Small Farmer Coffee Cooperatives in Ecuador: A Profile of Socioeconomic Conditions and Technical Capacity

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Table of Contents

Contents continued...

List of Tables

Tables continued...

Background

This study has been undertaken to provide information for the social soundness analysis that is being conducted in connection with a proposed program of private sector coffee renovation and rehabilitation in Ecuador. Coffee production and export is an important component of the Ecuadorean economy. Nearly 130,000 families are directly involved in the growing of coffee on over 400,000 hectares of land.[1] Between $150-$200 million are earned each year from the export of the crop. This means that coffee exports are Ecuador's third most valuable export commodity. Moreover, since an estimated 80% of all coffee producing families are small farmers, cultivating farms of less than five hectares in size, income from coffee production plays an important role in maintaining social and economic stability among an important sector of Ecuador's small farmers.

The recent appearance of coffee rust (La Roya) and a an insect infestation (La Broca) have come to threaten the survival of the coffee industry in Ecuador and hence places in jeopardy a significant source of foreign exchange earnings as well as the economic well-being of an important sector of Ecuadorean small farmers. These diseases have proved so devastating to production in other coffee growing regions that formerly rich production zones have been abandoned entirely.[2]

Many small coffee farms in Ecuador are particularly vulnerable to these diseases because knowledge and practice of modern coffee farming technology is very limited. Yields are said to average only 6 to 8 quintales per hectare compared to yields of

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[1]The exact figures, taken from the 1983 "Censo Cafetero" of the Programa Nacional de Café, are 129,612 producers on 429,609.47 hectares of coffee land.

[2]For a discussion of the impact of coffee disease on the economy and society of one region of rural Honduras see Jones, et al., 1983.

five or six times as high on highly technified coffee farms in Central America and Colombia.

An additional problem facing most small coffee producers is the low prices they receive for their crops. Many farmers, because of their immediate cash needs, sell their crop prior to harvest rather than waiting for the harvest when they could receive a substantially higher price.

At present consideration is being given to assisting small coffee farmers in Ecuador by channelling technical and credit assistance through coffee cooperatives. In Ecuador there are 147 coffee cooperatives organized into the Federación Nacional de Cooperativas de Cafe (FENACAFE). At latest count, there were 5,238 active members of these cooperatives. The report which follows is an attempt to provide an up-to-date picture of the membership of these cooperatives. The study will examine several key aspects of these coffee cooperative members: (1) socio-economic and demographic characteristics, (2)patterns of land tenure, (3) the volume and value of coffee production, (4) varieties of coffee being cultivated, (5) the use of modern agricultural practices, (6) the utilization of technical assistance, (7) the utilization of credit, (8) the presence of various coffee diseases and infestations, and (9) participation in and satisfaction with the coffee cooperatives. The study is based on a sample survey, the nature of which is described immediately below.

Data

Sample Design

The data analyzed in this report are drawn from a survey of 506 small coffee farmers, members of coffee cooperatives affiliated with FENACAFE.[3] They were interviewed during the period July 7-19, 1986.

The interviews were conducted in 25 coffee cooperatives selected from the list of 147 made available by FENACAFE. The selection of the cooperatives was based upon an effort to provide the maximum regional coverage, within the context limited by the availability of transportation and human resources. Coffee is produced in 18 Departments in Ecuador, but six of these, such as Galapagos, Azuay, Chimborazo, Pastaza, Cañar and Morona Santiago contain less than one-tenth of all coffee producers in Ecuador and were therefore excluded from this survey. An additional two Departments (Cotopaxi and Zamora Chinchipe) had fewer than two percent of the farmers and were also excluded. That left a total of nine Departments each one of which contained at least 2 per cent of the total number of coffee producers.

Within the constraints of the resources at hand, it was possible to conduct interviews in six Departments that contained at least two per cent of the country's coffee farms. The single largest coffee producing Department is Manabí, containing

[3]The sample was designed to include only members of cooperatives. A total of 18 respondents (3.6% of the sample) stated that they were not members of a cooperative (see item H2 in questionnaire). Upon further examination it emerged that all but four of these 18 stated that they had received services from a cooperative and/or attended meetings of one. Perhaps these respondents were in the process of becoming members. Three of the remaining four respondents who stated that they were not members had acquired their farms in the very recent past and thus were probably in the process of joining a cooperative. The remaining respondent stated that he had received no services from a cooperative and was very unhappy with it. Presumably, this was an individual who had recently terminated his membership. For the purposes of this report, therefore, all of the respondents will be considered coffee cooperative members.

over one-third of all of Ecuador's coffee producers (see Table 1). The sample concentrated a bit over half of its interviews in this Department. The Department of Los Ríos is the only remaining Department in which at least ten per cent of the total number of coffee farmers are located, and a little more than 10 per cent of the interviews were conducted there. The remaining four Departments included in the survey were selected from among the next seven Departments containing the largest number of coffee producers.

Table 1. Provincial Distribution of Coffee Farmers and Interviews

Rank	Province	% of coffee farmers	% of sample
1.	Manabí	34.2	54.0
2.	Los Ríos	11.8	10.8
3.	Guayas[a]	(9.6)	--
4.	Mapo[a]	(7.9)	--
5.	Pichincha	7.9	5.3
6.	Loja	7.4	12.8
7.	Esmeraldas	5.7	2.2
8.	El Oro	4.9	14.8
9.	Bolívar[a]	(2.4)	--
	TOTALS[b]	79.9%	100.0%

[a]The farms in these Departments are not included in the total displayed at the bottom of the table because no interviews were conducted in them.

[b]These totals exclude the "Zonas Litigio" (land whose ownership is contested with Peru).

The cooperatives themselves were sampled from among those in the six selected Provinces. The sampling technique of Probability Proportional to Size (PPS) was employed such that the number of target interviews per cooperative was established in proportion to the number of members in that cooperative, although as noted below, this procedure was not strictly adhered to. Table 2 contains the number of interviews

(in ascending order) conducted in each of the 25 cooperatives studied, along with the number of members in each cooperative.

Table 2. Membership and Number of Interviews per Cooperative: Ordered by Sample Size

Cooperative	Members	Interviews	%
Nuevos Horizontes	15	7	1.4
Norte Manabí	16	8	1.6
Dominguillo	16	8	1.6
Central Alamor	19	8	1.6
Praderas del Toachi	16	9	1.8
Porvenir del Toachi	15	9	1.8
Tierras Ecuatorianas	18	9	1.8
Costa Norte	18	11	2.2
Flor del Café	21	11	2.2
José M. Apolo	61	12	2.6
Nuevo Amanecer	29	15	3.0
Las Delicias	67	15	3.0
Cascol	61	15	3.0
Los Angeles	26	15	3.0
Ventanas	24	15	3.0
Coroncillo	96	21	4.1
Rambuche	42	22	4.3
Gran Puyango	52	22	4.3
Mocache	48	25	4.9
La Naranja	120	28	5.5
Centinela del Sur	81	28	5.5
San Isidro	67	35	6.9
Santa Ana	178	37	7.5
Cantonal Piñas	224	41	8.1
La America	323	80	15.8
TOTAL		506	100.0

Mean interviews per cooperative = 12.7

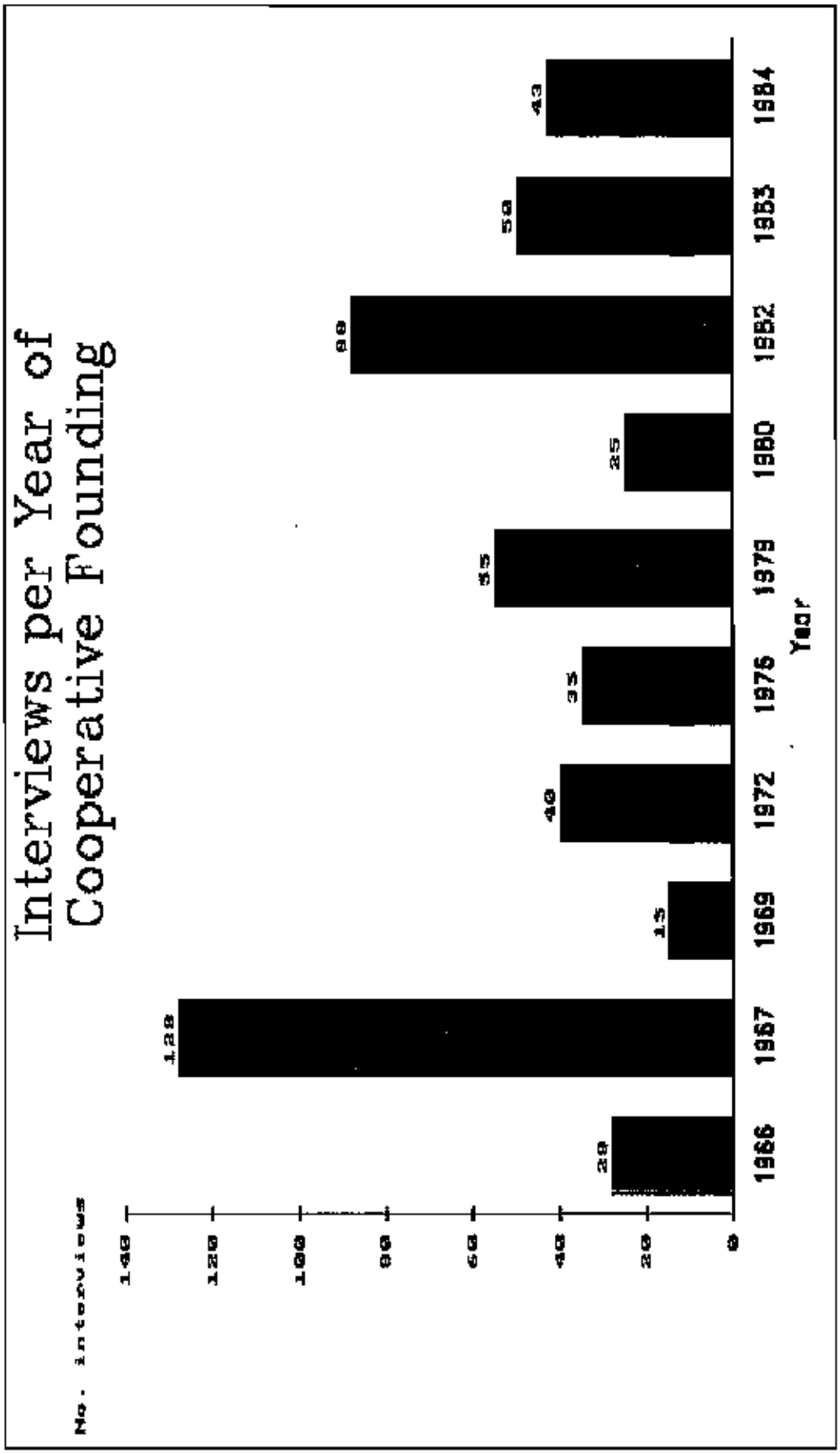
As can be seen, the proportion of the cooperative members interviewed[4] was not identical in each case. Three reasons account for this. First, in order to justify the cost of sending a survey team to the smaller cooperatives it was necessary to

[4]This is known as the "sampling fraction."

interview a larger proportion of the total number of members. Second, in order to be able to have a sample of sufficient size to be able to generalize to the smaller cooperatives it was necessary to oversample them. Third, the official count of the number of members often varied from the actual number of members encountered by the team as a result of illness, death, resignations or other factors that made the respondents unavailable.

In sum, the sample was broadly representative of the coffee cooperatives in Ecuador. The interviews were conducted in the regions where most of the country's coffee is produced. Within each cooperative selected, in ever case no fewer than 24% of the members were interviewed.

The cooperatives selected varied from those that were founded quite recently to those that are among the oldest coffee cooperatives in the country. Figure 1 shows the number of interviews conducted in cooperatives by year of founding. As can be seen, the interviews are broadly distributed among cooperatives of varying vintages. The only exception is the concentration of cases (25.2%) in cooperatives founded in 1967, but that is partly a function of the large number of cooperatives founded that year.


Interviews per Year of Cooperative Founding
No. interviews
140
120
100
80
60
40
20
0
28
128
15
40
35
55
25
88
59
43
1966
1967
1969
1972
1976
1979
1980
1982
1983
1984
Year

Fieldwork

The fieldwork was carried out by well-trained field personnel. All of the ten interviewers selected had participated in at least two rounds of the Sistema Estadístico Agropecuario (SEAN). Training was conducted both in the classroom and the field and led by Dr. Francisco Paez, professor of statistics at the Universidad Católica in Ecuador and former head of the Agrarian Structure Office of IERAC, Ecuador's agrarian reform agency. Each of the two teams of interviewers was comprised of five interviewers and led by a supervisor and assisted by a driver. The interviewers each conducted approximately 50 interviews during the two work-weeks during which the fieldwork was carried out and averaged 3 to 4 interviews per day.

The interviews averaged 29 minutes in length. The shortest time period taken by any interview was 12 minutes, but there was only one case this short. The maximum any interview took was 60 minutes.

Questionnaire Design

Four considerations guided questionnaire design. First, given the constraints of time and available resources, the questionnaire had to be designed to obtain the maximum amount of information at the lowest possible cost. This meant that in nearly all cases closed ended questions had to be employed. Extensive use of open ended questions would have resulted in a major effort at coding and would have significantly delayed the preparation of this final report. Second, since no prior studies of the characteristics of the target population (i.e., coffee cooperative members) were available as this project was being designed, the questionnaire had to be broad-gauged enough to capture a wide range of situations to be encountered in

the field. Third, the questionnaire had to obtain, as a minimum, the essential information normally utilized in the preparation of social soundness analyses in USAID project papers. Fourth, to the extent possible, the survey should go beyond the immediate social soundness issues and serve as a first, very rough, baseline data set that could assist those who might ultimately be involved in project implementation. Of course, when (and if) the project is actually implemented, a more extensive baseline survey would be required, one that would cover the target population as defined by the final project design and one that would obtain information related to the final package of technical inputs defined in project design.

The questionnaire was drafted by the author of this report and then reviewed and discussed with USAID/E mission staff. It was then reviewed by the director of the field teams, Francisco Paez. Additions and changes were made at that point and the instrument was field tested. The final version appears as Appendix I of this report.

The questionnaire contains distinct sections, each designed to elicit particular information. It begins with a short section on migration history, designed mainly to determine the respondent's residential stability in the region. This is then followed by a more extensive section on land tenure. In this section the size and tenancy status of the respondent's land holdings are elicited. The questionnaire then turns directly to coffee cultivation, obtaining information on the type of coffee planted, the volume and value of the most recent crop, and the distribution of the sale of the crop between cooperatives and middlemen. Information on the level of technification is then obtained through a series of questions that mention specific technical practices. These items are followed by ones measuring the sources and degree of technical assistance received by the farmer.

The questionnaire then goes on to elicit information on credit use, including amount, source and interest rates. Respondents are then asked if their farms are affected by any one or more of a list of eight coffee diseases or infestations. Participation in cooperatives and other community organizations is then measured both in terms of frequency and leadership, and specific evaluative information is obtained on the local coffee cooperative as well as the Federation, FENACAFE.

The questionnaire concludes with a series of items measuring basic demographic and socio-economic information including sex, marital status, age, education and level of living.

Plan of Analysis

In the pages that follow basic descriptive information will be presented for the purpose of informing project design. The data base, however, can be utilized for many other purposes of direct interest to those who might implement the project. For example, as implementation proceeds it might be important to contrast coffee farmers in one region of the country with those from another, or it might be important to examine the relationship between farm size and productivity. Many more analyses of that type can be easily performed on the data set that accompanies this study. All variable labeling information in the data file is in the Spanish language to facilitate that analysis in Ecuador.

Demographic Profile

Sex

The sample was designed to represent members of Ecuador's coffee cooperatives rather than the farming population generally. As a result, although many Ecuadorean women are actively engaged in farming, men predominate in formal membership roles in cooperatives. In total, only 14 of the respondents were women, amounting to 2.8 per cent of the sample. There are too few women in the sample to analyze profitably as a distinct group and hence the analysis in this report will not distinguish between male and female respondents.

Marital Status

Most of the respondents lived in family units. A total of 93.1% of the coffee farmers were married.[5] An additional 4.9% were widowed. Only 1.4% were bachelors and .6% had been divorced.

Children

The questionnaire did not attempt to obtain complete information on family size. It did, however, ascertain the number of children living with the respondent at the time of the interview so as to obtain an idea of household size. The average number of children living with the respondents was 3.9, making the average household size 5.9 for this sample. This is somewhat smaller than what one would expect from a cross-section of rural Ecuador. At the same time, only 6.5% of the respondents had no children living at home.

[5]A total of 72.5% were married and an additional 20.6% lived in a common law union.

Children in rural Latin America frequently form an important component of the family labor supply, and these coffee family proved not to be an exception. Fully 73.7% of all of the respondents had at least one of their children helping them with their coffee farms. Of the farmers who had children living on their farms, only 19.7% did not have any of those children helping them with their coffee farming. Family labor supplied an average of 1.9 full-time persons to assist the cooperative member in the cultivation of his coffee crop. With the total average number of full-time workers employed in coffee cultivation amounted to 4.3, it can be seen that family labor amounted to 42.9% of all of the permanent labor needs on the farm. This calculation actually underestimates the importance of family labor on the coffee farms because the mean overstates the number of permanent workers used for coffee cultivation as a result of the presence in the sample of a few farms with a very larger number of workers.[6] The median and mode are more reflective of the "average" situation, and both of these are 3.0. Hence, family labor supplies 60% of the median (or modal) number of permanent laborers on the coffee farms surveyed.

Age

The average age of the respondents is 50.0, identical to the median and mode. Hence, this is a very mature group of farmers; in 1983 life expectancy in Ecuador was 61 years for males according to the World Bank.[7] The youngest person interviewed in the sample was 20 years of age and the oldest 86. The breakdown of ages is presented in Table 3 As can be seen, only a tiny proportion (2.6%) are younger than

[6]Seven farms use 20 permanent workers and three farms use 30 permanent workers.

[7]World Bank, World Development Report, 1985, New York: Oxford University Press, 1985, p. 219. Female life expectancy was 65 years.

30 years of age, whereas most of the farmers interviewed were between 40 and 60 years of age.

Table 3. Age Distribution of Respondents

Age	(N)	%
20-29	13	2.6
30-39	64	12.6
40-49	163	32.2
50-59	174	34.4
60-83	92	18.2
TOTAL	506	100.0

Residential Stability

No attempt was made to obtain a complete migratory history of the coffee farmers. Rather, what was of interest was their residential stability in the area in which they now live. Such stability can be of considerable importance to lenders in determining credit worthiness. The farmers had lived in their present cantón of residence for 40.5 years prior to the interview (median 44.0 years). But this figure includes those who were born in the cantón as well as those who migrated to it from another area. Indeed, 42.6% of all those interviewed had been born in the cantón in which they were interviewed. Among those who migrated to the cantón sometime after birth, the mean number of years residence was 20.0 years (median 20). In sum, the coffee cooperative members interviewed in this study as a group were very stable residents of their communities. Well over half (57.4%) have lived in their present cantón their entire lives, and even among the "newcomers," average residence was two decades.

Socioeconomic Profile

Education

Many studies of agrarian development have demonstrated important linkages between education (formal or informal) and improved farm productivity. In the coffee technification project being considered education would seem particularly important because farmers will have to learn new ways of cultivating their farms. For the project to be successful, it will be important for the beneficiaries to be able to read and also to have sufficient levels of education for them to accept new ideas and practices that probably contradict many traditional practices in use for generations.

In a study of Honduran coffee farmers, a close relationship was found between adoption of the AID-sponsored technical assistance package and education.[8] In Honduras, those who had technified their farms were far more likely to be literate than those who had not (73.7% literate vs. 57.7% literate), and those who had adopted the AID-sponsored technical assistance package were almost certain to be literate (90.0%). Although education levels in rural Honduras are overall quite low, farmers who were using the package had significantly more years of education than those who were not.[9]

If the results noted above from Honduras can serve as a useful guide for the Ecuadorean case, there is considerable reason for optimism that the cooperative coffee farmers have sufficient levels of education to enable them to both adopt and utilize the technical assistance package. Whereas 90.0% those who used the package in

[8]See Mitchell A. Seligson, "A Report on the Honduran Small Farmer Coffee Improvement Project," submitted to AID, Honduras, January, 1986.

[9]Users: 3.5 years; non-users: 1.8 years.

Honduras were literate, 93.1% of all cooperative coffee farmers in Ecuador whom we interviewed were literate. This contrasts with a national level of literacy of 81%, with rural levels considerably lower.[10] According to one source, 63% or rural Ecuadoreans were literate in 1974.[11] In a more recent study (1984) of farmers in Manabí, the province producing the largest amount of Ecuador's coffee, it was found that 71.1% were literate.[12]

The contrast with Honduras shows that whereas the average level of education among the Honduran adopters of the technification package was 3.5 years, the average education level among the Ecuadorean coffee cooperative coffee farmers was 4.5 years (median 5.0). The "modal" farmer in the sample had six years of education (37.0%), while 5.1% had more than six years of education and 68.2% had completed more than three years of formal schooling. In contrast, only 13.3% of the Honduran adopters of the coffee technification package had six years of education and only 36.6 per cent had completed more than 3 years of education. The distribution of educational achievement in the Ecuador sample is presented in Table 4.

Some concern, however, needs to be focused on the small portion of the sample in which education levels are quite low. As shown below, 5.5% of the respondents had no formal education, and a total of 17.2% had not completed three years of

[10]This figure is from the World Bank, World Development Report, 1983. New York, Oxford University Press, 1983, p. 148. The figure is for 1980, the last year for which the annual reports for the World Bank reported this data. UNESCO's Statistical Yearbook for 1985 estimates illiteracy for those 15 and over at 17.6% for the nation as a whole.

[11]Carlos Luzuriaga C. and Clarence Zuvekas, Jr., Income Distribution and Poverty in Rural Ecuador, 1950-1979. Tempe, Arizona: Center for Latin American Studies, Arizona States University, 1983, p. 80.

[12]Francisco Paez, Estudio de la estructura agraria en Manabí, 1984. IERAC, 1985, p. 64.

schooling, the minimum number generally considered necessary for functional literacy. These coffee farmers may be disadvantaged in a technical assistance program and special consideration needs to be given to their needs, with the possibility that a literacy course be implemented as part of the overall package of technical inputs so as not to exclude these farmers from the full benefits of the program.

Table 4. Number of Years of Formal Schooling Completed

Years	(N)	%
0	28	5.5
1	7	1.4
2	52	10.3
3	74	14.6
4	88	17.4
5	44	8.7
6	187	37.0
7	14	2.8
8	5	1.0
9	1	.2
10	2	.4
12	1	.2
14	1	.2
18	1	.2
20	1	.2
TOTAL	506	100.0

Mean 4.462 Median 5.000
Mode 6.000

Levels of Living

No attempt was made to measure overall income levels for these farmers because of the complexity of estimating the value of non-market farm production. But a useful surrogate for income is data on levels of living. The data in Table 5 provide an overview of the key variables that were measured.

Table 5. Levels of Living

Indicator	% Possessing
Electric lights	49.6
Radio	96.4
Television	50.2
Sewing machine	69.2
Refrigerator	39.9
Indoor toilet	24.1
Indoor water	24.1
Car or truck	16.4
Separate sleeping rooms	98.4

Compared to most rural dwellers in Latin America, these coffee farmers appear to be considerably better off. In Honduras, for example, only 13.3% of the beneficiaries of the AID coffee technification program owned a T.V. and 86.7% owned a radio. Worse off still were coffee farmers in Honduras who had not technified their farms, as only 5.1% of those owned a TV and 58.5% a radio. Similarly, ownership of a sewing machine was found among 36.7% of the Honduran adopters of the program and ownership of a refrigerator was found among 10.0%. Part of this difference can be explained by the wider availability of electricity in the homes of the Ecuadorean coffee farmers than among the Honduran, where only 6.7% of the adopters had this service. Among those in Honduras who had not technified, only 3.3% had electricity. Honduras, of course, is poorer than Ecuador and it is not surprising that these differences emerge.

Despite these overall positive findings, the fact that less than one quarter of the Ecuadorean respondents lived in homes that had indoor water and/or indoor plumbing is cause for concern from a public health standpoint. Even so, among those who did not have indoor sanitary facilities, fully 83.6% had a latrine. At the other extreme,

there is a small group of farmers (12.5%) who had no sanitary facility or latrine available to them.

Patterns of Land Tenure

Throughout Latin America one of the most critical issues is land scarcity and security of land ownership. Farmers who farm tiny plots or who do not have secure title to the land they possess rarely are able to rise above the poverty line. Of more direct relevance to the proposed project are the patterns of land tenure among the prospective beneficiaries since both inadequate quantity of land and/or insecurity of tenure could adversely affect the success of the technification program. This section of the report reviews the basic data on land tenure among the coffee farmers surveyed.

Fragmentation

Fragmentation of farms into many parcels can be a serious problem for agricultural productivity, especially if the plots are widely separated. Farmers must travel long distances between each plot, expending scarce time and energy in the process.

Among the coffee cooperative members, slightly over half had all of their land concentrated in one parcel, as is shown in Table 6. The average number of parcels, was 1.8, with a total of 917 parcels being distributed among the 506 respondents to this survey. According to the 1974 agricultural census, for Ecuador as a whole, the average number of parcels per farm unit (UPA) was 1.7, almost identical to the survey findings indicating that in this way, at least, the coffee farms studied follow the national pattern. In contrast, fragmentation was considerably higher in Honduras, with an average of 2.5 parcels per farm among the beneficiaries of the coffee technification project.

Table 6. Fragmentation of Farms

Number of parcels	(N)	%
1	255	50.4
2	166	32.8
3	46	9.1
4	23	4.5
5	7	1.4
6	3	.6
7	3	.6
8	1	.2
9	1	.2
10	1	.2
TOTAL	506	100.0

Mean 1.812 Median 1.000
Mode 1.000 Sum (total parcels) 917.000

Farm Size

According to the 1986 CDSS[13], for the country as a whole a minimum of 5 hectares is required "to generate an adequate living standard." In the Sierra, only 29% of the farms met this standard, whereas in the Costa, 47% did. Among the coffee farmers interviewed for this study, the average farm size was 26.0 much larger than the standard note above. The mean, however, is influenced by a few large cases and hence the median, 11.3 hectares, provides a more accurate picture of the reality of farm size in this sample.[14] Only 19.2% of the farms studied in this sample are smaller than 5 hectares, a marked contrast with the national total (1974 census) of

[13]Background paper, "Agricultural Sector in Ecuador," USAID, 1984, p. 2.

[14]The mode is 10.

67%.[15] The farms in the sample contained, in total, 13,140.7 hectares of land. The distribution of farms by major size category is displayed in Table 7.

Table 7. Distribution of Farms by Size (Hectares)

Farm Size	(N)	%
1.00 - 1.99	15	3.0
2.00 - 2.99	28	5.5
3.00 - 3.99	26	5.1
4.00 - 4.99	28	5.5
5.00 - 10.99	113	22.3
10.00 - 19.99	127	25.1
20.00 - 49.99	130	25.7
50.00 - 99.99	26	5.1
100.00 - 499.99	11	2.2
500.00 and up	2	.4
TOTAL	506	100.0

Statistics based on ungrouped data:
Mean 25.970 Median 11.330 Mode10.000
Sum (total hectares) 13140.680

Renting

Indirect forms of tenancy, once quite common in Ecuador, have been in disfavor for some time.[16] Nonetheless, renting continues as a form of land tenure. According to the 1974 agricultural census, only 2.9% of the farm units are rented. Among the coffee farmers interviewed, 2.2% rented land from others, with the average parcel rented totaling .2 of a hectare. The largest rented parcel was one of 35 hectares, but this was clearly the exception, as is shown in Table 8. In total only

[15]Instituto Nacional de Estadística y Censos, II Censo Agropecuario 1974, Resultados Definitivos: Resumen Nacional, p. 3.

[16]See Seligson, "Land Tenure Security, Minifundization and Agrarian Development in Ecuador: A Preliminary Assessment." Report prepared for USAID/Ecuador, December, 1984.

100.8 hectares out of the 13,142 hectares included in the farms studied were rented land.

Table 8. Rented Land by Size

Number of hectares	(N)	%
None	495	97.8
2.00	1	.2
4.00	3	.6
5.00	2	.4
9.88	1	.2
10.00	2	.4
12.00	1	.2
35.00	1	.2
TOTAL	506	100.0

Mean	.199	Median	0.0
Mode	0.0	Sum	100.880

Intensity of Cultivation

One measure of the efficiency of a farmer is the extent to which his/her land is being worked. Taken to its extreme, however, as it often is among microfundios in Latin America, land can be overworked. Among the coffee farmers interviewed for this study, a very high proportion of the land was being cultivated. Of the 13,140.7 hectares in farms, a total of 11,148.6 were being cultivated. Hence, 84.8% of the farm land was being used on these coffee farms. The average number of hectares cultivated per farm was 22.0.

Title Security

It has been recognized that the absence of title security is a major obstacle to

agricultural development in Ecuador and elsewhere in Latin America.[17] Estimates vary as to how much of Ecuador's farm land is titled, so it is not possible to give an overall national average.[18] Among the coffee farmers interviewed in this study, 78.9% had all of their land titled and an additional 13.4% had some of it titled. Only 7.5% of the respondents had none of their land titled, and an additional .2% did not know of the title status of their land.

The proportion of titled land owned by these respondents that is planted in coffee is higher than the overall farm figures, but not by a great deal. The survey revealed that 83.4% of the farmers reported that all of their coffee land was entirely titled, 9.1% reported that some of it was titled and only 7.5% reported that none of it was titled. In sum, the lack of title is not a major problem for these coffee cooperative members and hence their access to credit will not be inhibited. Moreover, they are far more likely than owners of untitled land to be willing to make capital investments to improve their crops. In Honduras, many farmers may resist efforts at technification because of a concern for title security.

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[17]Projects to provide title security to smallholders are underway in Ecuador, Honduras, Costa Rica, Jamaica and elsewhere. For a discussion of the Honduran project see Mitchell A. Seligson and Edgar Nessman, Baseline Survey of the Honduran Small Farmer Titling Project: Descriptive Analysis of the 1985 Sample. Madison, Wisconsin: Land Tenure Center of the University of Wisconsin, 1986. For a report on the situation in Ecuador see Seligson, "Land Tenure Security, Minifundization and Agrarian Development in Ecuador: A Preliminary Assessment," report prepared for USAID, Ecuador, 1984. For a study of the situation in Panama see "Feasibility of Land Titling in Panama." Co-authored. Report prepared for the U.S. Agency for International Development, Panama. Land Tenure Center, University of Wisconsin, July, 1986.

[18]The 1974 census reports 38,256 untitled farms in Ecuador, a figure almost certain to be a substantial underestimate.

Coffee Cultivation

Land in Coffee Production

The coffee cooperative members interviewed for this study planted an average of 8.0 hectares of coffee each.[19] Since the average farm had 22.0 hectares under cultivation for all crops, an average of 36.4% of the land in farms is dedicated to coffee. Calculated in terms of total land in coffee, these farms were cultivating 4,029 hectares of coffee out of the total of 11,148.6 hectares under cultivation for all crops (Table 9).

Table 9. Distribution of Land in Coffee Cultivation

Land (in hectares)	(N)	%
.50	3	.6
.75	1	.2
1.00-1.99	22	4.3
2.00-2.99	49	9.7
3.00-3.99	57	11.3
4.00-4.99	46	9.1
5.00-9.99	197	38.9
10.00-19.99	101	20.0
20.00-49.99	26	5.1
50.00-99.99	2	.4
100.00 and up	2	.4
TOTAL	506	100.0

Statistics for ungrouped data:

Mean	7.964	Median	5.285
Mode	5.000	Sum	4029.800

Not all of the land planted in coffee had reached production age at the moment of the interview, although most had. The farmers reported an average of 7.5 hectares of coffee in production compared to the overall land planted in coffee that averaged

[19]The median was 5.3 and the mode 5.0.

8.0. The total land area in coffee production was 3,816.1 hectares as shown in the following table.

Table 10. Coffee Land in Production

Size (hect)	(N)	%
less than 1	6	.2
1-1.99	24	4.7
2-2.99	51	10.1
3-3.99	60	11.9
4-4.99	47	9.3
5-9.99	197	38.9
10-19.99	92	18.2
20-49.99	26	5.1
50-99.99	2	.4
100 and up	1	.2
TOTAL	506	100.0

Statistics (ungrouped data):
Valid Cases 506 Missing Cases 0
Mean 7.54 Median 5.5 Mode 5.0
Sum = 3,816.0

Although this study did not gather data on the crops other than coffee, it is clear that these farms are not mono-cultivators of coffee, but rather they produce other crops as well.

Labor and Coffee Production

Coffee cultivation is labor intensive. The cafetal requires constant attention almost year round in order to maintain it in optimal condition. Many hundreds of hours are invested each year in pruning the trees, clearing weeds, replanting old or diseased trees, and applying fungicides and insecticides. The single greatest investment of labor usually occurs in the harvest in which the ripe cherries are picked individually from the trees and processed.

The respondents were asked about their use of labor on their farms. A total of 2,166 permanent laborers were used to attend the coffee plantings covered in this study, or an average of 4.3 permanent workers per farm, although this figure is somewhat elevated by large numbers of workers on a few of the largest farms in the survey. The median, 3.0 workers per farm, is perhaps a more appropriate figure. Some farms used no permanent laborers, but this was the exception, involving only 4.5% of the sample. A substantial proportion of the permanent laborers were family members. In fact, 72.5% of the farms used family members, with an average of 1.8 family workers per farm.

Contract day-labor was also widely used. The survey found that 76.7% of the farmers interviewed employed day-laborers for the various tasks related to coffee cultivation. An average of 4.0 contracted workers were used on the farms studied. All but 5.9% of the farms hired pickers for the harvest, with the number of pickers hired averaging 8.8 per farm (median 7.0). Contract male workers were paid an average of 367 sucres per day, whereas female workers were paid an average of 351.

Types of Coffee Planted

Coffee grows in many varieties. The two most common types are Arabica and Robusta. For the most part, Arabica coffees obtain a higher price on the world market than Robusta varieties. Table 11 below indicates the distribution of the varieties most common in Ecuador among the cooperative members' farms. The variety known in Ecuador as "Arabica típica" is the most common variety found on the farms surveyed; over two-thirds of the farms grew this variety and over half of all of the trees under cultivation of all varieties were Arabica típica. Also quite common was the Arabica Caturra variety.

Table 11. Coffee Varieties Planted

Variety	% growing	% all trees	Mean no. trees
Robusta	20.2	11.3	726
Arabica típica	67.8	51.9	3339
Arabica Caturra	57.5	23.6	1515
Other arabicas	12.6	13.2	848

Crop Yields

The study gathered data on the amount of coffee gathered in the last harvest. All units are reported in quintales en cereza (hundredweights of coffee in cherry form[20]), the standard coffee measure in Ecuador. The average number of quintales produced by the sampled farms was 88.2 and the median 50.0.

The total crop in the sample came to 40,479 quintales. On a per hectare basis, this converts to an average yield of 10.6 quintales/hectare if only the coffee land that is currently in full production is considered. Traditionally, however, yields are calculated based upon all lands planted in coffee, even if they have not yet reached full production. As noted above, 4,029.8 hectares were planted in coffee, resulting in a yield of 10.0 quintales/hectare. The yields of these coffee farms are very low, as an examination of the international comparisons presented in Table 12 highlights.

[20]The term "cherry" refers to the coffee as it is harvested before the coffee bean itself is extracted from its several layers of covering.

Table 12. Comparative Coffee Yields

Country	Yield (quintales/hectare)
Costa Rica	30
El Salvador	27
Nicaragua	15
Guatemala	14
Honduras	12
ECUADOR	**10.6**[a]

[a]Based upon land in production. Yield drops to 10.0 if all land planted in coffee is included.

Source: Oficina del Café, Costa Rica, 1981

Commercialization

Coffee can be sold by the producer in various ways. He/she can harvest the ripe cherries and sell them to a middleman or cooperative for processing. This is known as selling coffee "en cereza." The farmer can process the coffee by removing the outer soft shell of each cherry and selling his coffee in "en pergamino húmedo" (moist parchment form). Finally, some farmers will dry the coffee and sell it "en pergamino seco" (dry parchment form). It is rare among small farmers to further process their coffee to convert it into its final form prior to export ("cafe oro"). Table 13 shows the distribution among these various forms of the crop sold by the respondents to this survey. As can be seen, the most common form in which the last crop was sold was "pergamino seco", followed closely by "cereza." Many farmers, however, sold their crop in more than one form, probably depending upon their capacity to process it and the nature of the market for a particular form.

Table 13. Form in which Coffee Crop Sold

Form	(N)	%
cereza	153	30.2
pergamino seco	187	37.0
pergamino húmedo	26	5.1
combination	135	26.7
none sold	5	1.0
TOTAL	506	100.0

Although all of the respondents in this survey were members of a coffee cooperative, not all sold all of their crop to a cooperative. The following table shows the division of sales between middlemen and cooperative for each of the forms of coffee sold:

Table 14. Sales to Cooperatives vs. Middlemen: by Form of Coffee

Form	% to middlemen	% to cooperative
cereza	36.7	63.3
pergamino seco	18.6	81.4
perg húmed	22.0	78.0

Total to middlemen: 27.8%
Total to cooperatives: 72.2%

As can be seen, nearly three-quarters of the coffee is sold to the cooperatives, irrespective of the form in which it is sold. It is also clear that sales to the cooperatives represent a greater proportion of the crop when it sold in the processed forms of pergamino than when sold in the completely unprocessed form (cereza).

The price per quintal that the producer receives varies greatly depending upon the form in which the coffee is sold and whether it is sold to a cooperative or a middleman. The data displayed in Table 15 make this clear. The highest price is paid for coffee sold in its most highly processed form, pergamino seco. This is followed

by pergamino húmedo, while the lowest prices are paid for unprocessed coffee. This means, of course, that in order to for a farmer to receive a higher price for his coffee at the farm gate he must invest greater time and effort in processing it. This investment may not, however, be the wisest use of his scarce resources, especially if it costs him more to process the coffee on the farm than it does to have it done at large processing plants (beneficios) where economies of scale can reduce processing costs to a minimum.

Coffee sold to middlemen yields a higher price than paid by cooperatives if sold unprocessed or as pergamino seco, but coffee sold as pergamino húmedo receives a substantially higher price when sold to a cooperative. However, since only a small proportion of all the coffee sales recorded in this study were sold in the húmedo form, one should not necessarily draw any major conclusions from this finding.

Table 15. Sale Price (per quintal): by Form and Destination

Form	mean price (sucres/qq.)
Cereza:	
Middlemen	4,989
Cooperative	4,316
Pergamino húmedo:	
Middlemen	5,047
Cooperative	6,775
Pergamino seco:	
Middlemen	7,940
Cooperative	7,651

It is a first surprising to learn that cooperatives pay a lower price than do the middlemen, but this is not at all an unusual pattern. The cooperatives generally do not pay out the entire price to their members because they reinvest a portion of the profits from each crop into the cooperative. Hence, in addition to the cash received

from the sale of his/her coffee, cooperative members are also building capital within the cooperative, a share of which is their own. Sales to middlemen, however, imply no such investment accrual. Nonetheless, it is clear that middlemen pay competitive prices that in many cases exceed those paid by cooperatives. Farmers in need of ready cash are tempted by these prices and divert a significant proportion of their sales from the coops. This in turn leads to reduced economies of scale for the cooperatives and, potentially, cutthroat and destructive competition.

Before leaving the subject of pricing, it is important to note that the study was conducted in a year when coffee prices were unusually high. Nearly four-fifths (79.1%) of those interviewed stated that the price they had received for the crop was higher than average, whereas less than one-tenth (9.5) said that they were receiving a lower price than average.[21] These favorable prices may partially explain the high prices paid by middlemen as the high price reflects high demand on the world market.

Crop Diseases and Infestations

One reason for the low yields of coffee reported above is the widespread presence of disease and infestation on these coffee farms. The questionnaire provides a general view of the presence of these infirmities, but without the confirmation by a trained expert, the farmers' reports should only be accepted as generally indicative of the nature and magnitude of the problems. Table 16 provides an overview of the reported presence of coffee disease and infestation.

[21]An additional 11.1% said that prices were about the same and .4% said that they did not know.

Table 16. Reported Presence: Coffee Disease and Infestation

Problem	% reporting
La Roya	8.3
La Broca	20.9
Ojo de Gallo	22.7
Mancha de Hierro	22.7
Minador de Hoja	16.6
Aranera	24.1
Taladrador	20.0

Another way of viewing the problem of disease and infestation is to determine what proportion of the farms are free of any reported disease and what proportion are affected by more than one. Table 17 presents this information. As can be seen, only about one-sixth of the coffee farms were free of any reported disease or infestation. About one-third had at least one disease or infestation, and an additional one-third had two.

Table 17. Total Reported Diseases or Infestations

Number:	(N)	%
none	84	16.6
1	158	31.2
2	195	38.5
3	50	9.9
4	19	3.8
TOTAL	506	100.0

Use of Improved Farm Technology

Crop yields and net farm income depend heavily upon improving the efficiency of the farm unit. One way of doing so is to introduce improved farm practices. The coffee project being planned in Ecuador is designed to introduce a number of technological changes on the farms. Generally, in order for farmers to introduce such practices they must first know about them and then be favorably disposed to utilize them before they will actually practice them. This section of the report presents a picture of the current levels of knowledge and use of coffee technology.

Table 18 summarizes knowledge and use of a number of key improved farm practices. Two important conclusions emerge from this table. First, there is widespread knowledge of a wide range of improved farm practices among the cooperative coffee farmers.[22] Second, there is a marked difference in use of these practices between those that are labor intensive vs. those that are capital intensive. Over eighty per cent of the coffee farmers were pruning their coffee, pruning their shade and engaged in manual weeding of their cafetales. Nearly as high a proportion replant their cafetales. But use of insect and disease control was restricted to little more than one in ten farmers, and fertilization was practiced by less than 6% of them. These results stand in marked contrast to the ones obtained in the already cited study of participants of the AID-supported coffee improvement program in Honduras. In that country, 90.0% of the participants were using fertilizer, 80.0% fungicide and 76.7% insecticide.

[22] The questionnaire made no attempt to measure the degree and/or sophistication of knowledge of these practices, and it should not be assumed that the farmers who indicated that they had heard of a given practice would be able to use it effectively without further instruction.

Combining these two observations leads to a tentative overall conclusion; expanded use of capital intensive farm practices is limited principally by lack of capital rather than lack of knowledge of those practices. This tentative conclusion is confirmed by the farmers' own opinions. They were asked: "What is the principal reason for not using more of these inputs and practices to improve your production. Is it that you don't have the money, or you don't know how to use them or is it another reason?" The lack of money was the reason given by 81.2% of the farmers. Lack of knowing how to use the practice was only mentioned by 14.2%, and an additional 4.5% said it was because of another (unspecified) reason or that they simply did not know.

Table 18. Knowledge and Use of Selected Farm Practices

Practice	Knowledge (%)	Use (%)
Coffee pruning	98.8	86.4
Shade pruning	98.8	82.6
Manual weeding	100.0	98.4
Chemical weeding	90.5	10.5
Replanting	98.4	76.1
Irrigation	92.7	4.9
Insect control	95.7	14.4
Disease control	95.7	11.3
Fertilization[a]	92.3	5.9
Soil conservation	75.9	9.9

[a]The questionnaire used both the terms "fertilización" and "abonamiento" to include both chemical and organic fertilizer.

Technical Assistance

In order for farmers to be able to use improved farm practices effectively, they must be trained to do so. The coffee farmers were asked to report on the number of visits they have had in the past two years from agronomists and to identify the agencies with which those agents were affiliated. The results of these questions are summarized in Table 19 below. As can be seen, the Coffee Program is the most active in visiting the farmers, with an average of slightly less than one visit per year. But even in this case over half the farmers reported not a single visit during the course of a year. FENACAFE was the next most active, averaging .53 visits a year, but over two-thirds of the farmers had not been visited during the year. In Honduras, over 90% of the participants in the AID-sponsored technification program report having been visited by a technician over the course of the year. On a more positive note, over three-quarters of the Ecuadorean coffee cooperative farmers had attended at least one technical lecture within the past two years.

Table 19. Technical Assistance: Frequency and Sources

Source	Average Annual Visits Per year[a]	% no visits
Coffee Program	.95	55.5
FENACAFE	.53	70.2
Min. of Agriculture	.62	68.8
Chemical salesmen	.08	94.1
Others	.13	92.7

Visit of agronomist in last two years =49.4%
Attended a technical lecture in least two years= 77.1%

[a]Includes those with zero visits.

Credit

The low use of improved farm practices, it was argued above, is largely a result of capital scarcity. Coffee farmers, having a marketable cash crop, are, as a group, considered good credit risks. In Honduras, 80.0% of the participants in the AID-sponsored coffee technification project had received some credit. In Ecuador, 51.8% of the coffee farmers interviewed had received credit counseling within the past two years, and 68.4% had actually requested credit at least once. Table 20 contains some details.

Table 20. Credit Applications

Requested credit:	(N)	%
Alone	274	54.2
In a group	62	12.3
Both	6	1.2
No	160	31.6
Don't recall	4	.8
TOTAL	506	100.0

The coffee farmers received credit from several sources, but their cooperative was the most frequently mentioned source, followed closely by the Banco Nacional de Fomento (BNF). There were no other major sources of credit for these farmers as is shown in Table 21. Slightly less than two thirds of the farmers had received credit from any source, and the average amount of the loan was slightly over 50,000 sucres.

Table 21. Credit: Sources and Average Amounts

Source	% receiving	Mean amount (sucres)
Cooperative	31.7	54,884
BNF	30.8	104,109
Private banks	3.0	102,591
Family/friends	2.4	57,083
Loanshark	.8	64,250
FENACAFE	.6	10,000
Middlemen	.2	50,000
All sources:	64.2	54,375

Interest rates

Interest rates paid by the coffee farmers varied widely. Some paid as little as 1%, while others paid as high as 70%, but those were the exceptions. The average interest paid was 18.5%. This was more than most were willing to pay under ideal conditions. When asked what they would be willing to pay, the average was 13%.

Cooperatives and Participation

The cooperative is to play a central role in the coffee improvement program. Active participation in cooperative activities would be important for this program to be successful. In addition, favorable attitudes toward the cooperative and a history of receiving services from it would also be important for the program's success. Finally, participation in other communal organizations might well help the program to the extent to which it involves famers with the larger community and thereby promotes self-help efforts.

The following table summarizes the extent and nature of participation in coffee cooperatives and other organizations at the community level. As can be seen, participation in coffee cooperatives is very intense, with members attending meetings on the average of more than once every two months. One-sixth of the sample were members of the board of directors of their coffee cooperative. Other forms of organizations such as agricultural associations and peasant leagues are not nearly so popular, but parents' associations are attended by nearly half of the respondents.

Table 22. Participation

Organization:	% attending	Average meetings attended yearly	Active member	Member of board of directors
Coffee cooperative	99.6	6.9	96.4	16.2
Agricultural assn.	15.4	0.6	12.3	0.8
Parents assn.	49.6	2.5	41.5	4.5
Peasant league	9.9	0.5	8.9	0.6

Coffee cooperative members were generally satisfied with their organization. Fully 87.2% reported that they were either very satisfied or more or less satisfied. But a sizeable minority of 12.8% reported dissatisfaction with the cooperative as shown on Table 23 below.

Table 23. Satisfaction with the Coffee Cooperatives

Level of satisfaction:	(N)	%
Very satisfied	178	35.2
More or less satisfied	263	52.0
Unsatisfied	65	12.8
TOTAL	506	100.0

A probable explanation for the satisfaction expressed with the coffee cooperatives is the high proportion of their members who report receiving services from them. The survey found that 94.3% of the respondents had received at least some services from their cooperative.

Lower levels of satisfaction were expressed toward the coffee cooperative federation, FENACAFE, but that is not surprising since much of the Federation's work is conducted through the cooperative and not directly with individual members. Table 24 shows levels of satisfaction with FENACAFE. The proportion who were "more or less satisfied" remained at about half of the total, but the proportion very satisfied dropped markedly and the proportion dissatisfied rose by nearly three times.

Table 24. Satisfaction with FENACAFE

Level of satisfaction:	(N)	%
Very satisfied	69	13.6
More or less satisfied	273	54.0
Unsatisfied	164	32.4
TOTAL	506	100.0

Exploring the attitudes toward FENACAFE further, we asked the respondents what services they have received from the Federation. The following table shows those results. Clearly the most frequently received service is the commercialization of the producers' coffee. Perhaps the respondents are dissatisfied with the price they

receive, but the questionnaire did not probe this issue. The respondents also received education, loans and farm inputs from FENACAFE, but the proportion receding these services was much lower.

Table 25. Services Recieved from FENACAFE

Service:	% receiving
Sale of crop	63.4
Education	26.3
Loans	11.3
Inputs	2.0

Predictors of Coffee Yields

This social soundness analysis is not the appropriate place to conduct a detailed analysis of the factors that might be the most important in improving crop yields among Ecuador's coffee farmers. Rather, the effort here has been descriptive so that those involved with project design will have a clear idea of the people and farms this proposed project is designed to benefit. Nonetheless, the writer cannot resist a brief examination of some of the factors that emerge as being important in this sample in determining higher coffee yields.

A complete examination of the factors related to higher coffee yields would involve an extensive study using regression analysis or other similar multivariate techniques. All that can be done here is to indicate a few simple correlations that are promising avenues for further research on this data set. Those correlations are presented in Table 26.

Table 26. Some Correlates of Coffee Yields

Variable	r
Coffee pruning	.18**
Manual weeding	.12*
Soil conservation	.17**
Min Ag visits	.12*
Infestation: Broca	-.18**
Member ag assn.	.16**
Member peasant lg.	.19**
FENACAFE education	.32**

[a]Based on harvest per hectare of coffee land in production.
* = Statistically significant at .01
** = Statistically significant at .001

The correlates presented above are quite interesting. They show, first of all, that farmers who prune and weed their coffee have higher yields than those who do

not. Second, they show that farmers who practice soil conservation have higher yields than those who do not. Third, the more frequent the visits from the Ministry of Agriculture's agronomists, the higher the coffee yields. Fourth, farms afflicted by the La Broca infestation have lower yields than those that are not. Fifth, peasants who are members of an agricultural association or a peasant league have higher yields than those who are not. Finally, the single highest association is between attending educational programs run by FENACAFE and higher yields.

These correlates of yields seem to point directly at the need for the project now being designed. Farmers who have been taught about improved practices obtain higher yields.

Summary

This report has taken a first look at a rich source of data for the coffee technification project in Ecuador. The data set consists of 506 personal interviews with members of FENACAFE coffee cooperatives conducted in July, 1986. The sample was broadly representative of the major coffee production regions in all of Ecuador.

The coffee farmers interviewed were a very mature and stable group of individuals, with an average age of 50 and over 40 years of residence in their current county of residence. As a group they are more highly educated that most rural Ecuadoreans, but the level of education is still quite low, averaging only a little over 4 years of formal schooling. Many of the farmers have some basic conveniences such as electric lights and radios, but few have indoor plumbing or motor vehicles.

The farm unit tended to consist of one parcel, but nearly half of the farms were fragmented into two or more units. Farms averaged over 25 hectares, far larger than the average of farms in Ecuador as a whole. Less than one-fifth of the farms were smaller than the 5 hectares considered a minimum acceptable size by USAID/E. In all of Ecuador, over two-thirds of all farms are small than 5 hectares. Indirect tenancy and insecure title are quite uncommon among these farmers.

The farms surveyed are intensively worked, with over four-fifths of the land owned being cultivated. About one-third of the farm land was being used for coffee. There is widespread use of hired (permanent and day) labor on these farms, but family labor also plays an important role.

Crop yields were very low. In this sample yields were about 10 quintales per hectare, lower than all of the countries in Central America, including impoverished Honduras. Farmers sell their coffee with various degrees of on-farm processing, but the most common form is in "dry parchment." Most coffee is sold to the

cooperatives, but over one-quarter goes to middlemen. Middlemen tend to pay somewhat higher prices for the coffee they buy than do the cooperatives, but those figures exclude the members' capitalization of their shares. The highest prices are paid for the most highly processed coffee (dry parchment).

Crop disease affect all but one-sixth of the farms. Improved technology, however, especially that important to fighting disease and infestation, was used by only a small portion of the farmers. One major reason for the low yields was the extremely low use of fertilizer (less than 6%). The Coffee Program and FENACAFE seem to have an active program of providing technical assistance, but even so visits of technicians to the farms averaged less than one per year. Credit is used by nearly two-thirds of the farmers, with average loans being somewhat more than 50,000 sucres at interest rates averaging 18.5%.

The respondents were active participants in their cooperatives, attending meetings on the average of more than once every two months. They also participated, to a lesser extent in other organizations. Most respondents were satisfied with their local cooperatives, but lower levels of satisfaction were expressed toward FENACAFE.

The study concluded with a brief look at the correlates of coffee yields and found that the single most important factor related to higher yields was education provided by FENACAFE. That conclusion, however, is tentative and requires confirmation with multivariate statistical analysis beyond the scope of this report.

Appendix I: Questionnaire

Encuesta de Base
Proyecto de Tecnificación
FENACAFE/AID

(V)

Número de encuesta (llenar en la oficina) _____ /_/_/_/_/
Nombre de la cooperativa _____ /_/_/

Hora de comienzo de la entrevista __:__

(Leer a todos). Buenos días, me llamo _____. Estamos haciendo un estudio con el FENACAFE. Ando visitando a los productores de café de este lugar y otros lugares de esta región para conocer mejor su situación y conversar sobre varios temas con el propósito de mejorar la labor de FENACAFE. Nos gustaría conversar con Ud. por unos 20 minutos. Toda la información que Ud. nos dé se manejará en forma confidencial, por su puesto, y su colaboración es completamente voluntaria.

Primero, quisiera saber si Ud. tiene algo de café cultivado en su finca? (Si contesta que no, pedir disculpas y buscar el próximo entrevistado.)

Migración

A1. Cuanto tiempo tiene usted de vivir en esta propiedad_____ (años) /_/_/
(Codificador: menos de 6 meses= 0); 6 meses hasta 12 meses= 1)

A2 Y en este cantón? _____ (años). /_/_/
(Codificador: menos de 6 meses= 0); 6 meses hasta 12 meses= 1)

****

Tenencia de la Tierra

B1. Ahora, hablando de su propiedad, cuántas parcelas posee Ud. en total? _____ /_/_/

B2. Cúantas hectáreas tiene en total? _____,_____ hect.
(enteros) (fracciones)
(Anotar fracciones: P.E. 1/4 hect. = ,25 1/3 hect. = ,33
1/2 hect. = ,50 2/3 hect. = ,66
3/4 hect. = ,75 /_/_/_/ /_/_/

B3. De esta tierra tiene título (o sea escritura pública) para toda, alguna parte o nada?
1. toda titulada 2. alguna parte 3. nada 8. NS /_/

B4. Qué cantidad de hectáreas de terreno alquila Ud. de otras personas?
_____, _____ hect.
(enteros) (fracciones): P.E.= 1/4 hect. = ,25 1/3 hect. = ,33
1/2 hect. = ,50 2/3 hect. = ,66
3/4 hect. = ,75 /_/_/_/ /_/_/

B5. En total, cúantas hectáreas está cultivando este año incluyendo todas sus parcelas (propias ajenas)? _____, _____ hect.
(enteros) (fracciones):
(Anotar fracciones) /24/25/26/, /27/28/

B6. De estas hectáreas cultivado, cuántas tiene sembradas con café? _____, _____ hect.
(enteros) (fracciones): /29/30/31/, /32/33/

B7. De estas hectáreas cultivado con café, todas tiene título, algunas tiene título, o ninguna tiene título?
1. todas tituladas 2. algunas tituladas 3. ninguna 8. NS /34/

B8. De estas hectáreas sembrado con café, cuantas están en edad de producción? _____, _____ hect.
(enteros) (fracciones): /35/36/37/, /38/39/
****

Cultivo de café

C1. Cuántas plantas (matas) de café sembró Ud. el año pasado? _____ /40/41/42/43/

C2. Cúantas plantas (matas) de café sembró Ud. el año antepasado _____ /44/45/46/47/

En toda la finca, incluyendo plantas viejas y nuevas, cuántas plantas tiene sembrado de café de los distintos tipos:
C3. Robusta _____ plantas /48/49/50/51/
C4. Arábica típica _____ plantas /52/53/54/55/
C5. Arábica caturra _____ plantas /56/57/58/59/
C6. Otras arábicas _____ plantas /60/61/62/63/

C7. Cúantos quintales de café en cereza (uva) cosechó en la última cosecha? _____ qq. (redondear)
Si es otra unidad, anotar unidad aquí _____ /64/65/66/67/
(Codificador: convertir todo a quintales.)

C8. Cómo vendió Ud. su café de esta cosecha? Lo vendió en cereza, en pergamino seco, en pergamino húmedo o en varias formas?
1. cereza 2. perg. seco 3. perg. húmedo 4. combinación /68/

(Sólo para los que venden algo en cereza:)
De estos quintales cosechado en cereza, cuánto vendió y a qué precio a:

	Cantidad (redondear todas) (T2)		Precio (promedio)	
C9. Un intermediario	_____ qq. cereza	/1/2/3/	C10. S._____	/4/5/6/7/
C11 Una cooperativa	_____ qq. cereza	/8/9/10/	C12. S._____	/11/12/13/14/

C13 En su opinión, cuáles son los problemas que afectan su producción de café? _____
_____
_____
_____

(Sólo para los que venden algo en pergamino seco:)
De estos quintales cosechado en pergamino seco,
Cúanto vendió y a qué precio a:

	Cantidad (redondear todas)		Precio (promedio)	
C14. Un intermediario	_____ qq. perg. seco	/15/16/17/	C.15 S. ____	/18/19/20/21/
C16. Una cooperativa	_____ qq. perg. seco	/22/23/24/	C.17 S. ____	/25/26/27/28/

(Sólo para los que venden algo en pergámino húmedo:)
De estos quintales cosechados en pergámino húmedo,
Cuántos vendió y a qué precio?

	Cantidad (redondear todas)		Precio (promedio)	
C18. Un intermediario	_____ qq. perg. húmedo	/29/30/31/	C.19 S. ____	/32/33/34/35/
C20. Una cooperativa	_____ qq. perg. húmedo	/36/37/38/	C.21 S. ____	/39/40/41/42/

C22. Diría Ud. que este año el precio fue más alto de lo corriente, fue más bajo de lo corriente o fue más o menos como siempre?
1. más alto 2. más bajo 3. como siempre 8. NS /43/

****

C23. Que hizo usted el año pasado con el café que no vendió
1. Embodegó 2. Regaló 3. Botó 4. Otro _____ /44/

Uso de prácticas, insumos y equipo de producción

Cúal de las siguientes prácticas e insumos ha oído Ud. nombrar y cuales acostumbra utilizar Ud. en el cultivo de café en su finca:

Prácticas	Oído		Utiliza	
D1. Poda del café	0. No 1. Si	/45/	D2. 0.No 1.Si	/46/
D3. Poda de sombra	0. No 1. Si	/47/	D4. 0.No 1.Si	/48/
D5. Deshierbas manuales	0. No 1. Si	/49/	D6. 0.No 1.Si	/50/
D7. Deshierba química	0. No 1. Si	/51/	D8. 0.No 1.Si	/52/
D9. Resiembra	0. No 1. Si	/53/	D10. 0.No 1.Si	/54/
D11. Riego (inmersión o por aspersión)	0. No 1. Si	/55/	D12. 0.No 1.Si	/56/
D13. Control de plagas	0. No 1. Si	/57/	D14. 0.No 1.Si	/58/
D15. Control de enfermedades	0. No 1. Si	/59/	D16. 0.No 1.Si	/60/
D17. Fertilización o abonamiento	0. No 1. Si	/61/	D18. 0.No 1.Si	/62/
D19. Conservación de suelos	0. No 1. Si	/63/	D20. 0.No 1.Si	/64/

Insumos y equipo

D21. Patio de concreto para asolear café	0. No 1. Si	/65/
D22. Despulpadora de café	0. No 1. Si	/66/
D23. Bomba de fumigar	0. No 1. Si	/67/
D24. Arado de madera	0. No 1. Si	/68/
D25. Arado de hierro	0. No 1. Si	/69/

/C/
/2/
/2/
/2/
/2/

D26. Cúal es el motivo principal para no haber utilizado más de estos insumos y técnicas para mejorar su producción? Es qué no tiene dinero, o no sabe utilizarlos o es otro motivo?
1. dinero 2. conocimiento 3. Otro _____ /01/
(Especificar y codificar)
****

Asistencia Técnica

E1. Cree que es necesario para usted recibir asistencia en la forma de producir café. (T3)
1. Si 2. No /11/

E2. Hay agrónomos que lo han visitado durante los últimos dos años?
1. Si 2. No 3. NS /12/

En los últimos dos años ha recibido asistencia técnica de las siguientes instituciones:

Institución	Promedio de visitas al año (0= ninguna)	
E3. Programa del Café	_____	/13/
E4. FENACAFE	_____	/14/
E5. Ministerio de Agricultura	_____	/15/
E6. Vendedores de Químicos	_____	/16/
E7. Otro _____ (especificar)	_____	/17/

E8. Há asistido a charlas de asistencia técnica durante los dos últimos años sobre el café?
1. Si 2. No 3. NS /18/

****

Crédito

F1. Ha recibido Ud. algún tipo de asesoría sobre crédito agrícola en los últimos dos años?
1. Si 2. No 3. NS /19/

F2. Ha solicitado Ud. crédito agrícola alguna vez, solo o en grupo?
1. Solo 2. en grupo 3. Los dos 4. No 8 NS /110/

(Si insiste en no, por qué no? (Anotar) _____

Cúanto crédito ha recibido de los siguientes fuentes durante los últimos dos años? (Si es en grupo, calcular y anotar crédito por persona.)

	Monto (redondear)	Lo usó para café	
F3. Una cooperativa	11/12/13/14/15/16	F4. 0. No 1. Si	/17/
F5. FENACAFE	18/19/20/21/22/23	F6. 0. No 1. Si	/24/
F7. B.N.F.	25/26/27/28/29/30	F8. 0. No 1. Si	/31/
F9. Banco Privado	32/33/34/35/36/37	F10. 0. No 1. Si	/38/
F11. Intermediario	39/40/41/42/43/44	F12. 0. No 1. Si	/45/
F13. Comerciante	46/47/48/49/50/51	F14. 0. No 1. Si	/52/
F15. Prestamista	53/54/55/56/57/58	F16. 0. No 1. Si	/59/
F17. Familiar Amigo	60/61/62/63/64/65	F18. 0. No 1. Si	/66/

F19. Cúanto ha pagado usted de interés por el Préstamo? _____ /67/68/

F20. Cúanto estaría usted dispuesto a pagar de interés si él crédito fuera suficiente, oportuno y fácil? _____ /69/70/

****

Enfermedades de café

Favor de indicar cúales de las siguientes plagas o enfermedades está afectando su cafetal:

G1. La Roya	0. No	1.Si	/71/
G2. La Broca	0. No	1.Si	/72/
G3. Ojo de Gallo	0. No	1.Si	/73/
G4. Mancha de Hierro	0. No	1.Si	/74/
G5. Minador de Hoja	0. No	1.Si	/75/
G6. Mancha de Hierro	0. No	1.Si	/76/
G7. Aranera	0. No	1.Si	/77/
G8. Taladrador	0. No	1.Si	/78/

G9. Cúal sería la mejor forma de mejorar su cafetal en su opinión?
(Leer alternativas y sólo marcar una)
1. Renovación por siembra
2. Renovación por recepa y repoblación /79/

****

Participación y Cooperativas

De las organizaciones que le voy a mencionar, me gustaría que me dijera si asiste a reuniones de ellas, si es miembro de ellas, y si Ud. forma parte de la Directiva de ellas:

(T4)

Asiste a reuniones de:
Cooperativa de café:

H1. Asiste _____ veces al año (promedio)	(00=ninguna vez; 01= una vez)		/1/2/
H2. Es miembro?	0. No	1. Si	/3/
H3. Es miembro de la directiva?	0. No	1. Si	/4/

Asociación agrícola:

H4. Asiste _____ veces al año (promedio)	(00=ninguna vez)		/5/6/
H5. Es miembro?	0. No	1. Si	/7/
H6. Es miembro de la directiva?	0. No	1. Si	/8/

Asociación de padres de familia:

H7. Asiste _____ veces al año (promedio)	(00=ninguna vez)		/9/10/
H8. Es miembro?	0. No	1. Si	/11/
H9. Es miembro de la directiva?	0. No	1. Si	/12/

Asociación de campesinos:

H10. Asiste _____ veces al año (promedio)	(00=ninguna vez)		/13/14/
H11. Es miembro?	0. No	1. Si	/15/
H12. Es miembro de la directiva?	0. No	1. Si	/16/

H13. Hasta que punto está usted satisfecho con su cooperativa?
1. Muy satisfecho, 2. Más o menos satisfecho, 3. Insatisfecho /17/

H14. Ha recibido algún servico de la cooperativa de café?
0. No 1. Si /18/

H15. Y ahora, hablando de FENACAFE, (Federación Nacional de Caficultores Ecuatorianos), hasta que punto está usted usted satisfecho con esta Federación?
1. Muy satisfecho 2. Más o menos satisfecho, 3. Insatisfecho /19/

(Para los que indican "si" a la pregunta anterior):
Cúales de los siguiente servicios ha recibido?

H16. Préstamos	0. No	1. Si	/20/
H17. Comercialización	0. No	1. Si	/21/
H18. Insumos	0. No	1. Si	/22/
H19. Educación	0. No	1. Si	/23/

****

Composición familiar y educación

J1. Sexo del entrevistado: 1. Hombre 2. Mujer /24/

J2. Es usted soltero o casado?
1. Viudo 2. Casado 3.Unión Libre 4.Soltero 5. Divorciado /25/

J3. Cúantos años tiene usted? _____ años /26/27/

J4. Sabe leer y escribir? 0. No 1. Si /28/

J5. Hasta qué grado llegó en la escuela? _____ /29/30/
(no asistió = 0; 1 de secundaria = 7;4 de secundaria = 10, etc.)

J6. Cuántos hijos tiene viviendo con Ud. ahora? _____ hijos /31/32/

J7. De estos hijos cúantos le ayudan en su cultivo de café? _____ /33/34/

J8. Cúantas personas permanentes necesita usted para su sembrío de café? _____ /35/36/

J9. De éstos, cuántos son de la familia? _____ /37/38/

J10. Cúantas personas contrata usted para el cultivo del café? _____ /39/40/

J11. Cúantas personas contrata usted para la cosecha del café? _____ /41/42/

J12. Cúanto paga usted a los hombres contratados? _____ /43/44/45/
D/A:10

J13. Cúanto paga usted a las mujeres contratadas? _____ /46/47/48/

J14. Cúantos cambia brazos o presta manos utilizó usted los últimos doce meses? _____ /49/50/

Nivel de Vida

K1. Con qué alumbra Ud?
1. Espermas 2. Lámpara gas o canfin 3. Luz eléctrica /51/

K2. Tiene un radio?	0. No 1. Si	/52/
K3. Tiene un televisor?	0. No 1. Si	/53/
K4. Tiene una máquina de coser?	0. No 1. Si	/54/
K5. Tiene una refrigeradora?	0. No 1. Si	/55/
K6. Tiene servicio?	0. No 1. Letrina 2. Sanitario	/56/
K7. Tiene carro o camión?	0. No 1. Si	/57/
K8. Cómo obtiene el agua?	0. Río 1. pozo público 2. pozo privado	/58/
	3. llave pública 4. agua potable en casa	
K9. Su casa está dividida en cuartos?	0. No 1. Si	/59/

****

Muchas gracias, estas son todas las preguntas que tengo.

Hora de terminar la entrevista ___:___

L1. Duración de entrevista en minutos ___ /60/61/

L9) Firma del entrevistador_____ código _____ /62/63/

Observaciones (usar el dorso si es necesario):

(3299G)