of Processing and Buyer

	Intermediary	Beneficio	Trade House
Cherry			
Alta Verapaz	34.2	40.7	----
Santa Rosa	40.3	37.3	----
Wet Parchment			
Solola	89.2	----	----
Dry Parchment			
Solola	188.3	----	----
Huehuetenango	204.0	----	207.2

Of interest in the above table is the fact that the average price received by those selling to the intermediary in Santa Rosa was substantially higher than the price received by those selling to the "beneficio". In fact, prices ranged between Q35 and Q42 for both types of buyers, although in several cases the intermediary was found to be paying up to Q45 per quintal of cherry coffee, which accounts for the higher average. Despite this, all those selling to the intermediary claimed they would prefer to sell to the "beneficio".

Of the two groups visited in Alta Verapaz, the members of one sell their coffee mainly to the processing plant in Cob n, while the others sell exclusively to local intermediaries, although they had not taken any advances from them and were thus not obligated to sell to them. Those selling to the intermediaries all expressed an interest in selling directly to the processing plant in Cob n, which had indeed paid an average of over Q16 per quintal than the intermediaries.

In both of the villages visited in Sololá, the farmers were found to sell their coffee to local intermediaries, although all expressed an interest in selling to the trade house.

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In contrast to the above, no sharp distinctions were found between the groups visited in Huehuetenango, in both of which some growers sold to local intermediaries and some sold to the trade house in the town of Huehuetenango. Those selling to middlemen seemed to be doing so mainly for reasons of convenience, and claimed the slightly higher prices paid by the trade house just barely covered their transportation costs.

The farmers selling to the trade house in Huehuetenango claimed one of their main problems in marketing their coffee is the lack of information on current prices. These farmers live far from the departmental capital, and the only way for them to find out the current price for coffee in the trade house is to go to Huehuetenango. Unless they have other reasons for going, this is a trip that entails considerable time and expense.

In addition, many of the farmers who had obtained loans from the trade house in Huehuetenango claimed the house would often not tell them how much it was paying for coffee when they were ready to sell. The farmers claimed they are told to wait and the price will go up. The farmers felt this was a ploy to defer repayment of their loans, so that the house could continue charging them interest. Needless to say, all felt extremely helpless in the face of this situation.

For most of the small producers met with, obtaining higher prices for their coffee appeared to hold priority over their preference for immediate payment and risk avoidance. For those with dry parchment coffee, the pattern of holding on to their coffee until the price rose to what they felt was an acceptable level was largely followed, at the expense of deferred payment and the risk of lower prices.

Additionally, all of those currently selling their coffee in cherry and wet parchment form said they would prefer to process their coffee and sell it as dry parchment, despite the fact that this would entail an additional waiting period.

A preference for marketing cooperatively was also shown. When asked what their main marketing problems were perceived to be, 18 (35%) of the farmers spoken with said that the lack of organization to market their coffee cooperatively and thereby obtain higher prices was one of their main obstacles.

The FEDECOVERA and FEDECOCAGUA cooperatives market their coffee via their respective federations. As would be expected, FEDECOVERA markets its coffee communally, although members can market the coffee grown on their individual plots in any manner they

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wish. The members of the FEDECOCAGUA cooperatives are expected to market all their coffee via their individual cooperatives.

When asked if there were any problems or dissatisfactions with present marketing arrangements, the members of the FEDECOCAGUA cooperatives in Huehuetenango claimed they were satisfied with the status quo and saw no problems. It is however known that many of these members market a portion of their coffee outside the cooperative, so it is assumed those present at the meetings were not being entirely candid.

As with credit, there seem to be problems of mistrust of FEDECOVERA on the part of some of the individual cooperatives. At a meeting with one of these cooperatives, the members claimed they mistrusted FEDECOVERA's marketing system, saying they did not know what happened to their coffee once they handed it over to the federation. The problem seems to be that there are often long lapses between the time the cooperative hands its coffee over to the federation until it gets paid for that coffee. The members claimed that when they ask FEDECOVERA about their coffee they are often told it still isn't sold, which they do not always appear to believe.

V. Characteristics of Small Coffee Producers

A. Risk-Taking and Motivation

Small farmers have traditionally had the reputation of being resistant to change of any sort, and loathe to take even the smallest of risks. Although often accused of being backwards and primitive because of this, this seemingly dysfunctional behavior is in fact a highly rational and functional survival mechanism for small, poor farmers, who often find themselves on the brink of economic survival. Whereas larger, wealthier farmers who have a "reserve-cushion" to fall back on in the case of failure, can afford to take risks and try out new ideas, this is not the case for small producers. For most small farmers one failed crop can mean the difference between having and not having enough food to feed one's family, or staying on the farm and having to migrate to the city in search of work.

Despite this, the literature has consistently shown that small farmers are indeed open to taking risks and trying out new ideas, as long as they can be assured that the chances for success are reasonably high, and that failure will not entail economic ruin. This receptiveness to risk-taking is especially high in the case of crops with which the farmer is already familiar, as is the case with coffee.

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In the current context, two parameters were used to measure risk-taking and motivation: receptiveness to credit and renovation of old coffee plantations.

As seen, the lowest receptivity to credit was found in Alta Verapaz, where most of the farmers spoken with appeared wary of taking out loans, due more, it seemed, to fear of high interest rates, than fear of not being able to pay back the loan and subsequent consequences. When asked if they were interested in receiving credit through the current project however, all expressed interest, albeit most with much hesitation.

All the other areas visited exhibited a high degree of receptivity to credit, and almost all the small producers met with had received loans in one form or another, either from BANDESA, intermediaries and trade houses, or friends and relatives. When asked whether they were interested in receiving credit via the current project, the answer was invariably a very emphatic "yes".

The indicator used to measure motivation, namely the renovation of old coffee plantations, shows a high degree of motivation on the part of all the small producers interviewed, although, as seen, this varies from region to region. Without exception, all the small producers met with had introduced new coffee plants on their lands, to the extent able, given the financial limitations to which they are subject. When asked if they would be willing to cut down the old trees on one manzana of land in order to qualify for credit through this project, almost all said they would be willing to do so.

B. Education, Literacy and Access to Knowledge

Guatemala currently suffers from extremely low levels of education and one of the highest rates of illiteracy in Latin America. It was difficult to assess the degree of literacy in the areas visited merely through personal interviews and the use of a questionnaire. It was however possible to ascertain the participants' educational level with a fair degree of accuracy, from which it should be possible to extrapolate levels of literacy.

The educational level of the farmers interviewed is in general very low, with a mean of 1.9 years of education for all the farmers spoken with. This varies by area, with the lowest levels of education found in Alta Verapaz, with an average of 0.6 years of education per person, and Sololá with an average of 1.5 years of education per person. These levels were slightly higher in Santa Rosa and Huehuetenango, with means of 2.7 and 2.1 years of education respectively.

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While most of the farmers interviewed claimed to be literate, judging by their very low levels of education it must be assumed that their ability to read and write is of a very low level indeed. ANACAFE is aware of the low rates of literacy among the small farmers it works with, and has produced with clear and helpful illustrations.

C. Quality of Life Indicators

Due to the short amount of time available for fieldwork for this study, data collection of quality of life indicators was of necessity kept to a minimum.

As mentioned however, the quality of life of most of the farmers interviewed is similar to that of the average altiplano farmer. Most have very small landholdings, although as seen, many seem to be able to support themselves from their crops alone. Apart from coffee, most grow only subsistence crops, or other cash crops which do not provide much income, such as bananas and cardamom. Thus, while many farmers claimed that they could support their families from their crops alone, most admitted that this was at a very low level. The quality of the farmers' homes, mostly mud huts, attested to this in part.

Large families are the rule in most rural areas of the third world, and Guatemala is no exception. The farmers' families were found to be large, with an average of 6.3 dependents. Households of eight and ten were not uncommon. Happily, it seemed that virtually all the farmers' children had received some education, including the children of those who had no education themselves. Educational levels were still found to be low however, and most of the farmers' children did not have more than a sixth grade education.

VI. Results and Discussion of Social Feasibility Analysis

A. Data Sources

As mentioned, the data for this analysis were collected from interviews with 51 small producers belonging to ANACAFE "Grupos de Amistad y Trabajo", located in eight villages in the departments of Alta Verapaz, Santa Rosa, Sololá and Huehuetenango. The farmers were visited in their villages, and it was possible to witness firsthand their coffee plantations and coffee processing equipment, as well as their living conditions. The visits were made with local ANACAFE extension agents. It is not certain whether the presence of the extension agents affected the data obtained in one way or another. The farmers were asked to be completely forthright in expressing their needs, problems and preoccupations, and it is hoped

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that the presence of the ANACAFE extension agents had the effect of inspiring the farmers' confidence in the author, rather than inhibiting their responses.

In addition to the individual producers met with, four cooperatives were visited - two FEDECOVERA cooperatives in Alta Verapaz and two FEDECOCAGUA cooperatives in Huehuetenango. The two FEDECOVERA cooperatives were visited only with the local ANACAFE extension agent, who acted as interpreter. The FEDECOCAGUA cooperatives were visited together with personnel from the Federation regional office in La Democracia, Huehuetenango. Because these meetings were held with the groups as a whole, and in the case of the FEDECOCAGUA cooperatives, in the presence of cooperative and Federation administrative personnel, doubts remain regarding the candor of the participants' responses.

B. Effects of Technical Assistance and Credit on the Adoption of Technology

ANACAFE's purpose in terms of the small producers it serves is to provide them with technical assistance in all aspects of coffee production and processing. It recommends the use of fertilizers, pesticides and other inputs, but does not provide the farmers with any of the recommended supplies. Despite this, the "grupos de amistad y trabajo" have met with great success in stimulating the participating farmers to produce more and higher quality coffee, through the renovation of old coffee plantations, increased (and often for the first time) use of fertilizers and pesticides, and other production technologies such as pruning, weed control and shade management.

As mentioned, of the 51 farmers interviewed, 38 claimed they had implemented none of the above-mentioned production technologies before joining the ANACAFE group. Of these same 51, with an average of five years in the groups, virtually all have applied at least some of these technologies on a portion of their coffee, especially fertilization and the introduction of high-yield varieties. When asked why they had joined the ANACAFE group, the response was generally that they had seen the results on their neighbors' farms, and were convinced of the benefits to be derived from working with ANACAFE. Another indication of the farmers' enthusiasm and desire to learn from ANACAFE is the high turnout of the group members at the monthly meetings with the extension agents, despite the often great distances which many must travel to get to the monthly meetings.

While ANACAFE itself provides no financial assistance in the form of credit or agricultural inputs, it must not be forgotten that it has helped many of the farmers in its groups obtain short-term

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loans from BANDESA. Additionally, as seen, many of the farmers also obtain loans from local intermediaries and trade houses.

As a result, it is difficult to separate the effects of technical assistance and credit on the adoption of technology. This is especially true since many of the technical assistance recommendations require financial investments such as chemical inputs and equipment. It therefore seems that a more sound approach would be to view the two as inseparable, i.e. that both technical assistance and credit are required in order to ensure the complete adoption of the recommended technology.

C. Effects of Technology, Technical Assistance and Credit on Productivity

As seen above, the ANACAFE technical assistance program has had much success in stimulating the adoption of technology among the small producers with whom it works. The adoption of technology seems to have paid off, and virtually all of the farmers met with have reported higher productivity on the areas of coffee on which they have applied the recommended technologies.

As a result of this program, by the end of crop year 1986-87, the members of the groups were able to increase their yields to an average of 8.9 cwt. of green coffee per manzana, signifying a 29% increase in production since ANACAFE first began its small producer program in 1981.

D. Effects of the Adoption of Technology on the Farm Gate Price of Coffee

For most farmers, the ostensible reason behind, and incentive for, the adoption of new production technologies is to obtain higher coffee yields. Apart from increased production however, an additional advantage of the adoption of these technologies should be an improvement in the quality of the coffee produced.

Many of the marketing problems currently faced by small producers are a result of the low quality and quantity of coffee produced. They receive low prices in part because their coffee is often not of very high quality, which, in addition to processing, could be improved by the proper use of production technologies. Additionally, the production of greater quantities of coffee could give farmers more leverage in terms of marketing their coffee, which would result in higher prices per cwt.

While all of the farmers interviewed were producing more, and perhaps better quality coffee, none seemed to be reaping the

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benefits of this in terms of higher prices per cwt. This could be due to one or a combination of several factors: most of the farmers interviewed do not produce large enough quantities of higher quality coffee to be able to command a higher price for it; most farmers do not fully apply the recommended production technologies, so that the quality of their coffee has not substantially improved; and none of these farmers have the same range of marketing possibilities open to them that large farmers do, so that it is questionable whether they could get better prices for their coffee via their present marketing arrangements.

As a result, the adoption of technology and ensuing higher yields have not yet resulted in higher prices for these farmers' coffee. All of the farmers interviewed were aware that they could be getting better prices for their coffee, and all had various suggestions for changing their marketing strategies, most notably cooperative organization to be able to export directly or negotiate for higher prices with trade houses in Guatemala.

E. Effects of the State of Coffee at Time of Sale, Type of Purchaser, on Farm Gate Price

Of the groups visited, the producers of Alta Verapaz and Santa Rosa generally sell their coffee in cherry form, while those of Solola and Huehuetenango sell in wet and dry parchment.

The average price paid for one cwt. of cherry last year was found to fluctuate between Q35-45, whereas dry parchment commanded a price of between Q180-200 per cwt. At an approximate conversion rate of 4.5 cwts. of cherry required to produce one cwt. of dry parchment, the price received by the producer works out to be just about the same for cherry and dry parchment.

Despite this, most farmers prefer to sell their coffee in dry parchment form. This has several advantages: shipping costs are reduced to almost a fifth; cherry coffee has an extremely high sugar content, and as a result the quality of the coffee begins to deteriorate as soon as it is picked, necessitating immediate marketing; and many trade houses, which generally pay somewhat higher prices will not accept cherry coffee, forcing the farmers to sell to middlemen.

VII. Issues

A. Selective Credit

Of the estimated 39,700 small coffee producers in Guatemala, this project, in its initial phase, will attempt to provide assistance to 6,000. Of the remainder, a very rough estimate would

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be that an additional 12,000 small producers would be eligible to participate in this project according to the project criteria of elevation, total coffee production and land in coffee. While there will necessarily have to be some selection of project beneficiaries, the question of what specific beneficiary selection criteria should be, and perhaps more importantly, what selection priorities should be, remains.

In this regard, it would appear that one of the most important issues at hand is the question of providing credit selectively within the individual ANACAFE groups. The ANACAFE small producer groups are classified from "A" to "D", reflecting the degree to which the groups have adopted the recommended production technologies. The groups are far from homogenous however, and wide variations in the degree of adoption of technology exist between the members of the individual groups. These variations are in part a function of the level of motivation of the individual farmer, in part a function of each producer's level of income and access to credit for the purchase of supplies and inputs.

It is here that the question of selection priorities assumes great importance. The issue is a complicated one, not only in terms of the economic success of this project, but also in terms of the social impact this project will have on the groups involved. Some farmers have proven themselves to be more motivated than others in terms of adopting and applying the recommended production technologies. Should this project select the 6,000 most motivated (and therefore most likely to succeed) farmers in Guatemala and supply them with credit and continued technical assistance? While this might be the best course to follow in terms of ensuring the financial success of this project, it would not be very feasible from a logistical point of view. Additionally, it is not clear what the social impact of selecting only the best members from any given group would be, in terms of ensuring the continued cohesion of the ANACAFE groups, in terms of providing incentives for those farmers not receiving credit to improve their production; in terms of increased income disparities between members of the same community; and in terms of the social relations between group members outside of the context of coffee.

On one hand, offering credit to some group members and not others could provide an incentive for those not receiving credit to work harder, especially if they believe this will improve their chances to receive credit in the future.

Apart from this however, providing selective credit could have detrimental effects, in terms of creating and/or exacerbating social and economic divisions between members of the same community. Additionally, as much as one would like to believe that all the group members will continue to receive the full and complete

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attention of the ANACAFE extension agents, it is likely that these agents will devote more attention to those members of the groups receiving credit, at the expense of the rest.

B. Credit to Cooperatives

Of the 39,700 small coffee producers in Guatemala, 9,500, or 24%, belong to one of 123 cooperatives. In addition to providing assistance to independent small producers, an additional component of this project could be the provision of credit and technical assistance to members of the FEDECOVERA and FEDECOCAGUA cooperatives.

As mentioned, cooperatives in both federations have encountered serious problems with financial mismanagement in the past, and doubts exist as to their ability to properly and effectively administer the large amounts of credit that could be provided through them as part of this project.

In addition, while the ANACAFE "grupos de amistad y trabajo" number from ten to thirty members, most of the cooperatives have several hundred members. Thus, the issues and problems associated with selective credit would be magnified in this context.

Since FEDECOVERA and FEDECOCAGUA operate along substantially different lines, the issues involved are also very different, and will be discussed separately.

1) FEDECOCAGUA

The main issue in this context is that of whether credit should be provided to cooperative members via the cooperative federations, via the individual cooperatives, or outside of the structure of the cooperatives altogether.

The answer to this question depends largely on the level at which this issue is viewed. On the level of the financial success of this project, seen here in terms of the successful administration and recuperation of the credit provided, in light of the fiscal mismanagement problems FEDECOCAGUA has had in the past, it is probably safe to say that credit should be provided and administered outside of the cooperative system altogether.

In terms of empowering and strengthening the cooperatives however, providing credit outside of their structure would undoubtedly have adverse effects. The cooperatives are currently suffering from problems stemming in part from a lack of legitimacy and credibility. This problem exists in terms of how the members view the individual cooperatives, and in terms of how the cooperatives view the Federation. Providing credit to cooperative members outside of the cooperative structure, while perhaps more

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efficient in terms of loan administration and recuperation, would undoubtedly detract from the cooperatives' already weak institutional structure.

The provision of credit through the cooperatives, coupled with the necessary administrative training and assistance, could constitute an excellent opportunity to increase the administrative capacity of the cooperatives, increase their credibility in the eyes of their members, and at the same time help in capitalizing them.

Assuming credit is provided via the cooperatives however, the question of whether to provide it via FEDECOCAGUA or the individual cooperatives still remains. In the interest of strengthening the institutional structure of FEDECOCAGUA, as well as that of the individual cooperatives, it would seem best to provide funding through the Federation. The most serious problem here however would be substantially higher interest rates for the individual cooperative members, since an additional percent or two would be added on at the level of both the Federation and the individual cooperatives.

The cooperative members spoken with all claimed they would prefer to receive credit via the cooperative, rather than independently of the cooperative. The stated order of preference for channelling credit was first via the cooperative, then via the Federation, and only then independently, i.e. outside of the cooperative structure altogether.

When asked why they preferred credit via the cooperative, the members' response was that credit through the cooperative would be more convenient and more secure, since they would not have to go to Huehuetenango and deal with strangers at the banks. When asked if they would prefer credit via the cooperative if it entailed higher interest rates, the members of the Río Azul Cooperative said they would still prefer to do so, claiming the cost of travel to Huehuetenango would equal the cost of the additional interest. The members of the Jacaltenango Cooperative on the other hand said their highest priority was to obtain credit at the lowest possible rate of interest, even if that meant obtaining it independently of the cooperative.

2) FEDECOVERA

The question of providing credit to the FEDECOVERA cooperatives, which have also suffered from problems of financial mismanagement in the past, is further complicated by the fact that the cooperatives' lands are for the most part communally owned and worked.

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Most, if not all of the FEDECOVERA cooperatives have large outstanding loans, which will take them many years to pay off. This, coupled with low productivity, has resulted in a situation in which virtually none of the cooperatives have been able to pay their members dividends. This, in turn, has resulted in a vicious cycle, in which most cooperative members see themselves as nothing more than hired laborers, and do not devote the same attention to communal lands that they do to their individual plots, leading to further low productivity on communal lands.

If credit is provided to the FEDECOVERA cooperatives, it is assumed that it will be provided for the renovation of communal, rather than individual lands. This being the case, the question is: Will the cooperative members, given their low understanding of cooperativism, and assuming they will not see the fruits of their labor for several years, devote the necessary attention to communal coffee lands to make this project succeed?

C. Effects of Increased Income

By the fifth year of this project, the participating small producers should be harvesting yields of approximately 30 cwt. of dry parchment coffee per manzana of renovated land. At current rates of Q200-250 per cwt. of parchment coffee, this signifies a yearly income Q6,000-7,500, from the renovated coffee plants alone, of which about Q2,500 would be net profit. This is a substantial increase in income for all of the small producers involved, and will have many direct and indirect impacts on the farmers themselves, as well as on the other members of their communities.

1) Effects of Increased Income on Small Producers

The increased income resulting from this project will directly benefit the participating small producers and their families in many ways, such as improved nutrition, health and access to health care, housing, and children's education. In addition, the increased income will provide the farmers with more capital to invest in their coffee and other farm improvements, and help them break out of the vicious cycle of high-interest loans from middlemen.

In addition to the above-mentioned benefits however, there are many social dislocations which often result from an increase in income, especially when the increase is relatively sudden, as is the case here. The most obvious of these dislocations, not surprisingly, is the temptation to spend one's money on all the luxuries that were never affordable in the past.

Most noticeably in Guatemala, where rates of alcohol consumption are already high, is the increased tendency to drink. Many villages with successful income-generating projects have seen a

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mushrooming of local "cantinas" overnight, with corresponding increases in rates of alcohol consumption. Other problems related to sudden increases in income are conspicuous consumption, and marital problems, when husbands suddenly find themselves dissatisfied with their wives, or perhaps suddenly find expression for previously existing dissatisfactions. In addition, marital problems are often caused and/or exacerbated by women unhappy with their husbands' increased drinking and ensuing erratic behavior.

2) Effects of Increased Income on the Community

The increased coffee production and income of the participating farmers will directly and indirectly benefit their communities in many ways. The communities will directly benefit from increased labor needs, as a result of increased fertilizer and pesticide applications, more frequent weeding and larger yields to be harvested. Additional benefits will be derived from increased support for local businesses, i.e. those selling chemical inputs, tools and equipment, and coffee processing plants, trade houses, transport companies and other businesses serving the community.

It is clear that the community will derive many direct and indirect benefits from the increased wealth and income of the small producers participating in this project. The fact does however remain that these benefits are largely of a trickle-down nature, and this project will probably result in increased income disparities between the participating farmers and the rest of the community over time. This is especially the case for those who work as agricultural laborers, than for entrepreneurs providing goods and other non-labor services.

Additionally, greater levels of income for the farmers participating in this project could eventually result in greater concentrations of landholdings, as increased wealth allows the participating farmers to buy up farms from poorer, less successful neighbors.

D. Effects of Increased Political Violence

While political violence in Guatemala has greatly diminished since its peak in the early eighties, it has never entirely disappeared. In the past, this violence has caused wide-scale flight from many villages in the altiplano, and many families have been forced to abandon their homes and lands. The past months have witnessed a resurgence of this sort of violence, much of which goes unreported in the local press. As in the past, the violence seems to be located mainly in the altiplano, the main area of focus of this project.

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At the moment, the situation is far from critical, and life seems to go on as normal for the majority of the inhabitants of the area. Should the violence increase however, it could seriously affect the ability of the farmers of these areas to continue cultivating their coffee and other crops. The political situation in Guatemala should therefore be closely monitored in the next few months, to observe and detect any trends that could affect the successful implementation and execution of this project.

VIII. Conclusions and Recommendations

A. Current Outlook

For small coffee producers, especially those located at altitudes of over 3,500 feet, technified coffee production has been shown to provide the highest income potential per farm over other available alternatives. The large majority of small producers have demonstrated their willingness to invest in the cultivation of coffee as a means of improving their economic status, even at the risk and expense of high-interest loans from middlemen. The primary limiting factor for most of these farmers is the availability of affordable, long-term credit.

Recommendation:

The Small Farmer Coffee Improvement Project should be funded.

B. Marketing

Apart from the lack of availability of affordable credit, the most serious problem facing most small farmers is the low price most receive for their coffee. While increased production should bring about higher revenues, secure, well-paying marketing outlets would increase these revenues even more.

Recommendation:

A marketing component providing the farmers with fair prices for their coffee should be an integral part of this project. This would ideally serve the needs not only of those directly participating in the project, but of other producers in the community as well. Marketing could be done via private export houses in Guatemala, or as many farmers have suggested, via the organization of producer-owned marketing cooperatives or associations in order to export directly.

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C. Selective Credit

Some of the advantages and disadvantages of providing selective credit to members of the same groups have been discussed in the previous section. While providing credit only to those producers most likely to succeed would probably result in a more financially sound project, it would also have deleterious effects of the cohesion of the groups and the social and economic relations between group members living in the same community.

Recommendation:

There will always be members of every group who are clearly not creditworthy. Apart from these individuals however, every effort should be made to provide credit to as many members of the same group as possible, in an effort to preserve group cohesion and minimize new or increased socioeconomic disparities within the group and the community.

D. Credit to Women

The vast majority small coffee producers in Guatemala are men. The area of Sololá is somewhat unique in that, according to the local ANACAFE office in Mazatenango, approximately 20% of the small producer groups are comprised by women. Additionally, other groups around the country have women members, albeit in smaller numbers.

Recommendation:

In the interest of advancing the socioeconomic status of women in Guatemala, every effort should be made to provide credit to as many women as possible through this project.

E. Effects of Increased Income on Farmers

As mentioned, while the increased income resulting from this project will provide the farmers with many benefits, it could also lead to many social dislocations affecting the farmers and their families.

Recommendation:

In order to help the participating farmers better cope with sudden increases in wealth and income, to help ensure timely repayment of their loans, and to help mitigate any social dislocations that might result from increased wealth, it is recommended that experienced social workers be incorporated into this project on a full-time basis.

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F. Effects of Project on Other Members of the Community

As mentioned, this project should provide many benefits to the members of the community not directly participating in this project. Additionally however, increased socioeconomic differences could result over time, as the participating farmers improve their economic status to a greater degree than other community members.

Recommendation:

Given the fact that this project will only be providing assistance for the renovation of one manzana of land, it unlikely that any great income disparities will result in the very near future. This is however an eventuality that should be considered. Provisions to ensure the more or less equal development of the entire community should be made, such as fair and realistic minimum wage guidelines to ensure a livable income for hired labor, or other projects more directly benefitting non- coffee producing members of the community.

G. Credit to the Cooperatives

As is known, the cooperatives have suffered from problems of financial mismanagement in the past, such that the provision of direct credit to cooperative members would probably be a more financially sound move than providing funding either through the Federations or the individual cooperatives. Conversely, this would also probably have the effect of further weakening the institutional structure of the cooperatives and detracting from their already low credibility.

Recommendation:

This project should very carefully consider its aims and objectives in providing credit to the cooperatives. Unless a clear strategy of providing assistance to cooperative members, the individual cooperatives and the cooperative federations can be devised, it would probably be best to exclude the cooperatives from this project until such a strategy is formulated.

ADMINISTRATIVE ANALYSISI. THE COFFEE SECTORIndustry Productive Structure

The coffee industry in Guatemala is comprised of about 43,700 farms, of which 39,700 are owned by small farmers, and account for 801,800 hundredweight of green coffee, or 19 percent of Guatemala's total output in 1986/1987. It is estimated that approximately 9,500 small farmers belong to 123 active and registered cooperatives, divided among FEDECOCAGUA, FEDECOVERA and UCONOFEC (Union of Non-Federated Coffee Cooperatives of Guatemala). This last group is organized more for marketing purposes than for production and acquires technical assistance directly from ANACAFE. Of the remaining independent small producers, about 8,000 are members of the Grupos de Amistad y Trabajo of ANACAFE. These are informal groups organized by ANACAFE through which most of its technical assistance to small coffee growers is channelled.

Industry Legal Structure

With the passage in April 1969 of the Coffee Law (Ley del Cafe) Number 19-69 by the Guatemalan Congress, the legal structure and organizational design of the Guatemalan coffee system was established. This law is the legal instrument that has regulated and controlled the Guatemalan coffee industry since that time. The maximum authority for the industry, after the President of the Republic, is the Coffee Policy Council (Consejo de Politica Cafetera), and is charged with the responsibility for the direction, orientation, and development of coffee policy. At the same time, the Coffee Law determined that the execution of that policy be vested in the National Coffee Association (ANACAFE).

The Coffee Policy Council

The Council is made up of four cabinet Ministries (Agriculture, Public Finance, Economy and Foreign Relations), the President of the Central Bank and the President of ANACAFE, and is normally convened in special session when requested by the Minister of Agriculture or the President of ANACAFE. The Council is the principal organism for determining national coffee policy, as well to advise the President of the Republic with regard to international agreements and treaties which

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regulate the production, export, consumption, marketing and other aspects of international coffee trade. The Council recommends to the President of the Republic delegates to international meetings on coffee, as well as two representatives to the Board of Directors of ANACAFE to safeguard the interests of the small coffee producer. Finally, it approves the allocation and distribution of export quotas among coffee producers and exporters.

II. PROJECT ADMINISTRATIVE ORGANIZATION

The implementing institution for the Small Farmer Coffee Improvement Project will be the National Coffee Association (ANACAFE), which will integrate the project into its existing administrative and technical structure. Project activities will focus primarily on the Grupos de Amistad y Trabajo, which currently are the target for approximately 80% of ANACAFE's outreach effort, and, secondarily, on selected members of the Federation of Agricultural Cooperatives of Coffee Producers of Guatemala (FEDECOCAGUA) and the Federation of Cooperatives of the Verapaces (FEDECOVERA).

A. ANACAFE

Authority and Responsibility

ANACAFE, under provisions of the 1969 Coffee Law, is the successor to the Central Coffee Office (La Oficina Central del Cafe), founded in 1928, and later to the Coffee Control Office (Oficina Contralora del Cafe) established in 1960. The Coffee Law defines ANACAFE as a non-profit entity constituted by and comprised of the coffee producers of the Republic, with full legal and fiscal attributes accorded private companies. While legally a private institution, the objectives of ANACAFE have been outlined by the Coffee Law and are to cooperate with the government in the protection of the interests of national economy in relation to the production and marketing of coffee, and to defend those of the ANACAFE membership.

Specifically, and in accordance with its economic capacity, ANACAFE will operate technical investigation services, experimentation, demonstration, assistance and extension in the diverse fields of the coffee industry and will promote all the economic and agricultural activities related directly or indirectly with coffee. It will also organize services for tasting, arbitration, registry, statistics, bonded warehouses, storage and other auxiliary services in the area of coffee marketing. Moreover, the association is to place emphasis on resolving problems of small producers with regards

to financing, cultivating, processing and especially marketing of their products at just and reasonable prices. To this end, the Board of Directors of ANACAFE is to create the necessary instruments and systems and make the pertinent arrangements with public and private institutions for the better attainment of these goals.

The same law establishes that ANACAFE is the only organization authorized to extend export and coffee shipping permissions, though it cannot interfere in the free contracting of coffee for export. It is empowered to fix minimum prices for the different types of export coffee, to restrict and regulate coffee for export outside the International Coffee Agreement, and to control the quality of coffee exported.

Administrative Structure

ANACAFE is governed by a Board of Directors and operated by an administrative and technical staff, as illustrated by the Table of Organization in Appendix 1. As is typical within the Guatemalan business community, the administrative decisions of an organization normally are determined by either a strong General Manager or by an active Board of Directors. In the case of ANACAFE its executive strength lies in the Board of Directors and, specifically, its President; and the concentration of power in the Presidency of the Board of Directors has consequently diminished the role of the General Manager to one of limited administrative activities. ANACAFE's by-laws establish two year terms for the 80% of the Board's positions that are controlled by the membership of ANACAFE, half of which, or eight seats, being elected or re-elected every year. (It should be noted that re-election to the Board is the exception to the rule.) Thus, in spite of his strong and dominant executive role, the President of ANACAFE normally remains in his position only two years. At the same time, over the past 10 to 15 years there have been frequent changes of the General Manager of ANACAFE, with some executives lasting less than one year. The resulting lack of continuity in the administrative structure of ANACAFE is one of its weaknesses and must be considered in the Small Farmer Coffee Project design.

1. The Board of Directors

The ANACAFE Board of Directors is made up of twenty members, of which ten are proprietary Directors and the remainder are substitutes; however, in practice, the twenty operate as a complete Board, with each Director having voice and voting rights. The Board is constituted as follows:

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a. Two Directors named by the Coffee Policy Council, representing the interests of the non-registered producers (small producers);

b. Two Directors named by the President in representation of the national interests with regard to coffee;

c. Sixteen Directors are elected by the General Assembly of coffee producers registered with ANACAFE. Each elected Director has a term of two years; and half are elected each year. Of these Directors, two represent each of the following groups of producers:

1) producers of 1,000 to 2,000 hundredweight parchment coffee;

2) producers of 2,001 to 6,000 hundredweight parchment coffee;

3) producers of over 6,001 hundredweight parchment coffee; and,

4) the registered cooperatives.

It should be noted that the five regional coffee groups - ACOGUA, ACU, AEC, CARCOR and PROCAFE - have played a prominent role in the annual elections of the Board of ANACAFE. In this sense, there is some continuity on the Board in that each organization maintains representation on the new Boards of Directors.

2. Administration

The daily administration of ANACAFE is under the direction of a General Manager, who is supported by an Assistant General Manager and three Division Assistant Managers. As noted in the Table of Organization ANACAFE operations are broken into four units:

- General Management Division;
- Administration and Finance Division;
- Export Marketing Division; and,
- Agricultural Affairs Division.

a. General Management Division

Under the responsibility of the Assistant General Manager of ANACAFE are two departments of specific interest to the Project: The Small Producers and Cooperatives Department and the Data Processing Department. The Small Producers and

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Cooperatives Department was formed in July 1986 and began operations in February 1987. Its first function was to re-register small coffee producers throughout Guatemala and to eliminate fictitious names of producers from the rolls of ANACAFE which had been used in the past to market large farmer production to the detriment of the legitimate small producer. Once that activity was implemented, the Department expanded its scope of operation to the organization of Grupos de Amistad y Trabajo, as well as group leader training programs and a mobile training school in coffee production techniques and crop diversification for group members. This Department, working with a small staff, has shown itself to be dynamic and aggressive and through September 1988 had registered 7,730 small producers .

The Data Processing Department is a new and modern section within ANACAFE. It has an efficient staff that uses an IBM System 36, Model 5360 principally in conjunction with the Export Marketing Division, as well as for administrative (accounting/finance) tasks. This Department also has an IBM System 2/Model 50 PC, and its personnel would be able to coordinate the basic computer systems of the Project with those of the institution.

b. Administration and Finance Division

The administration and finance division is responsible for the daily management, logistics and accounting of ANACAFE. At present the staff of this division is adequate to coordinate the integration of project administrative activities into the structure of the institution. The principal contacts with the project will be in the areas of procurement, audit, and the coordinated programming of ANACAFE's budget with regard to counterpart and support activities.

c. Export Marketing Division

This unit of ANACAFE is responsible for extending the export permissions, the registry of coffee contracts, and the quality control (coffee tasting) section. Although this division provides the major window for ANACAFE to the international coffee market, it has done virtually nothing in marketing overseas. Essentially, the focus of "marketing" has been oriented to the movement and control of product within Guatemala. The efforts to date have been more of passive reporting of international conditions than of an active role in creating markets for Guatemalan coffee and for ANACAFE's member producers and exporters. If it were envisioned that ANACAFE were to take a more dynamic participation in "selling"

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the Guatemalan product, additional attention and expertise would be necessary to do so successfully.

d. Agricultural Affairs Division

This unit of ANACAFE is responsible for technical assistance to the producers and is the largest unit in ANACAFE employing 120 persons out of a total permanent ANACAFE staff of 270. In addition to having a large support staff, this Division runs an experimental station at Finca Buena Vista, in Retalhuleu, as well as an agro-industrial plant in the Polochic Valley in the Verapaz area. It also runs an experimental farm, Finca Las Flores, in Barbarena, Nueva Santa Rosa.

The Agricultural Affairs Division is split broadly into the two departments of Coffee Research and Technical Assistance. The Coffee Research Department is involved in basic investigation into the principal aspects of coffee in Guatemala. The research effort is production oriented and emphasizes rapid responses to practical problems, rather than long term projects. In support of this focus the Department maintains a soils and a crop protection laboratory, and endeavors to keep current with coffee technology through its own efforts and by maintaining international professional contacts. Personnel from this Department received exposure to regional activities during the 1987/1988 year with trips to Costa Rica, Honduras and Mexico. In order to transfer the technologies and advances stemming from their research and professional contacts, Department technicians have a program of courses for coffee producers, technicians and farm administrators and a system to respond to inquiries from the membership of ANACAFE. During the 1987/88 coffee year 147 experiments on 93 farms were carried out in the following areas of interest:

<u>Area of Investigation</u>	<u>Number</u>	<u>Farms</u>
Operation/cultivation	27	17
Botany	37	17
Soils/fertilization	24	19
Crop protection (entomology, parasite infections and nematodes)	59	40

and, during this same period the Department responded to over 2,000 consultations regarding coffee production problems.

The Department of Technical Assistance and Cooperation is directly responsible for giving assistance to

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the coffee producer, which is primarily in the form of demonstrations and courses, through the Grupos de Amistad y Trabajo. In addition, though to a lesser extent, this Department supplies training in proper processing techniques to interested owners, farmers and administrators. The Agricultural Affairs Division is charged with the largest and most important role within ANACAFE, yet, it has not shown particular aggressiveness in confronting the major problem facing coffee production in Guatemala, that of low productivity. Although a low budget may have been an important cause for its poor record up to 1986, since that date the Department has suffered a lack of innovative leadership and direction to produce more positive and dynamic results. This has been coupled with the conditions in the field and of the members of the Grupos de Amistad y Trabajo, who have made obvious improvements in productivity by adopting the principal techniques recommended by the ANACAFE technicians, but are constrained by economic limitations from incorporating the complementary inputs into their production system.

3. Operations

a. Small Producer Activities

In the production year 1980/1981, the Board of Directors of ANACAFE decided on a new priority in its technical assistance program so as to direct its efforts primarily toward the small producer, and subsequently to the medium and large sized farms. In order to carry out its principal objective of helping the small producer Grupos de Amistad y Trabajo were formed, each comprised of ten to thirty small farmers. The members of these groups were organized and trained in modern coffee production techniques. Since the formation of the first group in 1981 through September 1988 a total of 432 groups, with 8,007 members, have been established.

The organization of each group is informal and membership and participation are voluntary. No quotas or fees are assessed on the members of the Groups. The formation of a group follows a fairly standard series of steps, and is initiated by ANACAFE technicians visiting a community, and explaining and promoting the objectives of the program. When there is sufficient interest demonstrated in the program, a Group is started. The membership elects from among their peers a Coordinator and Assistant Coordinator, who act as intermediaries between the ANACAFE technicians and the Group. In this stage, some basic information about the membership and the community is obtained to form a data-base to assist the Group in the second phase of the program.

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The training imparted to each group is based on the demonstration method, using the chronological sequence of planting coffee as the basis. To carry out the demonstrations, normally a farm of one of the members of the Group is used, with the sessions most commonly being held on a monthly basis. These meetings are held over a two or three day period, or broken out into shorter courses, depending on the possibilities of the Group members.

In the second, or advanced stage, the participants are offered other courses related to general agriculture, tours to other farms, supervision of their own plantings, and demonstrations of results, encouraging the participation of the entire family. In this phase instruction is given in basic administration of property and income, methods for selling coffee and proper purchasing of the inputs needed for production. However, access to credit generally is not available to the members of the Group under the program. In spite of the lack of credit, the program has had relative success, with ANACAFE statistics showing an average yield of 9.6 hundredweight green coffee produced on the farms in the program for 1987/1988. This yield is close to the national average for the medium and large farms, but far lower than the over 20.0 hundredweight green coffee yield registered by Costa Rica, the 11.7 hundredweight yield reported by neighboring El Salvador, or the 12.4 hundredweight average yield in Mexico.

b. ANACAFE Income and Budget

The income of ANACAFE is derived from 1% tax on the FOB value and a fixed charge of Q. 0.25 per hundredweight of all green coffee exports. The one percent income on the export of coffee assures that ANACAFE will have sizable financial resources over the next years even if further currency devaluations occur in that the income is based on the international (dollar) sale value of coffee exports, converted to Quetzales at the going parity rate at time of conversion.

During the current 1988/89 fiscal year the ANACAFE budget totals Q. 13,947,000 (\$ 5,166,000), with Q. 8,584,800 (\$ 3,180,000) estimated as income from the export of coffee. A detailed balance sheet is presented in Appendix 2. With respect to expenditures, the principal areas are the following:

-Management	Q. 2,912,600 (\$ 1,078,700)
Small Producer Unit	Q. 325,600 (\$ 120,600)
-Administration and Finance	Q. 1,686,500 (\$ 624,600)
-Export Marketing	Q. 971,800 (\$ 359,900)

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-International Affairs	Q. 1,525,500 (\$ 565,000)
-Agricultural Affairs	Q. 2,863,600 (\$ 1,060,600)
-Finca Buena Vista and the Agro-Industrial Section	Q. 716,400 (\$ 265,300)

Finally, ANACAFE has budgeted Q. 3,270,600 (\$ 1,211,300) for the start of construction of a new office building.

ANACAFE SUMMARY

ANACAFE is well suited from a technical point of view to supply the major input of personnel and support for project implementation and to identify the bulk of the beneficiaries for the Project; particularly through the organized membership of the Grupos de Amistad y Trabajo. ANACAFE has an established administrative organization; yet, its weak management and lack of management continuity must be taken into consideration. To overcome this deficiency, the management of the Project should be vested in an autonomous project office which is integrated into the ANACAFE administrative and technical structure. The primary point of contact for daily coordination between the project office and ANACAFE would be at the level of the Division Assistant Managers; whereas, project planning and direction would be consulted directly with the Office of the President of the Board of Directors.

The most important area for project coordination will be with the Agricultural Affairs Department, and the structure of this department, as well as its present work focus and methodology are well aligned to project goals and operation. Reaching the project's target group will not imply a reorientation of the Department's resources, nor sacrificing its own program and target group. In reality, the project implies mostly a more intensive and broader scope approach in the very areas in which the Department is already working. ANACAFE's Administrative and Financial Division would provide support in its areas of concern, especially in regard to the coordination of the institutional strengthening activities the project offers to ANACAFE.

B. FEDECOCAGUA

FEDECOCAGUA was started in March 1969 as a non-profit cooperative federation. It has a total of 47 affiliated cooperatives in addition to nineteen pre-cooperatives which are distributed throughout the interior of Guatemala, with the largest concentration in the areas of Huehuetenango, Alta

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Verapaz and Solola. FEDECOCAGUA officials estimate that the membership in their cooperatives and pre-cooperatives is about 6,270 producers (95 members average per unit); however, they admit that the exact figure is not known and that the number for the membership is probably exaggerated due to the floating population of many cooperatives, where the membership is constantly changing, depending on the success or problems of the cooperative.

The principal activities of FEDECOCAGUA can be divided into the areas of commercialization and education and technical assistance. These two areas are subdivided as follows:

1. Commercialization

- a. Marketing of coffee. (This is the principal activity of the Federation from a business point of view.)
- b. Marketing of honey.
- c. Marketing of other products, such as cereals.
- d. Purchase and subsequent sale to its members of the necessary inputs and materials for crop production.

2. Education and technical assistance

- a. Renewal of coffee plantings.
- b. Training courses, demonstrations and tours.
- c. Coffee tree variety research.
- d. Crop diversification.
- e. Education in cooperatives and rural youth clubs.
- f. Program for modern management methods.
- g. Promotion and development of women's clubs.

The Federation has seven agricultural technicians, who, however, do not coordinate their coffee related activities with ANACAFE. There is some overlap between the two organizations, but normally the methods and procedures imparted by the FEDECOCAGUA technicians are different from those of the ANACAFE technicians.

The Federation has its main office in Guatemala City and seven regional offices in the interior of Guatemala. Among these offices it has a total of 107 employees. The administration of FEDECOCAGUA is concentrated in its General Manager, who was also the founder of the organization. There is a Board of Directors, which theoretically is the principal organ of the Federation and responsible for establishing policy and goals. However, in reality the Board simply approves the actions taken and the measures suggested by the General Manager.

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The Federation's income is derived from the sale of the products it buys from the cooperative membership, particularly coffee. Figures for the 1987/1988 fiscal year show sales of Q. 13,461,300 (\$ 4,985,700), down from Q.15,722,000 (\$ 5,823,000) the previous period. The Federation has changed its mode of operation with respect to the sale of coffee in the past few years. Previously, it had an arrangement with German non-profit organizations which would purchase Guatemalan coffee at a premium price, and which would be exported directly by FEDECOCAGUA. However, that arrangement is no longer in force, and coupled with a cash flow problem, the Federation has been forced to switch to re-selling the coffee it buys from its affiliates to local exporters, thereby reducing the margin of profit from the sale.

The Federation has had a poor operating record. Although it showed a small operating profit for the most recent period, it has accumulated substantial losses during the life of the organization. It has also a substantial amount of long-term debt that must be liquidated in future years. Part of the accumulated losses occurred when the Federation dedicated the profits from the commercial side to social programs, and recently FEDECOCAGUA decided to divide its functions (commercial and social) into two separate divisions, with each surviving on its own merits and sources of income.

FEDECOCAGUA SUMMARY

FEDECOCAGUA has the organizational mechanism from which to draw a portion of the candidates for project beneficiaries provided that the technical assistance of the cooperatives be provided by ANACAFE. Due to the financial problems of FEDECOCAGUA, it is recommended that the credit assistance be channelled directly to the beneficiary in the Project, and not through the cooperative nor through FEDECOCAGUA.

C. FEDECOVERA

FEDECOVERA was organized in 1979 with 32 cooperatives, all in the Verapaz area. At present, it has an effective membership of 25 cooperatives, with about 5,100 active affiliates. The members speak very little Spanish, limiting themselves to the Kekchi dialect. Its cooperatives have large tracts of land which they received from the government Agrarian Reform Agency (INTA). As part of the agreement with INTA, the cooperatives are obliged to run part of the property received on a communal basis. The membership of the cooperatives are fairly well-knit, but oppose strongly having to run part of the cooperatives on a communal basis.

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FEDECOVERA is more commercially oriented and less directed toward social programs than is FEDECOCAGUA. Its principal activities lie in the sale of coffee and cardamom, and to a lesser degree in the sale of tea and spices. In the fiscal year 1987/1988 coffee and cardamom sales accounted for 95 percent of the gross sales income of FEDECOVERA.

The Federation has two technicians to assist in extension and technical matters for the cooperatives; but they are not very effective because farms are extended over vast areas with difficult access, and there are too many farms for too few technicians. A recent study undertaken by the USAID Cooperative Strengthening Program showed that the cooperatives that make up FEDECOVERA had an average yield in the 1987/1988 crop of 4.02 hundredweight green coffee, and that they expect in the upcoming crop to have a yield of 5.08 hundredweight. Both yields are substantially below those of the Grupos de Amistad y Trabajo and the national average.

FEDECOVERA is administered by a General Manager and a Board of Directors. The day-to-day authority lies in the General Manager, and the Board has a fairly rapid turnover. The General Manager is widely accepted by the membership of the cooperatives since he is from the area, speaks the Kekchi dialect and is active with the cooperatives. He is a trained agronomist, and with the two technicians, is responsible for technical assistance to all cooperative members.

FEDECOVERA has an agreement with USAID/Guatemala under its Cooperative Strengthening Program. This Program has detected and demonstrated serious deficiencies in the FEDECOVERA administration, in particular in its financial management and payment of accumulated debt. In addition, it has shown that most of the cooperatives are poorly managed, and that substantial time and effort would be needed to strengthen the Federation.

FEDECOVERA SUMMARY

As in the case of FEDECOCAGUA, FEDECOVERA has an organizational structure from which candidates for project beneficiaries could be drawn, again, with the provision that technical assistance be provided by ANACAFE. Due to the financial problems of FEDECOVERA it is recommended that the credit assistance be channelled directly to the beneficiaries of the project, and not through the cooperative nor through FEDECOVERA.

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ECONOMIC/FINANCIAL ANALYSISTABLE 1: TRADITIONAL COFFEE: COSTS OF PRODUCTION AND INCOME
(per manzana)

	Man-Days	Amount Q	
A. COSTS			
1. Replanting (5% of trees/yr)			
a. nursery	4.0	18.00	
b. replanting	2.0	9.00	
c. seedlings (54 at Q 0.40)	—	22.00	
d. seedling transport	.5	2.25	
2. Weeding	12.0	54.00	
3. Pruning coffee trees	3.0	13.50	
4. Shade management	6.0	27.50	
5. Insect control			
a. spraying (2/yr)	3.0	13.50	
b. insecticide	—	19.26	
Coffee rust control			
a. spraying	6.0	27.00	
b. fungicide	—	70.00	
6. Fertilization			
a. application	6.0	27.00	
b. fertilizer (6qq)	—	170.16	
7. Harvest (at Q 5.00/man-day)	31.5	157.50	
8. Implements and tools	—	12.00	
9. Maintenance (equip. & blgds)	—	80.00	
10. Amortization and depreciation			
a. roads (6.67% of Q 500.00)		33.35	
b. equipment (value=Q 100.00)		9.09	
<u>TOTAL</u>	74.0	Q 765.11	(\$ 283.37)
B. <u>SALES</u>: 31.5 quintals of <u>cereza</u> at Q 40.00/qq.*		Q 1,260.00	(\$ 466.67)
C. <u>NET INCOME</u>:		Q 494.89	(\$ 183.29)

* Equivalent to Q 186/qq of pergamino

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TABLE 2

SCHEDULE --

Page --

Small Producer's Normal Cash Flow
Per manzana

ACTIVITY	Total labor days	EXPENSES				INCOME			Accumulate Cash flow
		Labor Cost	Input Cost	Total Cost	Accum. Yearly Cost	Amount harvested (cwt parch.)	Estimated price per cwt	Value of harvest	
A. Seedbed	6.75	30.38	294.00	324.38	324.38	.00	200.00	.00	-324.38
B. Nursery	44.00	198.00	531.00	729.00	1,053.38	.00	200.00	.00	-1,053.38
C. First year field plantings	244.00	1,098.00	938.00	2,036.00	3,089.38	.00	200.00	.00	-3,089.38
D. Second year field plantings	114.00	538.50	1,134.00	1,672.50	4,761.88	6.00	200.00	1,200.00	-3,561.88
E. Third year field plantings	192.00	949.00	1,153.00	2,102.00	6,863.88	20.00	200.00	4,000.00	-1,663.88
F. Fourth year field plantings	245.00	1,230.00	1,148.00	2,378.00	9,241.88	30.00	200.00	6,000.00	1,958.13

Small Producer Loan and Income Cash Flow

ACTIVITY	Total labor days paid by loan(A)	AMOUNT LOANED				INCOME			Accumulate Cash flow
		For Labor Cost	For Input Cost	Total Yearly Loan	Accum. Loan Amt.	Amount harvested (cwt parch.)	Estimated price per cwt	Value of harvest	
A. Seedbed	6.75	30.38	294.00	324.38	324.38	.00	200.00	.00	-324.38
B. Nursery	44.00	198.00	531.00	729.00	1,053.38	.00	200.00	.00	-1,053.38
C. First year field plantings	169.00	760.50	938.00	1,698.50	2,751.88	.00	200.00	.00	-2,751.88
D. Second year field plantings	39.00	201.00	1,134.00	1,335.00	4,086.88	6.00	200.00	1,200.00	-2,886.88
E. Third year field plantings	117.00	611.50	1,153.00	1,764.50	5,851.38	20.00	200.00	4,000.00	-651.38
F. Fourth year field plantings	.00	.00	.00	.00	5,851.38	30.00	200.00	6,000.00	5,348.63

(A) Total labor days, reduced by 75 (at rate of 0. 4.50 per day), provided by owner in years one thru three.

100
X

COST OF PRODUCTION OF NURSERY
May 1989 - May 1990
(4,000 bags of 2 plants per bag)

ACTIVITY	LABOR			INPUTS				TOTAL COST
	No. of days	Cost/day	Labor Cost	Type	Amt & Unit	Unit Cost	Cost of Inputs	
A. Seedbed		0.	0.				0.	0.
1. Clearing land for seedbed	2.00	4.50	9.00				.00	9.00
2. Raising beds and soil preparation	1.50	4.50	6.75				.00	6.75
3. Disinfection	.25	4.50	1.13	Furidan 5%	2.00 lbs	5.00	10.00	11.13
4. Purchase of seed	.00	4.50	.00	Bourbon/Catuai	7.00 lbs	7.00	49.00	49.00
5. Planting seed; soil cover	.50	4.50	2.25	Difolatán	3.00 lbs	20.00	60.00	62.25
6. Spraying of fungicide	.50	4.50	2.25				.00	2.25
7. Purchase of sprayer	.00	4.50	.00	4 gal knapsack sprayer	1.00 unit	175.00	175.00	175.00
8. Shade and irrigation	2.00	4.50	9.00				.00	9.00
9. Purchase of bags (7" x 12")	.00	4.50	.00				.00	.00
Sub - total	6.75		30.38				294.00	324.38
B. Nursery								
1. Clearing nursery area	3.00	4.50	13.50				.00	13.50
2. Soil preparation	3.00	4.50	13.50				.00	13.50
3. Purchase of bags	.00	4.50	.00	Bags 7" x 12"	4,000 units	.033	132.00	132.00
4. Filling bags	14.00	4.50	63.00				.00	63.00
5. Locating bags in nursery and disinfection	2.00	4.50	9.00				.00	9.00
6. Transplanting/planting shade	6.00	4.50	27.00	Crotalaria	1.00 lb	3.00	3.00	30.00
7. Cultural practices (weeding) and irrigation	10.00	4.50	45.00				.00	45.00
8. Fertilization	2.00	4.50	9.00	1) Foliar spray	8.00 lbs	7.00	56.00	65.00
				2) 20-20-0	1.00 cwt	40.00	40.00	40.00
9. Pest management	4.00	4.50	18.00	1) Difolatán	15.00 lbs	20.00	300.00	318.00
				2) Fungicides	10.00 lbs	9.00	90.00	90.00
Sub - total	44.00		198.00				531.00	729.00
TOTAL	50.75		228.38				825.00	1,053.38

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COST OF PRODUCTION - YEAR ONE IN FIELD
One manzana of coffee

ACTIVITY	LABOR			INPUTS				TOTAL COST
	No. of days	Cost/day	Labor Cost	Type	Amt & Unit	Unit Cost	Cost of Inputs	
C. Field Planting		0.	0.				0.	0.
1. Remove old coffee and clean area	30.00	4.50	135.00					135.00
2. Regulation of shade	4.00	4.50	18.00					18.00
3. Staking coffee and new shade	10.00	4.50	45.00					45.00
4. Digging holes (3,500 holes)	50.00	4.50	225.00					225.00
5. Transport of coffee bags	10.00	4.50	45.00					45.00
6. Preplanting fertilization	2.00	4.50	9.00	Superphosphate	9.00 cwt	18.00	162.00	171.00
7. Planting coffee	50.00	4.50	225.00	Lime (dolomite or mg. sulf.)	1.50 tons	90.00	135.00	360.00
8. Planting shade (temporary/permanent)	5.00	4.50	22.50					22.50
9. Post planting coffee pest control	10.00	4.50	72.00	1) Benlate	1.00 kg	85.00	85.00	157.00
				2) Ferban	8.00 lbs	9.00	72.00	72.00
				3) Copper fungicide	10.00 lbs	2.50	25.00	25.00
10. Weeding	48.00	4.50	216.00					216.00
11. Fertilization (soil application)	8.00	4.50	36.00	1) Foliar fertilizer	10.00 lbs	7.00	70.00	106.00
				2) Spreader sticker	1.00 lt	5.00	5.00	5.00
				3) 20-20-0	12.00 cwt	32.00	384.00	384.00
12. Soil analysis	1.00	4.50	4.50					4.50
13. Shade pruning	10.00	4.50	45.00					45.00
TOTAL	244.00		1,098.00				938.00	2,036.00

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COST OF PRODUCTION - YEAR TWO IN FIELD
One manzana of coffee

ACTIVITY	LABOR			INPUTS				TOTAL COST
	No. of days	Cost/day	Labor Cost	Type	Amt & Unit	Unit Cost	Cost of Inputs	
	q.	q.				q.	q.	q.
Field Plantation (year 2)								
1. Cultural practices:								
a) Weeding	48.00	4.50	216.00					216.00
b) Fertilization								
i) Foliar application (with fungicides)								
ii) Soil application				(According to soil analysis)				
1st application	6.00	4.50	27.00		18.00 cwt	32.00	576.00	603.00
2nd application	6.00	4.50	27.00					27.00
3rd application	6.00	4.50	27.00					27.00
2. Pest management								
a) Fungi	6.00	4.50	27.00	1) Copper fungicide	18.00 lbs	2.50	45.00	72.00
b) Insects	3.00	4.50	13.50	2) Spreader/sticker	1.00 lt	5.00	5.00	5.00
3. Replanting coffee	3.00	4.50	13.50	1) Lebaycid	1.00 lt	36.00	36.00	49.50
4. Shade management	3.00	4.50	13.50	2) Furadan	10.00 lbs	4.00	40.00	40.00
				MU-2	10.00 lbs	4.00	40.00	53.50
				1) Magnesium sulfate	9.00 cwt	24.00	216.00	229.50
				2) Boron	6.00 lbs	6.00	36.00	36.00
				3) Nitrogen, foliar	20.00 lbs	3.20	64.00	64.00
				4) Thiodan	1.50 lt	18.00	27.00	27.00
Sub - total	81.00		364.50				1,085.00	1,449.50
5. Coffee harvesting (27 cwt cherry)	27.00	5.00	135.00	Picking baskets	4.00 units	3.00	12.00	147.00
6. Processing (6 cwt parchment)	6.00	6.50	39.00	Sacks	10.00 units	1.00	10.00	49.00
7. Transport coffee				Hired transport	27.00 cwt	1.00	27.00	27.00
TOTAL	114.00		538.50				1,134.00	1,672.50
	*****		*****				*****	*****

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COST OF PRODUCTION - YEAR THREE IN FIELD
One manzana of coffee

ACTIVITY	LABOR			INPUTS				TOTAL COST
	No. of days	Cost/day	Labor Cost	Type	Amt & Unit	Unit Cost	Cost of Inputs	
E. Field Plantation (year 3)		0.	0.			0.	0.	0.
1. Cultural practices								
a) Weed control	48.00	4.50	216.00					216.00
b) Fertilization								
i) Foliar application								
ii) Soil application	18.00	4.50	81.00	Fertilizer (eg. 20-20-20) according to recommendation	20.00 cwt	32.00	640.00	81.00 640.00
				Spreader/sticker	1.00 lt	5.00	5.00	5.00
				Copper fungicide	18.00 lbs	2.50	45.00	45.00
				Lebaycid	1.00 lt	36.00	36.00	36.00
				Furadan	15.00 lbs	4.00	60.00	60.00
				MU-2	15.00 lbs	4.00	60.00	60.00
2. Pest management	9.00	4.50	40.50	1) Boran	6.00 lbs	6.00	36.00	76.50
a) Fungi				2) Nitrogen, foliar	20.00 lbs	3.20	64.00	
				3) Dolomite lime or mg. sulfite equivalent	30.00 cwt	3.00	90.00	90.00
				4) Thiodan	1.50 lt	18.00	27.00	
b) Nematodes								
4. Shade management	6.00	4.50	27.00					27.00
5. Soil analysis	1.00	4.50	4.50					
Sub - total	82.00		369.00				1,063.00	1,336.50
5. Coffee harvesting (90 cwt cherry)	90.00	5.00	450.00					450.00
6. Transport coffee				Hired transport	90.00 cwt	1.00	90.00	90.00
7. Processing (20 cwt parchment)	20.00	6.50	130.00					130.00
TOTAL	192.00		949.00				1,153.00	2,006.50

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COST OF PRODUCTION - YEAR FOUR IN FIELD
One manzana of coffee

ACTIVITY	LABOR			INPUTS				TOTAL COST
	No. of days	Cost/day	Labor Cost	Type	Amt & Unit	Unit Cost	Cost of Inputs	
F. Field Plantation (year 4)		0.	0.			0.	0.	0.
1. Cultural practices								
a) Weed control	48.00	4.50	216.00					216.00
b) Fertilization								
i) Foliar application								
ii) Soil application	18.00	4.50	81.00	Fertilizer (eg. 20-20-20) according to recommendation	20.00 cwt	32.00	640.00	81.00
				Spreader/sticker	1.00 lt	5.00	5.00	5.00
				Copper oxychloride	18.00 lbs	2.50	45.00	45.00
				Lebaycid	1.00 lt	36.00	36.00	36.00
				Furadan	15.00 lbs	4.00	60.00	60.00
				MU-Z	15.00 lbs	4.00	60.00	60.00
2. Pest management	9.00	4.50	40.50	1) Boran	6.00 lbs	6.00	36.00	76.50
a) fungi				2) Nitrogen, foliar	20.00 lbs	3.20	64.00	64.00
b) Insects				3) Thiodan	1.50 lt	18.00	27.00	27.00
3. Shade management	5.00	4.50	22.50					22.50
4. Equipment				Per need			40.00	40.00
Sub - total	80.00		360.00				1,013.00	1,373.00
5. Coffee harvesting (135 cwt cherry)	135.00	5.00	675.00					675.00
6. Transportation				Hired transport	135.00 cwt	1.00	135.00	135.00
7. Processing (30 cwt parchment)	30.00	6.50	195.00					195.00
TOTAL	245.00		1,230.00				1,148.00	2,378.00

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TABLE 3: FINANCIAL RATE OF RETURN--FARM LEVEL (U.S. \$)

YEAR	COST OF PRODUCTION (\$)		YIELDS (QD)		PRICE (\$)		INCOME (\$)		NET
	TRADITIONAL	TECHNIFIED	TRADITIONAL	TECHNIFIED	TRADITIONAL	TECHNIFIED	TRADITIONAL	TECHNIFIED	BENEFITS (\$)
1	283	452	7	6	70	70	237	-452	-659
2	283	655	7	6	70	70	207	-655	-1061
3	283	699	7	6	70	70	207	-279	-485
4	283	883	7	26	70	70	207	517	310
5	283	1002	7	30	70	70	207	1098	692
6	283	1002	7	30	70	70	207	1098	692
7	283	1002	7	30	70	70	207	1098	692
8	283	1002	7	30	70	70	207	1098	692
9	283	1002	7	30	70	70	207	1098	692
10	283	1002	7	30	70	70	207	1098	692
11	283	1002	7	30	70	70	207	1098	692
12	283	1002	7	30	70	70	207	1098	692
13	283	1002	7	30	70	70	207	1098	692
14	283	1002	7	30	70	70	207	1098	692
15	283	1002	7	30	70	70	207	1098	692

IRR 15 Years 0.25

2357X

TABLE 4: RENOVATION LOAN AMORTIZATION--FARM LEVEL (U.S.\$)

	YEAR							
	1	2	3	4	5	6	7	8
Annual Loan	389.63	629.07	494.44	653.25	755.49	755.49	755.49	755.49
Cumulative Loan	389.63	1018.70	1513.14	2166.39	2921.88	3677.37	4432.86	5188.35
Interest Charged	0.00	62.34	162.99	214.85	175.98	120.88	120.88	120.88
Interest Paid	0.00	62.34	162.99	214.85	175.98	120.88	120.88	120.88
Interest Capitalized	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Principal Paid	0.00	0.00	170.32	896.20	1099.87	755.49	755.49	755.49
Outstanding Debt	389.63	1018.70	1342.82	1099.87	755.49	755.49	755.49	755.49
Non-Loan Financed Co	123.58	123.58	123.58	123.58	123.58	123.58	123.58	123.58
Surplus Income	0.00	0.00	162.99	214.85	566.71	911.08	911.08	911.08
Retained Income	0.00	0.00	111.11	370.35	555.53	555.53	555.53	555.53
Total Income	0.00	0.00	274.10	585.20	1122.23	1466.61	1466.61	1466.61
Interest Rat	0.16							
Grace: Inter	0							
Prin	2							

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TABLE 5: SMALL FARMER COFFEE PROJECT: BUDGET, OUTPUT AND INTERNAL RATE OF RETURN (U.S.\$000)

Project Costs	Years:															TOTAL	TOTAL	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Yrs 1-8	Yrs 1-15
CREDIT (Incl Reflows & Bank Funds)		195	587	1,138	1,768	2,679	3,524	4,371	5,284	6,201	7,108	8,015	8,921	9,828	10,735	11,642	19,546	81,996
Renovation		195	587	1,038	1,668	2,101	2,417	2,584	2,665	2,600	2,600	2,600	2,600	2,600	2,600	2,600	13,256	31,456
Processing				100	100	200	200	200	200	200	200	200	200	200	200	200	1,000	2,400
TECHNICAL ASSISTANCE		349	634	592	421	178	14	22	22								2,232	2,232
Long Term - Foreign		200	400	400	300	100											1,400	1,400
Long Term - Guatemalan		50	50	50	50	50											250	250
Short Term - Foreign		99	184	142	71	28	14	22	22								582	582
OPERATING EXPENSES		289	437	492	568	597	592	714	765	779	779	779	779	779	779	779	4,454	9,907
ANACAFE																		
Technology Transf & Process Management Info Syst		78	166	215	290	367	409	331	577	577	577	577	577	577	577	577	2,633	6,672
Specialty Coffee		10	15	20	20	20	25	25	30	20	20	20	20	20	20	20	165	305
Project Implementation Unit		50	100	100	100	50				100	100	100	100	100	100	100	400	1,100
Personnel		94	94	94	94	94	94	94	94	52	52	52	52	52	52	52	752	1,116
Operation		48	48	48	48	48	48	48	48	30	30	30	30	30	30	30	384	594
BANDESA		9	14	15	16	18	16	16	16								120	120
TRAINING		70	165	240	322	282	257	232	232	143	143	143	143	143	143	143	1,800	2,801
In-Country		50	100	150	212	212	212	212	212	143	143	143	143	143	143	143	1,360	2,361
Short Term Participant		20	40	40	60	20	20	20	20								240	240
Long Term Participant			25	50	50	50	25										200	200
PUBLICATIONS		20	30	50	50	50	50	50	50	50	50	50	50	50	50	50	350	700
COMMODITIES		296	175	217	167	216	211	211	207	239	207	207	207	207	239	207	1,704	3,217
Vehicles		96	64	128	128	192	192	192	192	224	192	192	192	192	224	192	1,184	2,592
Equipment		200	111	89	39	24	19	19	15	15	15	15	15	15	15	15	520	625
EVALUATION AND AUDIT			50	50	50	50	50	50	50									
INFLATION			186	235	225	287	368	540	765	840	910	945	1,012	1,124	1,242	1,316	2,604	9,993
CONTINGENCY			104	116	106	106	96	109	112								749	749
TOTAL		1,219	2,368	3,130	3,675	4,444	5,162	6,299	7,491	8,220	9,229	10,139	11,112	12,131	13,188	14,137	33,439	111,595
Production (Renovated) (NT)				136	445	1,564	2,073	2,582	3,009	3,191	3,055	3,055	3,055	3,055	3,055	3,055		
Value (Renovated)				233	1,124	2,779	4,994	7,803	11,083	14,546	18,055	21,699	25,484	29,412	33,489	37,719		
Non-Credit Cost			63	150	263	400	563	563	563	563	563	563	563	563	563	563		
Value Trad. Crop		92	220	384	586	824	824	824	824	824	824	824	824	824	824	824		
Net Benefits		(1,310)	(2,650)	(3,432)	(3,398)	(2,889)	(1,554)	118	2,206	4,940	7,440	10,175	12,985	15,895	18,915	22,196		
IRR 8 years																		-0.38
IRR 15 years																		0.23

2007

TABLE 6: SUB-LOANS MADE (U.S.\$ 1,000)

Manzanas	Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
500	1	195	315	247	327											
700	2		273	440	346	457										
900	3			351	566	445	588									
1100	4				429	692	544	719								
1300	5					507	818	643	850							
1200	6						468	755	593	784						
1200	7							468	755	593	784					
1200	8								468	755	593	784				
1200	9									468	755	593	784			
1200	10										468	755	593	784		
1200	11											468	755	593	784	
1200	12												468	755	593	784
1200	13													468	755	593
1200	14														468	755
1200	15															468
Total		195	587	1038	1668	2101	2417	2584	2665	2600	2600	2600	2600	2600	2600	2600
Interest Due (i = 0.16)		0	31	94	166	267	336	387	413	426	416	416	416	416	416	416
Interest Uncollectable		0	3	9	17	27	34	39	41	43	42	42	42	42	42	42
Interest Paid		0	28	85	150	240	303	348	372	384	374	374	374	374	374	374

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TABLE 7: AMORTIZATION OF SMALL FARMER COFFEE PROJECT LOAN FUND (US\$1,000)

Subloans	Years	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
500	1	0	0	76	249	379	379									
700	2				106	349	531	531								
900	3					136	448	682	682							
1100	4						167	548	834	834						
1300	5							197	648	986	986					
1200	6								182	598	910	910				
1200	7									182	598	910	910			
1200	8										182	598	910	910		
1200	9											182	598	910	910	
1200	10												182	598	910	910
1200	11													182	598	910
1200	12														182	598
1200	13															182
1200	14															
1200	15															
Capital Payable		0	0	76	355	864	1525	1959	2346	2600	2676	2600	2600	2600	2600	2600
Capital Uncollectable = (10%)		0	0	11	53	130	229	294	352	390	401	390	390	390	390	390
Capital Collectable		0	0	64	302	735	1297	1665	1995	2210	2274	2210	2210	2210	2210	2210
Accum. Collectable		0	0	64	366	1101	2398	4063	6057	8267	10542	12752	14962	17172	19382	21592

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X

TABLE B: SMALL FARMER COFFEE IMPROVEMENT PROJECT: CREDIT FUND CASH FLOW (U.S.\$ 1,000)

LOAN FUND	YEARS														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Sources of Cash															
Cash Balance (Beginning)	0	0	0	64	367	1101	1930	2372	2553	2163	1838	1448	1058	668	278
Loan Funds AID	100	200	200	0	0	0	0	0	0	0	0	0	0	0	0
Loan Funds GOG	95	387	838	1668	2101	1949	1362	852	0	0	0	0	0	0	0
Interest Due (i = 0.16)	0	31	94	166	267	336	387	413	426	416	416	416	416	416	416
Interest Paid	0	28	85	150	240	303	348	372	384	374	374	374	374	374	374
Principal Due	0	0	76	355	864	1525	1959	2346	2600	2676	2600	2600	2600	2600	2600
Principal Paid	0	0	64	302	735	1297	1665	1995	2210	2274	2210	2210	2210	2210	2210
Total Sources	195	615	1187	2184	3443	4649	5305	5591	5147	4812	4422	4032	3642	3252	2862
Use of Cash															
Annual Sub-loans	195	587	1038	1668	2101	2417	2584	2665	2600	2600	2600	2600	2600	2600	2600
Interest to Bank	0	12	37	66	106	133	153	164	169	165	165	165	165	165	165
Interest to Reserve	0	8	24	42	67	85	97	104	107	105	105	105	105	105	105
Interest to ANACAFE	0	7	21	37	60	76	87	93	96	94	94	94	94	94	94
Interest to Bk of Guate	0	1	3	4	7	9	10	11	12	11	11	11	11	11	11
Cash Balance (End)	0	0	64	367	1101	1930	2372	2553	2163	1838	1448	1058	668	278	-112
Total Uses	195	615	1187	2184	3443	4649	5305	5591	5147	4812	4422	4032	3642	3252	2862
Default Rate: Principle	0.15														
Interest	0.10														

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TABLE 9: SMALL FARMER COFFEE IMPROVEMENT PROJECT: Effect on Export Income and Employment

YEAR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TOTAL
EXPORT INCOME (U.S.\$ 1,000)																
Price Premium Over																
Replaced Traditional	-35	-84	-117	-82	29	207	445	725	1011	1287	1563	1839	2115	2391	2667	13961
Premium To New Prod In Quota Mkt	0	0	19	89	217	382	585	814	1047	1274	1501	1727	1954	2181	2408	14198
Add'l To New Prod For Premium																
And Price Over Non-Qua Mkt	0	0	20	93	226	398	609	848	1091	1327	1563	1799	2036	2272	2509	14788
Add'l Premium Price Over Non-Exports	0	0	84	398	963	1697	2598	3618	4654	5662	6670	7678	8686	9694	10702	63101
EMPLOYMENT																
Traditional Employ (man-yrs)	130	312	545	831	1168	1480	1792	2103	2415	2726	3038	3349	3661	3973	4284	31807
Renovated Employ (man-yrs)	89	553	960	1583	2435	3405	4307	5348	6398	7429	8461	9493	10524	11556	12587	85127
Increased Employment (man-years)	-41	241	414	752	1266	1925	2516	3245	3983	4703	5423	6143	6863	7583	8303	53320

Quality premium = \$ 10.00/cwt; Non-quota export price = 78% quota price; Quota = 63% and Non-quota = 17% of national production

Employment Renovated (man-years)

Manzanas days		Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
500	51	1	89	428	200	337	430	430	430	430	430	430	430	430	430	430	430
700	244	2		125	599	280	472	602	602	602	602	602	602	602	602	602	602
900	114	3			160	771	360	606	774	774	774	774	774	774	774	774	774
1100	192	4				196	942	440	741	946	946	946	946	946	946	946	946
1300	245	5					231	1113	520	876	1118	1118	1118	1118	1118	1118	1118
1200	245	6						214	1027	480	808	1032	1032	1032	1032	1032	1032
1200	245	7							214	1027	480	808	1032	1032	1032	1032	1032
1200	245	8								214	1027	480	808	1032	1032	1032	1032
1200	245	9									214	1027	480	808	1032	1032	1032
1200	245	10										214	1027	480	808	1032	1032
1200	245	11											214	1027	480	808	1032
1200	245	12												214	1027	480	808
1200	245	13													214	1027	480
1200	245	14														214	1027
1200	245	15															214
Total			89	553	960	1583	2435	3405	4307	5348	6398	7429	8461	9493	10524	11556	12587
TOTAL			85127														

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TABLE 10: ANACAFE INCOME AND COSTS (U.S.\$ 1,000)

ANACAFE INCOME	2,141																
Interest	1,039																
Add'l Quota Export	1,102																
ANACAFE: COSTS	10,523																
ANACAFE: INCOME-COST (Net Est)	(8,382)																
ANACAFE: Projection of 1989																	
Sm. Farmer and Ext. Budgets	17,709																
ANACAFE: Net Cost/cwt.	6.00	Project															
ANACAFE: Net Cost/Beneficiary	508	Project															
Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
Ext./Credit Agent Cost: (\$)	26	63	110	168	236	299	336	362	378	383	378	378	378	378	378	378	4,250
Ext./Credit Agents: Man-Years	4	10	18	27	38	48	53	58	60	61	60	60	60	60	60	60	
ANACAFE Income:																	
Interest	0	7	21	37	60	76	87	93	96	94	94	94	94	94	94	94	1038.80
Earning on Add'l Export																	
Premium Tec/trad	-0.35	-0.84	-1.17	-0.82	0.29	2.07	4.45	7.25	10.11	12.87	15.63	18.39	21.15	23.91	26.67	29.43	139.61
Premium in quota aqt	0.00	0.00	0.19	0.89	2.17	3.82	5.85	8.14	10.47	12.74	15.01	17.27	19.54	21.81	24.08	26.35	141.98
Premium+price noqta aqt	0.00	0.00	0.20	0.93	2.26	3.98	6.09	8.48	10.91	13.27	15.63	17.99	20.36	22.72	25.08	27.44	147.88
Prem quota price/local	0.00	0.00	0.84	3.98	9.63	16.97	25.98	36.18	46.54	56.62	66.70	76.78	86.86	96.94	107.02	117.10	631.01
Per bag chg exp/local	0.00	0.00	0.06	0.26	0.64	1.12	1.72	2.39	3.08	3.74	4.41	5.08	5.74	6.41	7.08	7.75	41.73
TOTAL	-0.35	6.17	21.25	42.62	75.02	103.59	131.11	155.46	177.05	192.84	210.97	229.11	247.25	265.39	283.52	301.66	0.00 2141.01

Interest = 4% from renovation credit fund; Price premium = \$ 10.00/cwt; Non-quota price = 78% quota price; Per cwt bag charge = 0.25

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SPECIALTY COFFEE MARKETING PROGRAM

The objectives of the Specialty Coffee Marketing Program are:

1. To insure that small farmers receive maximum ongoing compensation for their coffees, and that they benefit directly from increased quality through premiums paid when coffee is purchased.
2. To effect certain changes in the U.S. specialty market, and eventually in the world specialty market by:
 - (a) increasing market demand for high quality Guatemalan coffees at the Importer, Roaster, Distributor, and Consumer level, and
 - (b) increasing the value of high quality Guatemalan coffees to bring higher "premiums" for these coffees over other specialty coffees.
3. To improve and maintain the overall quality of Guatemalan high-elevation coffees as follows:
 - (a) Establish criteria by which all coffees may be evaluated and graded to determine the "premium" value of these coffees in the specialty coffee market. Criteria will include:
 1. Isolated growing/processing
 2. Mean plant type and age
 3. Altitude, soil, climatic conditions
 4. Harvesting/wet processing/hulling and grading techniques.
 - (b) Identify and fully develop "quality sensitive" production and processing centers throughout the growing, harvesting, and processing of coffees where improvements in raw materials, procedures, and equipment will result in and maintain improved quality.
 - (c) Incorporate these operations into the project's farmer/processor training program.
 - (d) Develop a personnel and procedural system through which quality evaluations are ongoing and documented in order to

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allow "specialty graded" coffees to be verified, documented, and exported in a controlled and consistent fashion.

4. To develop and implement on an ongoing basis an aggressive and well-targeted "push through" promotional program which will increase and maintain the value and demand for high quality Guatemalan coffees on all market levels. To do this, the project will assist ANACAFE to develop a promotional package of literature for Roaster/Distributors, Roaster/Retailers, and Retailers which include the following:

- Program description communicating the objective of providing the most specialized assortment of higher quality coffees available from any producing country;
- Promotional Ad Slicks to be used by Roaster/Distributors to build sales in specific grades of high quality Guatemalan coffees;
- Point of Purchase (P.O.P.) color handout and poster materials showing the consumer why Guatemalan Specialty Coffees are the "best" in the world;
- A quality certificate indicating the production, processing and cup quality ranking of each exported lot of coffee to Roasters. This certificate will be multi color, with official seals and signatures to communicate a "high level" of certification, and be suitable for display in retail stores and at trade shows.

The specialty coffee program will include the following features and components:

- PRODUCTION

- A. GRADE CRITERIA: The coffees offered will provide a distinctive quality advantage over normal SHB and HB coffees in order to gain market support and credibility on the sales side. Grading of select coffees will employ a "point" system which will add premium value to the current SHB and HB grades as follows:

STRICTLY HARD BEAN (Grown above 3,500 ft.)

+ Grown over 5,000 ft.	2 points
+ Grown over 4,000 ft.	1 point
+ Grown over 3,500 ft.	0 points

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+ 100% Sun Dried	2 points
+ 50% Sun Dried	1 point
+ 100% Machine Dried	0 points
+ Ultimately Density	2 points
+ Standard SHB Density	0 points
+ Fantasia Bean Uniformity	2 points
+ Standard Bean Size Assort	0 points
+ Isolated Grade A Estate (Cherry +95% Ripe - Plant Condition Superior ANACAFE rating)	2 points
+ Isolated Standard Estate (Cherry +80% Ripe - Plant Condition Good ANACAFE rating)	1 point

MAXIMUM POTENTIAL POINTS	10
MINIMUM POTENTIAL POINTS	0

HARD BEAN (Grown below 3,500 ft.)

+ 100% Sun Dried	2 points
+ 50% Sun Dried	1 point
+ 100% Machine Dried	0 points
+ Ultimate Density	2 points
+ Standard HB Density	0 points
+ Fantasia Bean Size	2 points
+ Standard Bean Size Assortment	0 points
+ Isolated Grade A State (Cherry +95% Ripe - Plant Condition Superior ANACAFE rating)	2 points
+ Isolated Standard Estate	1 point
+ (Cherry +80% Ripe - Plant Condition Good ANACAFE rating)	
MAXIMUM POTENTIAL POINTS	8
MINIMUM POTENTIAL POINTS	0

- ISOLATION OF QUALITY COFFEES: By design, the quality control program will provide for identification of individual bags of cherry or parchment with markings identifying their point value in order to allow isolation in processing.

CHERRY BAG MARKINGS:

1. Name of Finca and Date Picked
2. Growth Altitude (on record for each finca)
3. Finca's ANACAFE Rating (on record for each finca)

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PARCHMENT BAG MARKINGS:

1. Name of Finca (only on fincas pre-selected for "Estate" Program)
2. Density Classification: 2 / 1 / or 0
3. Density Classification: 1/ or 0

- SALE OF "BELOW GRADE" COFFEES: Residual of approx. 10% of all SHB and HB coffees will be below grade and must be sold in manner prescribed by ANACAFE board of directors.

- WET PROCESS EQUIPMENT TO BE PURCHASED FOR THE ANACAFE PROGRAM: Wet mill equipment will be selected to allow for:

1. Floater separation of over and under-ripe cherries.
2. Sizing of cherries prior to pulpint to eliminate damage to beans during pulping, improve first-run pulping efficiency, and provide for more uniform bean size in fermentation tanks.
3. Dual Fermentation Tanks to provide bean size separation during fermentation.
4. Drying patios for sun drying
5. Moisture meters 1st year (Field Models)
Moisture meters 2nd year+ (Lab Models, ICAITI)
6. PH testing equipment (ICAITI)
7. Caffeine content (ICAITI)

- INITIAL PURCHASE OF PARCHMENT COFFEE FOR STAGE I: Parchment will be purchased from selected fincas where quality standards as itemized above may be isolated. During Stage II, Cherry will be purchased to be processed in wet mills, maintaining high priority for purchase from small fincas.

- QUALITY CONTROL: Quality standards for all Parchment and Cherry purchased for the program will be verified by an inspector at the point of purchase, using the tag marking system described above. Verified quality markings will be audited on a random basis by special inspections initiated by the Program Director, conducted under contract with ICAITI. Certificates of Quality will be issued based strictly on quality verification and audited control.

- Certificates of Quality carrying authorized signatures from both ANACAFE and ICAITI will be included in every bag of Oro Coffee prior to export, and will be recorded to allow program audits by USAID. Certificates will be designed to be suitable for display at point of purchase

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and will include indications of all quality attributes in accordance with the point system, in addition to PH and Caffeine analysis. Certificates will also include date and size of shipment to insure that certificates are used to demonstrate quality standard only for current retail inventories.

Program success will rely as heavily on promotional effectiveness as it will on quality. The following outline describes the promotional aids that will be produced for one segment (Roaster/Distributor) of the Specialty Trade:

A complete pamphlet describing the purpose of providing higher quality coffees to the U.S. Specialty Coffee Trade, and to insure the future supply of very high quality Guatemalan coffees for this market segment. A brief history of the development of the certification program, how it is administered, the credibility of the Quality Certification program, and a detailed explanation of the steps being taken to ensure that better quality coffee reaches the Specialty Trade. A statement of the intention to provide assistance in the promotion of higher quality coffees to the trade through information dissemination, and the printing and supply of educational and promotional aids. A request for constructive feedback from the trade and a pledge to continue to implement an increasingly higher quality standard in Guatemalan coffee. A technical description of the specific steps, with pictures, that are being taken to improve the quality of Guatemalan coffees. Finally, a section describing the point-of-purchase aids available to assist retailers in the promotion and sale of Guatemalan coffees to their customers.

This pamphlet will serve the purpose of selling the Roaster Distributor on supporting the Specialty Coffee program, and will be a promotional tool for the Roaster/Distributor to hand out to prospective customers to increase sales of Guatemalan specialty coffees.

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EQUIPMENT LIST

1. Production Technology and Processing

a.	Computer (PC) with software (4)	\$60,000
b.	Visual aids	
	(1) Video recording	7,100
	(2) Slide projectors (7 at 340)	2,380
	(3) VCR (2)	2,000
	(4) Retroprojectors (7 at 700)	4,900
	(5) Camera and accessories (2)	1,200
	(6) Megaphones (10)	1,000
	(7) Projection screens (7 at 100)	700
	(8) Charts, etc.	500
	(9) Movie Equipment	2,200
	(10) Small generator (2 at 1,510)	<u>3,020</u>
	Sub-Total	\$25,000
c.	Office	
	(1) Desk calculators (10 at 125)	\$ 1,250
	(2) Electric typewriter (eq. IBM Select.) (7 at 1,100)	7,750
	(3) Photocopier (eq. Xerox 1,025)	8,115
	(4) Desk (executive) (2 at 450)	900
	(5) Desk chair (2 at 125)	250
	(6) File cabinets (10 at 130)	1,300
	(7) Computer tablex and chairs (4 at 350)	1,400
	(8) Bookshelves (10 at 75)	750
	(9) Lamps (6 at 75)	450
	10) Chairs visitor (8 at 35)	280
	11) Printer Tables (4 at 275)	1,100
	12) Supplies	<u>1,905</u>
	Sub-Total	\$25,000
d.	Field	
	(1) Spray pumps (motorized) (7 at 500)	\$ 3,500
	(2) Spray pumps (manual) (60 at 100)	6,000
	(3) Accessories for motorized pumps (7 at 200)	1,400
	(4) Accessories for manual pumps (60 at 100)	6,000
	(5) Humidity guages (30 at 270)	8,100
	(6) Energy converter for humidity guage (30 at 50)	1,500
	(7) Hand calculators (60 at 25)	1,500
	(8) Soil Testing Kits (20 at 40)	800
	(9) Fertilizer, chemicals and tools for demonstrations (60 at 320)	<u>19,200</u>
	Sub-Total	\$48,000

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e.	Research and Laboratory	
	(1) Stereoscopic microscope (4 at 1,500)	3,000
	(2) Triple scales (2 at 150)	300
	(3) 20x magnifying glass (10 at 50)	500
	(4) Aspersion pumps (motorized) (2 at 500)	1,000
	(5) Accessories for motorized pumps (2 at 200)	400
	(6) Aspersion pumps (manual) (4 at 100)	400
	(7) Accesories for manual pumps (4 at 50)	200
	(8) Calculator (2 at 250)	500
	(9) Electronic eye for bean abnormalities (2 at 190)	380
	10) Clock hygrometer (2 at 100)	200
	11) Sieve set for bean sizes (2 at 160)	320
	12) Density measurer (2 at 150)	300
	13) Plastic bag sealer with accessories (7 at 400)	2,800
	14) Fertilizers, chemicals, tools, etc. for trials	12,000
	15) Roasting equipment	6,500
	16) Packaging equipment	5,000
	17) Puiping equipment	3,000
	18) Drying equipment	3,000
	19) Tables (8 at 150)	1,200
	20) Chairs (10 at 50)	500
	21) Lamps (10 at 75)	750
	22) Humidity measurer	900
	23) Suppliers (expendible)	<u>4,150</u>
	Sub-Total Research/Lab.	\$47,000

f.	Processing	
	(1) Prototype small scale processing facilities (15 at 2,500)	\$37,500
	(2) Prototype medium scale processing facilities (4 at 9,375)	<u>37,500</u>
	Sub-total	\$75,000

Total Production/Processing \$280,000

2. Credit

a.	Desk calculators (10 at 125)	1,250
b.	Hand calculators (10 at 25)	250
c.	Filing cabinets (20 at 130)	2,600
d.	Stencil machine, accessories and supplies (2 at 3,000)	6,000
e.	Office supplies	25,000
f.	Typewriters (manual) (20 at 200)	4,000
g.	Desks (10 at 175)	1,750
h.	Chairs (40 at 85)	3,400
i.	Lamps (10 at 75)	<u>750</u>
	Total Credit	\$45,000

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3. Specialty Coffee

a.	Computer (PC) with accessories	15,000
b.	Office	
	(1) Desk (executive)	450
	(2) Chair (executive)	125
	(3) Desk	250
	(4) Chair	85
	(5) Computer table and chair	350
	(6) File cabinets (4 at 130)	520
	(7) Office supply (3,000/yr x 5 yrs)	15,000
	(8) Bookshelves (2 at 150)	300
	(9) Lamps (4 at 75)	150
	10) Desk calculators (2 at 125)	250
	11) Electric typewriters (e.g. IBM Selectric)	1,100
	12) Printer table	275
	13) Chairs, visitors (6 at 35)	210
	14) FAX	<u>1,455</u>
	Total Specialty Coffee	<u>\$35,000</u>

4. Project Implementation Unit

a.	Computer (PC) (3 at 15,000)	\$45,000
b.	Office	
	(1) Desk (executive) (2 at 450)	900
	(2) Chair (executive) (2 at 120)	240
	(3) Desk (4 at 250)	1,000
	(4) Chair (4 at 85)	240
	(5) Chair, visitor (9 at 35)	315
	(6) File cabinets (6 at 130)	780
	(7) Photocopier (eq. Xerox 1025)	8,115
	(8) Bookshelves (4 at 75)	300
	(9) Lamps (9 at 75)	675
	10) Typewriter (e.g. IBM Selectric)	1,100
	11) Desk calculator (3 at 95)	285
	12) Computer table and chair (3 at 350)	<u>1,050</u>
	Sub-total office	<u>\$15,000</u>
c.	Didactic support (supplies)	2,000
d.	Field support - miscellaneous	<u>3,000</u>
	Total PIU	<u>\$65,000</u>

Management Information System

a.	Computer (PC) (2 at 15,000)	\$30,000
b.	Office	
	(1) Computer tables and chairs (2 at 350)	700
	(2) Printer table	275
	(3) File cabinets (4 at 130)	520
	(4) Desk	250
	(5) Chairs (4 at 35)	140

250+

(6) Photocopier (eq. Xerox 1025)	8,115
(7) Bookcases (4 at 75)	300
(8) Reproduction equipment, accesories and Supply	4,500
(9) White board	300
10) Miscellaneous equipment	<u>3,200</u>
Total MIS	\$18,000

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ACUERDO DE ADMINISTRACION DEL PROYECTO
DE MEJORAMIENTO DE PEQUEÑOS CAFICULTORES

El Ministerio de Finanzas Públicas por medio de su Ministro y Representante Legal y que en lo sucesivo se denominará EL MINISTERIO.

Por Otra parte

El Banco de Guatemala, por medio de su Presidente y Representante Legal, y que en lo sucesivo se denominará BANGUAT.

Considerando que:

En el Convenio de Donación AID No. 520-0381, (_____ fecha _____), que en lo sucesivo se denominará el PROYECTO, firmados entre la República de Guatemala, la ASOCIACION NACIONAL DE CAFE (ANACAFE), y los Estados Unidos de América actuando a través de la Agencia para el Desarrollo Internacional (A.I.D.), se estipula la firma de un Acuerdo, entre EL MINISTERIO y EL BANGUAT que defina los poderes y responsabilidades para la administración de los fondos asignados al Proyecto para el Mejoramiento de Pequeños Caficultores.

Hemos Acordado:

Celebrar, como al efecto lo celebramos mediante el presente documento, un Acuerdo que tiene como objeto fundamental, transferir los fondos de contraparte del PROYECTO ejecutar la sección _____ de EL CONVENIO para lo cual las partes aquí firmantes que regirán por los términos y condiciones establecidos en los artículos siguientes:

ARTICULO I
DEFINICIONES

Sección 1.01: Los diferentes términos en este Acuerdo a menos que específicamente se les de otro sentido, tienen los respectivos significados definidos en EL CONVENIO, en las condiciones generales aplicables a los préstamos. Sin embargo, si la definición de un termino adicional establecido en este Acuerdo fuera incongruente con una definición establecida en EL CONVENIO, la definición establecida en EL CONVENIO, prevalecerá.

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ARTICULO II
OBJETIVOS DEL ACUERDO

Sección 2.01: Este Acuerdo tiene por objeto sentar las bases de administración de fondos de crédito de EL CONVENIO del Proyecto "Mejoramiento del Pequeño Caficultor," firmado el día _____ de _____ de 1989.

ARTICULO III
TERMINOS Y CONDICIONES DEL ACUERDO

Sección 3.01: EL MINISTERIO por este medio conviene que poner a la disposición del BANGUAT la suma de VEINTICUATRO MILLONES DE QUETZALES (Q24,000,000), sobre el período de ocho años del Proyecto para créditos, como se establece en el CONVENIO, que se detallan a continuación:

ACTIVIDADES	FUENTE DE RECURSOS		
	AID (QTZ.)	CONTRAPARTE GOBIERNO GUAT. (QTZ.)	TOTAL (QTZ.)
a. Renovación e Inversión de Viveros.	1,350,000	24,000,000	25,350,000
b. Beneficiado	2,700,000	-0-	2,700,000
TOTALES	4,050,000	24,000,000	28,050,000

Sección 3.02: EL BANGUAT, en base del Convenio del Proyecto de la AID para el Mejoramiento del Pequeño Caficultor (520-0381), pone a disposición de los bancos participantes autorizados, en forma anticipada, un Fondo de Fideicomiso destinado a préstamos para pequeños productores de café, de acuerdo con los términos del Convenio. Dicho fondo se concederá por la cantidad y plazo acordados entre el BANGUAT, ANACAFE y EL BANCO, según el flujo de préstamos previstos. El monto de este fondo será revisado anualmente y ajustado a la medida del desembolso de créditos.

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Sección 3.03: Los bancos participantes otorgarán préstamos a pequeños productores de café, quienes cumplan con los requisitos del proyecto. El monto promedio será de aproximadamente SEIS MIL QUETZALES (Q6,000) y será calculado de acuerdo a las recomendaciones de ANACAFE.

Sección 3.04: EL BANGUAT mantendrá los recursos asignados y recuperados, disponibles a favor de los bancos participantes por un período no menor de diez años después del fin del proyecto un fondo rotativo sujeto a los mismos criterios y condiciones establecidos en el CONVENIO y sus enmiendas.

Sección 3.05: EL BANGUAT y EL MINISTERIO acuerdan que para asegurar la continuidad de los objetivos de EL PROYECTO requieren que EL BANGUAT Y LA ANACAFE suscriban con cada banco participante un Convenio Operativo.

Sección 3.06: EL BANGUAT y EL MINISTERIO convienen por este medio, que cuando sea necesario, previa autorización de AID, se podrán incorporar otros bancos que suscriban los convenios respectivos, siempre y cuando ellos llenen las demandas del proyecto.

Sección 3.07: Procedimiento de desembolso de recursos:

a) EL BANGUAT, al recibir del banco participante la solicitud de desembolso acompañada por el formulario especial diseñado para este fin, determinará después de la revisión el monto que deberá ser desembolsado por EL BANGUAT, para recapitalizar el FIDEICOMISO administrado por el banco participante enviando de inmediato la nota de crédito correspondiente.

La revisión de las solicitudes de desembolso presentadas por los bancos participantes, por parte de EL BANGUAT deberá realizarse en un plazo no mayor de ocho (8) días hábiles.

b) EL BANGUAT autorizará a través de quien corresponda el manejo de las operaciones indicadas en el inciso a); y aceptará operaciones con plazos de hasta siete (7) años, ya que se incluyen préstamos refaccionarios que son amortizados en ese período.

c) EL BANGUAT solicitará fondos a través de la Dirección de Financiamiento Externo de EL MINISTERIO, para capitalizar los fideicomisos de los bancos participantes. Estas solicitudes se harán de acuerdo a las proyecciones hechas por ANACAFE y el Banco Participante en las regiones del país donde el PROYECTO se ejecutará.

d) El Banco Participante suministrará al BANGUAT y a la ANACAFE trimestralmente, un informe del uso de los fondos, las recuperaciones y los intereses del FIDEICOMISO.

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- e) EL BANGUAT revisará y controlará todos los documentos y operaciones que surjan del manejo de los préstamos hechos por los bancos participantes. Estas revisiones y controles se verificarán en fechas posteriores a los créditos concedidos; enviando copia de dichos informes a los suscriptores de este convenio.
- f) EL MINISTERIO, por medio de la Dirección General de Financiamiento Externo, podrá hacer revisiones periódicas o cuando así lo estime conveniente de los controles que sobre los préstamos lleve LA ANACAFE, a fin de comparar y/o actualizar la cartera de los bancos participantes.
- g) A partir del cuarto año del Proyecto, los bancos participantes aportarán con recursos ajenos al fideicomiso, créditos de avío destinados a actividades de mantenimiento de los lotes que se tecnificaron bajo el Programa de mejoramiento del Pequeño Caficultor.

**ARTICULO IV
VIGENCIA**

Sección 4.01: El Presente Acuerdo de Administración entrará en vigencia a partir de la fecha en que sea firmado por las partes.

Sección 4.02: Este Acuerdo y todas las obligaciones derivadas del mismo terminarán en diez (10) años contados a partir de la fecha de terminación de la asistencia del Proyecto.

**ARTICULO V
DISPOSICIONES VARIAS**

Sección 5.01: El presente Acuerdo podrá ser revisado a voluntad de cualquiera de las partes firmantes en el momento en que lo consideren necesario.

En fe de lo cual suscribimos el presente Acuerdo de Administración en cinco ejemplares de un mismo contenido, en la ciudad de Guatemala, Municipio del Distrito Central a los _____ días del mes de _____ de mil novecientos ochenta y nueve.

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ASOCIACION NACIONAL DEL CAFE

SISTEMA OPERATIVO - TECNICIFACION DE FINCAS
PROYECTO AID No. 520-0381:
MEJORAMIENTO DE PEQUEÑOS CAFICULTORES

ACUERDO

El Banco de Guatemala, por medio de sus Representantes Legales, _____, y a quien en los sucesivo se denomina "BANGUAT". Por otra parte el Banco _____, por medio de sus representantes legales, _____ y quien en los sucesivo se denomina "EL BANCO".

Y, FINALMENTE

La Asociación Nacional del Café, por medio de su representante legal, y que en lo sucesivo se denominara "ANACAFE", acuerdan lo siguiente:

1. OBJETIVO

El presente documento constituye el sistema operativo que define los lineamientos específicos de relaciones coparticipantes, entre la ANACAFE y EL BANCO, para la administración del Fondo de Crédito destinado a la caficultura nacional conforme términos establecidos en EL CONVENIO celebrado entre la República de Guatemala y los Estados Unidos de América, Proyecto AID No. 520-0381 y el Acuerdo Tripartito de Administración suscrito entre EL MINISTERIO DE FINANZAS PUBLICAS Y EL BANCO DE GUATEMALA.

2. DEL FONDO

El Fondo de Crédito representa el componente básico de Contraparte del Gobierno de Guatemala del Proyecto AID No. 520-0381, destinado al crédito de fomento para la tecnificación del cultivo del café, como una de las medidas que permitirá el incremento de la producción de café por parte de los pequeños caficultores del país.

Este fondo será administrado en fideicomiso por el Banco de Guatemala, quien canalizará los recursos mediante contrato celebrado con EL BANCO, haciendo uso de anticipos del BANGUAT para establecer un Fondo Rotatorio en el BANCO.

3. BENEFICIARIOS

Los beneficiarios del Fondo de Crédito se identificarán entre aquellos cafetales, cuyas características se ajustan a los parámetros siguientes:

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3.1 Tecnificación

- a. Una superficie cultivada de café no mayor de diez (10) manzanas ni menor de dos (2) manzanas.
- b. Rendimientos inferiores a quince (15) quintales de café pergamino por manzana.
- c. Localizadas en áreas de influencia de infraestructura básica que garantice la normalidad de operaciones de producción y comercialización.
- d. Condiciones técnicas de producción favorables, tales como, clase de suelos, pendientes, disponibilidad de agua, mano de obra familiar, educación, etc.

3.2 Almácigos

Los beneficiarios de crédito para manejo del almácigo que proveerán las plántulas que requiera el Proyecto serán identificados por ANACAFE en base a otros criterios que reflejen el nivel de tecnificación de los productores proveedores para garantizar plantas sanas y de variedades altamente productivas.

- a. Pueden ser beneficiarios o no del Proyecto para tecnificación Mejoramiento Pequeños Caficultores.
- b. Que hayan recibido el curso de capacitación dictado por el IHCAFE, u otra institución calificada.
- c. La mayor parte del café beneficiado corresponde a pequeños productores.

Las características descritas anteriormente serán consideradas como requisitos básicos que deberán reunir los posibles usuarios del crédito, aparte de las posibles exigencias de otras condiciones de carácter personal, técnico-económico a ser evaluados y calificados por ANACAFE y EL BANCO.

4. CARACTERISTICAS DE LOS PRESTAMOS

4.1 Tecnificación

4.1.1 Préstamos refaccionarios:

Los préstamos refaccionarios son aquellos que se otorgan para el financiamiento sostenido de todas las labores del cultivo, durante los dos primeros años de sembrado del café para renovación total, salvo el valor de 75 jornales en el segundo

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año; asimismo, para inversiones fijas, excepto adquisición de terrenos. Los costos más significativos a financiarse con préstamos refaccionarios son los siguientes:

a. Costos de Instalación

Comprende los costos de inicio de bienes y servicios requeridos, tales como: nuevos cafetos y herramientas, mano de obra y servicios de limpieza, preparación de tierras y limpieza de cafetos, compra de bienes, materiales, construcciones, etc.

b. Costos de Mantenimiento

Durante los dos primeros años de renovación, deberán atenderse los costos de bienes y servicios para control de plagas y enfermedades, fertilización y sombra.

c. Adquisición de Plántulas

El costo de las plántulas deberá ser incluido en los planes de inversión, a consideración de la ANACAFE y de acuerdo a las posibilidades de utilizar plantas provenientes de almácigos del beneficiario del préstamo a satisfacción de la ANACAFE.

4.1.2 Préstamo de Avío:

a. Avío para almácigo

El préstamo de almácigo con fondos del proyecto es el financiamiento a los productores de viveros calificados por LA ANACAFE, para proveer de plantas de café a los usuarios del crédito refaccionario. Este tipo de préstamo se podrá otorgar al beneficiario mismo del crédito refaccionario.

b. Avío para Mantenimiento

El crédito de avío a cada beneficiario será con recursos del Banco, ajenos del Fondo de Crédito, es el que se aplica al mantenimiento y recolección del cultivo a partir del cuarto año.

4.2 Beneficiado

Los préstamos para la actividad del beneficiado se otorgarán para la construcción de beneficios de café o en mejoras de instalaciones existentes, que comprende: construcción de tanque de agua, tanque de fermentación y lavado, canales de correteo, patio para secado y

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zarandas, secador y compra de despulpadora, motores y mangueras, según la necesidad en cada caso. Este crédito no se limita a productores o grupos de productores.

5. CONDICIONES DEL CREDITO

Independientemente de los requisitos de carácter técnico para la selección de beneficiarios del Fondo de Crédito, en el otorgamiento de los préstamos deberán observarse las condiciones según las cláusulas del Convenio de Donación 520-0381, conforme los siguiente:

5.1 Monto

5.1.2 Tecnificación

5.1.1.1 Préstamos Refaccionarios

El monto de préstamo para cada prestatario cubrirá todas las necesidades para la instalación y mantenimiento de parcelas de café una manzana a la vez para cada beneficiario en un monto aproximado de SEIS MIL QUETZALES (Q6,000) por manzana para el Modelo I, y de hasta DOS MIL QUETZALES (Q2,000) por manzana.

5.1.1.2 Préstamos avío para Almacigo

En lo que respecta a los créditos de avío para almacigos, el monto será establecido por ANACAFE conforme al programa de abastecimiento de plantas para el Proyecto, sin exceder Q350.00 por millar.

5.1.3 Beneficiado

El monto del préstamo cubrirá todas las necesidades para la construcción e instalación del beneficio o para mejorar la operación de un beneficio, dependiendo del plan de inversión; siempre y cuando la facilidad se oriente al beneficio de la producción de pequeños productores y, en especial a los participantes del Proyecto.

5.2 Tasa de Interés

La tasa de interés aplicable a los préstamos refaccionarios, para almacigos, y construcción de beneficios que se otorguen con fondos del Proyecto será del 16%, calculándose de acuerdo a la fecha individual de cada desembolso y se computará a un año de trescientos sesenta días (360).

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La tasa de interés será revisada y ajustada anualmente en observación del Convenio de Administración suscrito por el Ministerio de Finanzas Públicas y el Banco de Guatemala. Una tasa modificada se aplicará a los nuevos préstamos dentro del Proyecto y será la tasa comercial que rige en el momento del ajuste.

El interés del 16% antes mencionado, se desgloza así:

Banco Participante	5%
Reserva para cuentas incobrables	4%
Banco de Guatemala y Ministerio de Finanzas Públicas	3%
ANACAFE	<u>4%</u>
	16%

Se entiende que estos fondos se constituirán de los intereses pagados, y que el desgloce de los intereses podría cambiarse de acuerdo a las necesidades del proyecto y por ajustes en la tasa de interés. Cualquier cambio se realizará por medio de decisión unanime por parte de los suscritos a este Acuerdo.

5.3 Plazo

5.3.1 Tecnificación

El plazo de los préstamos refaccionarios será concedido según el nivel de tecnificación recomendada por ANACAFE a cada prestatario, en atención a lo siguiente:

- Renovación

Plazo máximo de siete (7) años con período de gracia hasta de dos (2) años, intereses pagaderos a más tardar el 30 de abril de cada año, con amortizaciones de capital en cuotas niveladas hasta cinco (5) años después del período de gracia.

- Avío Almacigo

El plazo máximo del crédito de avío para almacigo será de hasta dieciocho (18) meses, según el caso.

- Avío Mantenimiento

El crédito de avío para el mantenimiento de fincas otorgados con recursos del proyecto y propios del banco, será de hasta 12 meses.

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5.3.2 Beneficiado

El plazo para los préstamos para beneficios será en atención a la capacidad de pago del beneficiario pero en ningún caso sera mayor de tres (3) años.

5.4 Documentación de Préstamos

Para agilizar los créditos individuales, dada su naturaleza y multiplicidad de operaciones, los préstamos serán formalizados mediante documento privado por el total del costo estimado por el técnico de ANACAFE y aprobado por EL BANCO, por el período de años comprendido en el plan de inversión de cada prestatario. Asimismo, en el Documento Privado se consignará que EL BANCO se compromete a otorgarle al prestatario del crédito refaccionario para tecnificación, un préstamo anual de avío para el mantenimiento de la finca y/o capital de trabajo, los propios recursos del BANCO, a partir del cuarto año y mientras que el prestatario se mantenga al día en sus obligaciones con EL BANCO.

5.5 Garantía

Previa evaluación de los aspectos financieros de cada crédito que sea calificado en primera instancia por ANACAFE en los aspectos agronómicos y aceptados en definitiva por EL BANCO, podrán aceptarse las garantías siguientes:

Garantía Prendaria sin Desplazamiento:

Todos los préstamos a documentarse deberán garantizarse preferentemente con garantía prendaria sin desplazamiento, constituida por la futura producción de café, así como la cosecha por obtener en el área de producción total.

Garantía Fiduciaria

Además se podrán aceptar garantías fiduciarias que a criterio del banco sean aceptables.

6. EL FONDO DE CREDITO

6.1 El Fideicomiso

El Acuerdo de Administración celebrado entre el Ministerio de Finanzas Públicas y el Banco de Guatemala establece el fideicomiso con el mecanismo a adaptarse para canalizar los créditos a los beneficiarios del Proyecto. La capitalización del mismo en EL BANCO se hará en base a una evaluación y estimación de las necesidades del BANCO para

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atender la demanda de créditos previstos por ACANAFE. El monto asignado al Fideicomiso será modificado anualmente según el flujo de créditos.

6.2 El Fondo Rotatorio

Los desembolsos de crédito del BANCO a los beneficiarios se realizará por medio de un Fondo Rotatorio creado en el BANCO. Este Fondo se capitalizará con un adelanto al BANGUAT, de acuerdo a las necesidades estimadas por ANACAFE, EL BANCO y BANGUAT. El Fondo Rotatorio será evaluado anualmente (o con mayor frecuencia si fuera indicado), y ajustado de acuerdo a la carter del BANCO.

El Fondo Rotatorio se mantendrá por medio de un sistema de reembolso desde BANGUAT al BANCO, en base de la liquidación del adelanto por parte del BANCO ante BANGUAT usando los procedimientos a establecerse. Las liquidaciones y solicitudes de reembolso se presentarán a BANGUAT cada trimestre, y el reembolso se efectuará en un plazo no mayor de treinta días (30).

7. ORGANIZACION INSTITUCIONAL

A efecto de lograr la adecuada coordinación para la administración, control y evaluación del Fondo de Crédito, la ANACAFE y EL BANCO definen los aspectos organizacionales siguientes:

7.1 BANGUAT

- a. Designar la persona dentro del Departamento de Fideicomiso quien se responsabilizará por la administración de las actividades del Banco de Guatemala relacionadas con el Proyecto.
- b. Establecer los procedimientos dentro del Banco para atender a las exigencias del Proyecto.

7.2 ANACAFE

- a. Establecimiento de zonas geográficas cafetaleras donde será desarrollado el Proyecto.
- b. Designación de nombre, posición y sede del ejecutivo principal responsable de la coordinación general del Proyecto.
- c. Nombre y sede del personal facultado para autorizar el trámite de solicitudes de préstamo.
- d. Registro de firmas del personal involucrado según el inciso anterior.

7.3 EL BANCO

- a. Localización de agencias autorizadas para la administración del fondo;

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- b. Nombre, posición y sede del ejecutivo principal responsable de la coordinación general para la administración de préstamos con recursos del Fondo de Crédito.
- c. Nombre y sede de los oficiales y otros funcionarios bancarios facultados para la autorización de préstamos.

8. AREAS DE RESPONSABILIDAD ADMINISTRATIVA

Las áreas de responsabilidad administrativa se caracterizarán en este documento por la especificación de funciones o actividades básicas del BANGUAT, ANACAFE y EL BANCO que realizarán en su gestión co-participativa para la administración del Fondo de Crédito.

8.1 Funciones de BANGUAT

- a. Creación del Fideicomiso con el BANCO, capitalizado con fondos designados por Ministerio de Finanzas Públicas.
- b. Establecimiento del Fondo Rotatorio en EL BANCO.
- c. Administración del FONDO de CREDITO, incluyendo el monitoreo de los varios fideicomisos, las contribuciones del Gobierno de Guatemala, a través del Ministerio de Finanzas Públicas, y las recuperaciones.
- d. Participar con EL BANCO y ANACAFE en la especificación de normas y procedimientos del Proyecto.

8.2 Funciones de la ANACAFE

- a. Promover y seleccionar en coordinación con EL BANCO, a los beneficiarios potenciales del Fondo de Crédito que reúnan las condiciones según el Convenio de Donación No. 520-0381.
- b. Preparar conjuntamente con el productor los planes de inversión que deberán detallar y que incluyen el desglose de costos de instalación y mantenimiento, monto total del financiamiento, programa de desembolsos y proyección de ingresos y egresos que cubra el plazo del préstamo.
- c. Brindar la asistencia técnica necesaria a los productores beneficiarios, para el buen desarrollo de la finca tecnificada.
- d. Preparar, seleccionar en principio y ayudar al agricultor a gestionar ante EL BANCO las solicitudes de crédito.
- e. Orientar a los beneficiarios sobre los trámites bancarios y adquisición de insumos agrícolas.

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- f. Suscribir los contratos con los Cooperadores de Viveros.
- g. Supervisar la aplicación de los recursos financieros conforme planes de inversión y verificar los comprobantes de gastos realizados en cada etapa.
- h. Supervisar la elaboración de estudios de factibilidad sobre la construcción o mejoras de los beneficios con fondos del proyecto.
- i. En los casos de solicitudes de crédito que sean denegadas por EL BANCO, los agentes de crédito deberán proceder según lo siguiente:
 - Revisar los datos cuando la denegación sea por falta o incongruencia de información y cursar de nuevo el trámite al banco.
 - Realizar gestiones directas cuando a su juicio no exista mérito para denegar el préstamo.
- j. Conforme programación de desembolsos, recomendar retiro de fondos contra el préstamo aprobado para cada prestatario, previo control de las inversiones anteriores.
- k. Participar en sesiones de coordinación con BANGUAT y El Banco para la administración del Fondo de Crédito.
- l. Abrir expediente de préstamo para cada beneficiario, archivar la documentación en forma ordenada y efectuar el monitoreo y control del proyecto, a través de un sistema computarizado.
- m. Conocer la posición de la cartera total, por zonas geográficas y situación por prestatario en base a los informes que el banco enviará a la Unidad Coordinadora del Proyecto en forma mensual.
- n. Respaldar al BANCO en las actividades de recuperación de préstamos conforme a condiciones pactadas con el beneficiario.
- o. Informar por medio de la Unidad Coordinadora del Proyecto, al Banco de Guatemala y los bancos participantes, de las proyecciones anuales y trimestrales de las necesidades financieras del Proyecto por región.
- p. Convocar a reuniones de revisión y/o evaluación a los bancos participantes.
- q. Controlar que el BANCO acredite mensualmente en cuenta especial que genere intereses el 4% que le corresponde a la ANACAFE para gastos de asistencia técnica.

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8.3 Funciones del BANCO

- a. Recibir y registrar en orden de procedencia las solicitudes de préstamo con cargo al Fondo de Fideicomiso.
- b. Analizar, calificar y resolver las solicitudes de préstamo conforme al mérito de la información financiera disponible de acuerdo con su política de créditos y de la fuente de fondos.
- c. Notificar a los solicitantes de crédito, por medio de los Agentes de Extensión de la ANACAFE en la medida que los préstamos sean aprobados o denegados, supliendo copia de la resolución.
- d. Suplir la papelería necesaria a los Agentes de ANACAFE para la elaboración y presentación de las solicitudes de crédito.
- e. Suscribir los contratos de préstamos con los beneficiarios del Proyecto y enviar copia a la ANACAFE.
- f. Mantener registros adecuados para control de los créditos autorizados y las operaciones del fideicomiso.
- g. Entregar fondos con cargo al préstamo aprobado conforme el plan de inversión elaborado por ANACAFE.
- h. Gestionar ante el Banco de Guatemala, en forma anual, los fondos necesarios para mantener solvente el Fondo de Crédito conforme al Convenio suscrito con el Banco de Guatemala.
- i. Supervisar la aplicación de los recursos financieros mediante visitas a las fincas de los prestatarios, cuando lo estimen conveniente.
- j. Preparar informes trimestrales sobre la situación de la cartera de préstamos a ser presentados a la Unidad Coordinadora de ANACAFE, según cuadros diseñados por éste y que comprenden:
 - i. Estado de la situación de cartera mensual (cifras acumuladas).
 - ii. Movimiento de las diferentes transacciones realizadas durante el mes.
 - iii. Cuadro separados de cartera en mora por prestatario, parcial y totalmente vencida.
 - iv. Listado de préstamos cancelados.
 - v. Otros informes que ambas instituciones acuerden.

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- k. Participar en reuniones con ANACAFE para análisis y evaluación de la administración de préstamos.
- l. Contabilizar en detalle todas las operaciones del Fondo de Crédito.
- m. Calcular y debitar intereses en cuenta de los prestatarios.
- n. Recibir pago de intereses y amortizaciones de capital acreditando los valores a cuenta de los prestatarios.
- o. Efectuar la recuperación de intereses y capital por los préstamos que otorguen.
- p. Acreditar mensualmente en cuenta especial que genere intereses el 4% que le corresponde a la ANACAFE para gastos de asistencia técnica; igual que los montos que le corresponden al Fondo de Reserva (4%) y al Gobierno de Guatemala (3%).
- q. Participar en el programa de capacitación en temas crediticios dirigidos a los técnicos de ANACAFE y de otras instituciones involucradas en el Proyecto.

9. CUENTAS INCOBRABLES

Se consideran cuentas incobrables aquellos préstamos vencidos o no, sin importar el plazo otorgado, cuando se detecte lo siguiente:

- a. Destrucción total o parcial de la finca o beneficio por fuerzas naturales o incendio, sin posibilidades de su reestablecimiento.
- b. Después que EL BANCO agote todos los medios para la recuperación del préstamo por la vía administrativa, y que el prestatario no cuente con los bienes necesarios para ejercer el pago por la vía judicial. Las normas que establezcan estos procedimientos serán definidas durante los primeros seis meses del Proyecto, conjuntamente entre ANACAFE, EL BANCO y AID.

10. COORDINACION

Para garantizar los objetivos del programa ambas instituciones se comprometen a integrar una comisión coordinadora en forma permanente que conocerá y resolverá aquellos asuntos relacionados con el mismo, además de estudiar y recomendar las acciones a tomar referentes al programa en general.

11. EVALUACION

Las evaluaciones del programa se realizarán anualmente al final de cada ciclo agrícola, con el propósito de conocer los resultados del mismo.

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13. DE LAS RECUPERACIONES

Toda recuperación de los créditos concedidos serán reinvertidos en el programa bajo la misma filosofía y disposiciones contenidos en este Convenio.

El presente Convenio regirá durante la vigencia del Proyecto, pero sujeto a revisión a voluntad de las partes.

En fé de lo cual firmamos por duplicado en la ciudad de Guatemala, a los _____ días del mes de _____ de mil novecientos ochenta y nueve

ANACAFE
GERENTE GENERAL POR LEY

BANCO

Banco de Guatemala

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C R E D I TI. BANDESA

BANDESA has features of both a development and commercial bank. The focus of its operations has been to provide financing to the small and medium-sized farmers who traditionally have lacked access to the private banking system. BANDESA has made little attempt to develop its commercial operations; however, it has experienced a rapid expansion in development banking.

BANDESA's mandate includes meeting the credit needs of the same producers which are among AID's traditional clientele. USAID/Guatemala has channeled more than \$42 million in loan funds through the Bank since 1970 for lending to small and medium-sized farmers. AID's success in utilizing BANDESA to support project initiatives has been mixed. The inefficiencies in BANDESA's operating procedures, the continued operating losses and resultant decapitalization, and the increasing delinquency in its portfolio have severely affected its operations.

BANDESA has been attempting to improve. Interest rates have been adjusted upwards. The Bank has taken a harder line on delinquent loans--new portfolio classification and collection procedures have been introduced, recoveries have increased, and some unrecoverable loans have been written off; and, credit approval procedures have been tightened. However, at the same time the Bank has not been successful in reducing central office overhead and little has been done to decentralize its operations on a regional basis. Continued low levels of credit approval authority in the district offices have created bureaucratic delays for potential borrowers. The large volume of paperwork required by the Bank as part of each loan application does not provide it with any greater assurance of recovery, but compliance is costly in both time and money. Additionally, the increased documentation has slowed the analysis and approval process dramatically. BANDESA does not have sufficient technical personnel in its credit department to rapidly process the increased document flow necessitated by the centralization of decision-making. This has resulted in weak pre-loan analysis and a dependence upon "formula lending", frequent and untimely delays, and little follow-up monitoring of its portfolio.

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Obviously, a new and more innovative strategy for working through BANDESA is necessary, and more effective criteria have to be identified and proven to work. BANDESA continues to be the most likely channel through which credit services can be provided to the small farmer. Although the Bank has had mixed success in recovering its agricultural lending portfolio, it is the largest lender (in number of small loans) to the sector. Neither the private bank nor the financiera option is available to the Mission for development lending purposes. The commercial banking sector does not possess the outreach or agency network of BANDESA, it does not become involved in unsecured lending, and it is not interested in providing credit to AID's target population. Agricultural lending is a risky business under the best conditions, and lending to small farmers possessing little collateral is even more so. There exist few incentives for the private banks to lend in the rural areas.

BANDESA has been the main conduit used by USAID to channel credit funds to the small farm sector. However, the history of this relationship between AID and BANDESA has revealed major problems which characterize the Bank's operations that have lessened its effectiveness and agility. Among the principal problems identified are the following:

1. The Bank is overly centralized (48% of total staff are located in the capital city) with the result that the Bank does not take full advantage of its widespread rural network of regional offices and "cajas rurales".
2. Insufficient numbers of trained technical personnel (e.g., managers and analysts) are available to process loan applications. In 1986, only 96 of the 1,094 employees of the Bank were classified as "technical personnel".
3. The Bank is overly bureaucratic, paperwork is excessive, and the procedures in use from loan application submittal through analysis and final approval have increased processing costs, inflated Bank overhead, slowed or delayed loan analyses, and frequently resulted in untimely disbursement of loans.

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4. Few procedural guidelines exist to guide Bank personnel in determining the documentation requirements for a specific loan application. This contributes to long processing delays and arbitrary interpretation of credit policies and documentation requirements.
5. Credit policies and loan repayment analyses frequently have no relationship to cash flow projections and potential return. Many borrowers have been provided loans under terms which will likely lead to default. The inability of Bank personnel to recognize the differences between short-term production and medium-term investment credit has led both individuals and cooperatives to assume loan repayment obligations that are unrealistic and inconsistent with their ability to repay.
6. There is little supervision of borrowers and insufficient attention loan collection. Bank personnel emphasize the application process; however, once a loan has been disbursed, little loan monitoring takes place and inadequate efforts and resources are available for collection activities.

In addition to administrative and structural problems within the Bank, its shortages and deficiencies in personnel, equipment and logistic support also prejudice its operations. The Phase II Amendment proposes to fortify BANDESA through three areas of intervention:

1. Technical assistance for improving operations, policies and inter-agency collaboration;
2. Equipment and logistical support ranging from field vehicles, to office equipment, to data processing systems; and
3. Training in loan analysis, credit administration and data management.

The principal purpose of assistance to BANDE is to create conditions which are adequate to service development activities. Full time technical assistance will be assigned to implement internal changes to achieve this purpose and to design a training program to meet the needs of Bank personnel.

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II. BANDESA Decentralization

The decentralization of BANDESA has been continually recommended as a measure to increase its efficiency and responsiveness (the evaluation by Development Associates for AID in May 1988 reinforced this conclusion). GOG and AID negotiations have elicited a commitment on the part of the GOG to undertake a wide reaching national decentralization of BANDESA. AID is, in turn, prepared to offer the use of ESF local currency funds to finance much of the process. Through the HADS II project AID is in a position to complement the ESF monies with funds to meet dollar expenses, especially in the areas of commodity procurement, technical assistance, and certain training programs.

The professional and logistic support that can be channelled through HADS II will help to create the physical and technical frame work by which policy and administrative changes can be implemented. Immediate benefits will derive to the project it self, even under the current BANDESA structure, and even greater advantages will accrue to HADS II and future development activities once these changes are made.

A commitment to support activities directed at Region I (headquartered in Quetzaltenango) has already been made under Amendment 4 of HADS I. Further decentralization contemplates principal offices in the easter region (Zacapa) and in the southeast (Jutiapa). The HADS II Project will provide these offices with similar support which will be made available to the GOG using the Region I experience as a guide, and dependent upon its succesful fulfillment of its policy and administrative change committments. Efforts in project implementation will be made to expand production, marketing and credit capabilities into new geographic areas in a coordinated fashion.

III. The Trust Fund

The Trust Fund mechanism provides an area for innovations in structure, activities and administrative systems to increase effectiveness and efficiency in development lending using criteria different from those normally or currently being applied in the Bank. The use of the Trust Fund provides a degree of insolation from the Bank's general operation and independence from the process of decentralization with regard

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to project specific activities. For the Phase II project several provisions for improved implementation should be incorporated into the trust agreements. The reason for concentrating on responsive mechanisms within the trust agreement is to increase its flexibility and scope for meeting the myriad of situations which will arise during implementation. Several specific innovative possibilities arose during the life of the Small Farmer Diversification Project (520-0255) which would have been useful in resolving problems. Among these, and ones that would anticipate similar needs that will arise during Phase II implementation, are:

1. Multicycle Production Loans To eliminate the need for credit worthy farmers to return to BANDESA after each crop cycle to repay a previous loan and apply for a new one, a system should be instituted which allows a loan to be kept for several crop cycles. The computerized systems to be installed in the Bank would allow monitoring to be made rapidly, and the farmer would retain ready access to his funds. Interest payment could be made on a cyclical basis (crop cycle) and the loan repaid after two or three years.

If the borrower failed to deposit the full loan amount during a agreed upon period, a "red flag" would be raised, permitting the credit agent to identify the reason. This system would eliminate Bank work associated with closing and opening accounts, inspections and loan collection field visits by the credit agent, and a loss of control by the farmer of funds needed to meet timely purchases.

A secondary benefit to the farmer would be to earn interest on the portion of the capital left in the savings account until needed, offsetting his interest cost of the loan. In addition, the Bank would benefit from the use of the money left in the account, until withdrawn to meet production expenses. Over time, it is likely that the savings habit would become automatic, and the borrower would become a saver, including with his own excess cash.

2. Credit Financed Technical Assistance For the commercial producer agronomic and management assistance should be treated as a cost of production, as is any

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other modern input, as long as its return is greater than that cost. The use of private technical assistance is perhaps the final step in converting from a subsistence farm to a commercial enterprise. Making credit funds available to finance this step would represent an important support activity to the emerging commercial farmer, as well as provide the Bank an additional insurance policy towards loan recovery. In order to encourage both the Bank and the borrower to take this innovative step the project will provide money to be administered through the Trust Fund to initiate this activity, much the same way that the social payment is used as an incentive for soil conservation. As with conservation, when private technical assistance demonstrates its worth the farmer will assume the risk of purchasing it.

3. Balloon Payments for Investment Loans Presently, infrastructure loans are permitted extended payback periods (ten years for mini irrigation) in order to compensate for the low repayment capacity in the early years. However, this method for reducing average payment quotas results in high interest costs over the life of the loan and delays the return of investment capital to circulation. The use of a balloon repayment model would more closely relate the loan recovery schedule with repayment capacity. In the Phase II project balloon payments could be contemplated for irrigation investment, market infrastructure and livestock purchase.
4. Reflow Use Rarely does a USAID project reflect upon specific uses of reflow funds. In the case of the Trust Fund mechanism the destination of loan payback money can be precisely defined. Two obvious alternatives are to maintain it in the Trust Fund to compensate for bad loans and/or expand the fund total; or, direct it to the Bank's general fund for capitalization requirements resulting from uncollectable loans. Regardless of the second round use of reflows, the trust agreement should have an active role in determining it.
5. Annual Adjustments The trust agreement should provide for an annual review of activities and allow for a

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redistribution among them. Given the uncertainty surrounding the implementation process, it is prudent to include a means for periodic adjustment in resource allocation. It is the rule rather than the exception that funds stagnate because of the inability to make transfers from dormant activities to active ones.

IV. The Credit Fund

Phase II will provide funds to be administered through the Trust Fund in four areas:

- A. Production Credit
 - 1. short cycle crops
 - 2. fruit crops
 - 3. livestock
- B. Irrigation construction and maintenance
- C. Marketing
 - 1. post-harvest working capital
 - 2. marketing infrastructure
- D. Financial Services
 - 1. soil conservations payments
 - 2. Irrigation feasibility studies
 - 3. private technical assistance

A. Production Credit

This element is very similar to that in 520-0255, with the exception that there is no attempt to restrict eligible activities to export oriented crops, or eliminate basic grains. Also, with respect to livestock loans will be directed toward establishing commercial enterprise in which livestock is a primary activity and source of income. The following amounts were assigned to each activity; based on the assumptions and calculations detailed in the Economic Analysis in Section 4: Economic Measures.

1. Short Cycle crops	\$	2,715,000
(includes allowance for default)		
2. Fruit Crops		40,000
3. Livestock		<u>800,000</u>
Total	\$	3,555,000

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B. Irrigation Construction and Maintenance

It was estimated that over the life of the project the following credit funds would be required for this activity:

1. Gravity Systems (1760 has. at \$,200/ha.)	\$ 2,112,000
2. Pump Systems (590 has. at \$2,000/ha.)	1,180,000
Total	<u>\$ 3,292,000</u>

C. Marketing

Working capital for marketing operations, with priority given to producers, will be available under the Phase II project. As increased opportunities become known for marketing, funds in addition to the production loan may be required to take advantage of the best options. Special attention will have to be given to the agility with which marketing loan applications are processed, given the fleeting nature of many market opportunities. \$270,000 will be allotted to this activity.

Funds will also be made available for investment in market infrastructure at the local and regional level. Basically, collection and distribution centers are envisioned as the most common form of infrastructure investment; with guidelines set at \$5,000 per local facility and \$25,000 for regional installations. However, flexibility should be maintained and the overriding

D. Financial Services

This component includes three non-repayable disbursement activities. First are the incentive payments for soil conservation works. Second is a fund to pay for irrigation feasibility studies done by private sector firms, as presented in the description of this activity. Finally, there is an allocation to pay for up to three cycles per borrower of private technical assistance for crop production as well as allocations for livestock farms. It is believed that after that period profitability should be apparent and the group should assume the costs as part of its production loan, or

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dispense with the service. For this last activity BANDESA must coordinate with other entities in the public and private sector to identify eligible technicians, establish fees and payments systems, fix the rules governing work load, and establish a monitoring and evaluation scheme to measure the quality of the assistance being given. Guidelines are given in the discussion of this activity in the extension section.

The following non-reimbursable funds will finance these three activities:

1. Conservation (6,400 has. at \$130/ha.)	\$	832,000
2. Irrigation Studies and Design (of which \$240,000 has. already been allocated under HADS I)		600,000
3. Private Technical Assistance		<u>500,000</u>
	Total	\$ 1,932,000

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