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A.I.D. SPRING REVIEW OF SMALL FARMER  
CREDIT. VOLUME IV. SMALL FARMER CREDIT  
IN ECUADOR

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A.I.D. SPRING REVIEW OF SMALL FARMER CREDIT  
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COUNTRY PAPERS

# SMALL FARMER CREDIT IN ECUADOR



AGENCY FOR INTERNATIONAL DEVELOPMENT  
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COUNTRY STUDY

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- NATIONAL DEVELOPMENT BANK -  
THE SUPERVISED AGRICULTURAL CREDIT PROGRAM  
IN SANTO DOMINGO DE LOS COLORADOS

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Quito, Ecuador  
December, 1972

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## I. INTRODUCTION

Aware of the fundamental technical and social importance of supervised credit, the National Development Bank made provision in its constitution for reaching small farmers by means of a program of supervised credit.

Essentially supervised credit provides funds, technical assistance, and social education to groups of small operations with limited but hopefully growing resources for the purpose of bringing about real improvements in their economic and social conditions in the not too distant future.

The factors taken into account in organizing programs of this sort are:

- a. Selection of a clearly defined area for an economic and social survey;
- b. Selection of the participants in the program, taking care to ensure that they are capable in their field, physically fit, honest and hard-working, and permanent residents of the area;
- c. Selection of farms, taking care to choose those with the best money-making prospects that will produce returns in the shortest time; the investments made are spread over short-, medium-, and long-term projects;
- d. Total financing of investment plans, including when necessary the construction or improvement of dwellings;
- e. Regular systematic technical assistance from the planning stage on through to the achievement of the program's objectives and recovery of the loan;
- f. Supervision to ensure that part of the annual income is reinvested in the capital of the farm and in social improvements; and
- g. Periodical assessments of the program.

In seeking to work according to these criteria, the Bank has laid down a number of guidelines for making loans, as follows: Funds will be provided for up to 100 percent of an investment plan; the term of the loan varies with the type of investment (short-term loans, up to two years; medium-term loans, up to seven years; and long-term loans, up to 15 years); grace periods are granted for medium- and long-term investments, and these may apply even to the payment of interest; the type of repayment is determined in accordance with the income yielded by the farm; guaranties are based on the correct selection of participants and are secured

by the assets financed by the loan. The interest rate is lower than usual, the supervised credit beneficiaries paying only 8 percent per year, and there are no additional charges.

## II. DESCRIPTION OF THE PROGRAM

1. Loan contract BID-56/TF-Ec. was signed in October 1963 between the Inter-American Development Bank and the National Land Settlement Institute--later transformed into the Ecuadoran Agrarian Reform and Land Settlement Institute (IERAC) for the amount of U.S.\$2.6 million, to which a domestic contribution was added, making a total fund of U.S.\$4 million.

These funds were to be invested in a selected area in the Santo Domingo de los Colorados zone, which was considered to be suited to voluntary land settlement. A group of eight properly coordinated programs was intended to assist the families of settlers in improving their economic and social status within a fixed period of time. These programs were:

- a. Access routes for the settlement areas (construction of 180 km of secondary roads);
- b. Farm and housing loans to the families of 1,600 settlers;
- c. Organization of community centers in three selected localities in the zone;
- d. Organization of agricultural extension and experiment services;
- e. Technical assistance in supervising and controlling the programs;
- f. Construction and equipment of 20 schools;
- g. Organization of social welfare, medical, health, and other services; and
- h. Technical services in support of all the above programs.

2. The farm and housing credit program was directed toward granting financing through a supervised credit program, planning the needs of the rural population on the productive side and in the social field, for the purpose of helping them to find real solutions to their problems.

The two subprograms were originally financed in the following way:

a. Agricultural credits:

- |                                                                 |             |                |
|-----------------------------------------------------------------|-------------|----------------|
| 1. From the IDB loan, the equivalent in sucres of               | .....U.S.\$ | 960,000        |
| 2. Local funds provided by the BNF, the equivalent in sucres of | .....U.S.\$ | <u>232,600</u> |

SUBTOTAL OF AGRICULTURAL PROJECTS U.S.\$1,192,600

b. Credits for rural housing:

- |                                          |             |                |
|------------------------------------------|-------------|----------------|
| 1. IDB loan: the equivalent in sucres of | .....U.S.\$ | <u>748,000</u> |
|------------------------------------------|-------------|----------------|

TOTAL INVESTMENT IN THE PROGRAM U.S.\$1,940,600

3. The program was entitled the Land Settlement Credit Program and it came into being in September 1964. The IERAC was responsible for the technical and administrative operation of the whole program, as well as for the planning and for supervision of the participants.

The BNF acted as fiscal administrator under a provision of loan agreement No. BID-56/TF-Ec. which provided that subloans could be disbursed only through the BNF. In order to comply with this provision it was necessary to draw up an agreement between the ENF and the IERAC regarding the loan administration. In addition, the agreement made the Bank responsible for financing the local contribution of 5 million sucres (U.S.\$232,600). In practice, the Bank provided 20 percent of all the subloans for agricultural development.

4. In the early stages, the so-called "IDB Polygon" referred to a diamond-shaped area whose corners were 12 km from Santo Domingo de Los Colorados and located on the roads connecting that community with Quito, Esmeraldas, Chone, and Quevedo. Later on, under pressure from the residents in neighboring areas who wished to be included in the program, the area was extended to 60 km in each direction.

Consequently, the area was very much bigger and far less homogeneous than had originally been intended, which might be considered a disadvantage, as the program was so designed that success depended on applying it in a small space. In the case of Santo Domingo, it was not intended that the program should cover the whole area; only that the outer limits should define the location within which the participants in the program would

be selected. Actually, the area itself contains large highly capitalized enterprises, medium-scale undertakings belonging to absentee farmers, small farmers who have been residents of the area for many years, and small farmers who have only recently come there as a result of the road developments, and who still had land tenure problems. The area also contains a number of fairly rapidly growing villages, and it comes under the political jurisdiction of no less than four provinces (Pichincha, Esmeraldas, Manabi, and Los Rios).

5. Ecological features: The Santo Domingo de los Colorados area contains very humid subtropical forests and humid tropical forests.

The very humid subtropical forests are to be found in the part of the area falling within Pichincha province where the temperature is between 18°C and 24°C and the average annual rainfall is between 2,000 and 4,000 mm. The land lies between 500 meters and 1,600 meters above sea level. The lower part of the area is suitable for limited agricultural operations, the main crops being bananas, yucca, rice, and corn; but the most characteristic operation is stockraising (beef cattle). Most of the land is covered by forests.

The humid tropical forest covers part of the provinces of Manabi (El Carmen) and Esmeraldas (La Concordia); it provides more satisfactory conditions for agriculture and stockbreeding than the very humid subtropical forest. The average temperature is somewhat above 24°C and the annual rainfall between 2,000 mm and 4,000 mm. The land lies at about 1,000 meters above sea level. The topography is flat or undulating, thus being suitable for the cultivation of plantains, bananas, cacao, hemp, yucca, pineapples, citrus, and so forth and, of course, it is good for stockraising. There is a great variety of forest species and many of them have commercial value.

In general, the countryside around Santo Domingo de los Colorados is what might be expected of an area where one of the principal activities is stockraising. Nevertheless, the soil is not as good as is generally thought, and needs to be worked on a five-year cycle unless it is manured at regular intervals.

6. The following comments may be made on the way in which the program worked out in practice:

(a) The very small demand for credits for housing led to a freezing of resources, since the amount of U.S.\$748,000 had been specifically earmarked for that purpose. This blocking of funds was most undesirable from the standpoint of the purpose of the program as a whole, which was to speed up the economic development of the families concerned.

The BNF maintained that it was undesirable for settlers to become indebted for a non-profit-bearing investment when they lacked the capacity to pay; it was therefore decided to find a better means of financing productive activities. The BNF considered that improving the financial circumstances and the efficiency of the undertaking were the goals which should be achieved in the shortest possible time, with social improvements following quite certainly as side benefits.

(b) The second difficulty encountered in the operation of the program was the lack of funds available to the IERAC for maintaining the technical and administrative structure. It was, for instance, unable to support an office devoted entirely to the Santo Domingo de Los Colorados program, a situation that did not make for proper institutional security, not even on a medium-term basis.

These two problems were overcome by transferring to the BNF complete responsibility for administration of the part of the loan intended to finance agricultural activities and the construction of rural dwellings. At the same time, all parts of the loan were brought together in a single fund which could be made available according to demand.

Nevertheless, the debate on these problems and on the difficulties following discontinuance of the program took up most of the year 1966. The BNF assumed complete control of the program in November of that year and has continued to run it ever since with results that are considered quite satisfactory, especially because they have been achieved in a relatively short period.

7. The principles which have made it possible not only to exceed the original number of participants (1,600) but also to make genuine progress in both the economic and the social fields may be summarized as follows:

(a) The settlers have obtained permanent possession of the land, a factor that provides a secure basis for medium- and long-term planning;

(b) The amount of land granted in each instance is sufficiently large to enable the family undertaking to make sustained progress on the basis of operating plans that produce a reasonable yield;

(c) The financing has been both timely and adequate in respect of amount and terms which enable the undertaking to develop favorably. Families that have received more than one loan during the period have shown more rapid improvement than others;

(d) The program provides technical assistance through planning of the loan and supervision throughout its duration;

(e) The program area is criss-crossed by a network of primary roads and many kilometers of secondary roads, making it easy to move farm products and supplies; more particularly, the roads put the area in touch with the country's more active markets;

(f) The settlers are genuine farmers established once and for all on the land with their families. Hence, there is no absenteeism, and the settlers are determined to improve their standard of living by their own efforts.

#### 8. Summary of results to date

The following tabulation of the results of the program up to December 1969 shows that investments in small undertakings can be extremely productive in the short period of five years, provided that there is proper supervision.

<u>Type of Investment</u>	<u>Credits Granted</u> (in thousand sucres)	<u>Actual Investment</u> (in thousand sucres)	
Establishment and maintenance of live-stock farms	3,440.0	12,386.2	
Purchase of cattle for breeding and for fattening	37,873.9	39,194.0	
Pigs for breeding and for fattening	700.3	1,296.5	
Poultry breeding	21.5	197.0	
Permanent crops	2,944.2	7,119.4	
Agricultural constructions	402.6	990.0	
Construction or improvement of dwellings	744.0	19,257.0	
Other permanent investment	492.2	3,136.0	
Land purchase (urban and rural)	-	14,000.0	
<b>TOTAL INVESTMENT</b>	<b>46,555.8</b>	<b>96,586.1</b>	
<b>CAPITAL GAIN</b>		<b>109.6</b>	
<u>CHANGES IN INVESTMENT</u>	<u>Original</u>	<u>Present</u>	<u>Increase (%)</u>
	(in million sucres)		
TOTAL ASSETS	121.9	299.7	146
TOTAL LIABILITIES	14.3	43.8	205
NET CAPITAL	107.6	255.9	138

Certain other figures showing the changes of the past five years are set out below:

<u>ITEMS</u>	<u>STOCKS</u>	
	<u>At Start</u>	<u>At December 31, 1969</u>
<u>Livestock</u>		
Cattle (head)	9,730	39,980
Pigs (head)	16,870	16,900
Poultry	59,770	60,110
<u>Agriculture</u>		
Pastures	19,040	30,880
Crops (hectares)	17,790	19,590
<u>Income</u>		
Gross income (sucres)	27,196,000	45,181,000
Net income (sucres)	18,686,000	25,571,000
Average income per family per year (sucres)		52,281
Cash income per family per year	15,437	29,481

In brief, the figures show that the program has had very positive results. Among these it will be seen that the area under cultivation has been extended by more than 13,000 hectares; the number of beef cattle has increased by some 30,250 head during the period; and more generally, there has been an improvement in the standard of living of the settlers as a result of the increase in revenue, estimated at some 15.5 million sucres, which has in turn had a multiplier effect on the development of the economic activities in the area.

As for improvement in family circumstances, it has been noted that the settlers have been buying more agricultural land and urban lots in the neighboring villages; they have built new homes or improved existing ones; they have a strong desire to provide the best possible education for their children; they have improved their eating habits and hence their health and vitality; their assets have risen by some 146 percent on the average; and finally, they have become sources of jobs for third persons to whom they paid more than 11 million sucres in wages during the period.

Since December 1969 the program has become more satisfactory still as, up to the end of 1971 some 4,698 loans had been made to the

benefit of 2,670 families, representing a total investment of 61.2 million sucres. The purpose of each loan and the accumulated investment under each heading are shown in the following table:

NATIONAL DEVELOPMENT BANK  
Training Credit Department

CREDITS GRANTED FOR THE LAND SETTLEMENT PROGRAM IN THE  
SANTO DOMINGO DE LOS COLORADOS AREA

In thousands of sucres

	AMOUNTS LOANED					ACCUMULATED TOTALS 9/1/64 - 12/31/71		
	1967	1968	1969	1970	1971	Amounts	No. of Operations	Value
Plantains & Bananas	24.6	167.2	82.6	36.8	-	610 has	69	436.0
Corn	17.8	16.6	52.6	23.0	10.0	690 "	119	396.0
Beans	-	-	4.0	-	-	19 "	8	17.1
Rice	3.0	188.2	80.8	6.5	6.0	493 "	103	494.0
Coffee	-	-	-	-	-	180 "	64	396.7
Peanuts	-	1.6	-	4.0	-	7 "	5	12.6
Yucca	-	24.6	-	-	-	16 "	2	26.2
Pineapples	26.5	5.0	13.0	-	-	46 "	19	141.0
Sugarcane	-	-	-	-	-	18 "	5	44.7
Other Fruit	-	5.0	-	22.0	-	16 "	3	28.2
Hemp	-	30.0	-	-	-	52 "	6	132.4
Abaca	1,400.0	350.0	70.0	-	139.8	272 "	28	1,959.8
Cacao	-	-	-	4.0	-	11 "	1	4.0
Soybeans	-	-	-	12.0	-	6 "	3	12.0
Pastures (establish)	761.2	134.5	35.0	14.0	95.0	1,971 "	265	2,309.7
Pastures (maintain)	336.2	274.0	168.9	139.8	143.6	4,013 "	617	1,522.8
Cattle (breeding)	12,502.1	8,814.1	4,424.2	3,657.6	4,792.9	16,487 cbz	1,982	43,585.6
Cattle (fattening)	794.9	1,301.2	480.4	1,769.4	1,437.6	5,712 "	715	6,955.8
Pigs (fatt'g & breed'g)	172.6	132.3	4.0	58.0	23.8	1,844 "	256	782.1
Poultry	-	3.1	14.6	24.0	8.0	3,370 "	11	53.5
Draught Animals	118.4	46.2	15.0	11.0	5.3	288 "	222	410.3
Timber	-	-	-	-	-	5 has	1	4.0
Agric. inputs	3.0	16.5	14.8	70.0	27.9	-	18	136.1
Agric. Implements	15.2	9.1	4.5	7.5	1.5	20 u	20	44.2
Stables	5.0	3.0	-	-	5.0	9 "	9	38.0
Slaughter- houses	61.0	14.2	-	12.0	5.5	29 "	29	154.2
Chicken- houses	-	-	-	-	-	5 "	5	65.8
Tents	-	-	6.0	-	-	2 -	2	9.0
Roads	15.0	-	-	25.0	-	7 km	6	183.0
Housing	241.0	107.8	64.8	43.7	20.0	104 u	104	808.6
Total original loans	16,497.6	11,644.1	5,535.1	5,940.2	6,762.0		2,670	61,193.5
No. of Loans approved	501	517	280	309	249			

Source: Departmental Reports  
Prepared by: Department of Supervised Credit

### III. REVIEW OF THE CREDIT PROGRAM

The assessment was carried out on the basis of a statistical sampling of the loans granted up to December 31, 1969. There were 1,850 cases and 10 percent or 185 participants were examined, so that the sample may be considered sufficiently representative.

The review covered three general aspects of the program; the success or failure of the settlers in the economic and financial spheres; achievements with respect to social betterment; and the technical and administrative aspects of the program.

The statistical annexes give a quantitative view of the results. While of course the figures are a consolidation and speak only for the program as a whole, they show the extent to which individual families have made progress, or failed to do so.

Making a general appreciation on the basis of the data provided by the survey, there can be no doubt that in the time the program has been in existence, it has been of real benefit to the settlers in the area around Santo Domingo de los Colorados, and therefore it has successfully met the objectives for which it was established.

Obviously, the results that can be shown here do no more than reflect the efficiency with which the Branch of the BNF concerned has carried out its daily tasks. Not the least of its contributions was the assistance given in making this evaluation, whose results are set out below.

#### A. ECONOMIC AND FINANCIAL RESULTS OF THE PROGRAM

1. Table 1 shows that the loans made so far have affected an area of 90,135 hectares, the amount of land believed to be held by the 1,850 borrowers on the date of the review.

This figure is 8,900 hectares more than 81,235 hectares held by the participants at the beginning of the program and represents individual family purchases for the purpose of increasing their land holdings.

The second part of the table shows the volume of credit made available during the period. There is in fact no figure available for the total demand for credit by the settlers; however,

one indication of the scale of the program can be gained from the figure for the planned volume of credit, which came to 58.2 millions sucres for the five-year period, of which some 48.5 million were actually lent. Of that amount, 11.8 million sucres, or roughly 25 percent of the total, has been repaid by the settlers in the form of debt cancellation or in scheduled repayments and the money was immediately reinvested in new loans to meet the growing demand.

2. The financial position of the participants, showing the purposes for which the loans were made, is set out in Table 2. The assets of the farmers, estimated at 121.9 million sucres at the beginning of the program, rose to 299.7 million up to the end of the period analyzed, an increase of 145.8 percent. In other words, the value of a family's assets rose one and a half times above the original figure.

An examination of the status of families in relation to the time they have been on the program and the number of loans they have received shows that there is a direct relationship between these factors. In other words, the families that joined the program in the early years and have received two or three loans are better off than those joining later, because they have been able to increase their assets more rapidly.

There are seven groups of assets, namely, land and buildings, cattle, pigs, poultry, draught animals, tools and agricultural equipment, and other assets including domestic goods. Each of these categories has increased, though in different proportions, for every one of the families admitted to the program during the period under review, thus demonstrating the general improvement in the condition of the settlers.

One of the groups whose value has increased more noticeably is cattle, which rose from 18.4 million sucres to 76 million sucres, a more than fourfold increase. These figures agree with those for the number of head of cattle owned by the settlers.

The increases in values arising from the development process in the area around Santo Domingo de los Colorados has led to a doubling in the assets of the settlers under the heading of land and buildings, not only by improvements made on their own land but also by the addition of lots that have been purchased by some of them.

From the standpoint of improving the technology used in cultivation, it is perhaps worth noting that the investment in tools and agricultural equipment has risen by 153.5 percent above the starting inventory which means that a considerable increase in the level of productivity should be possible.

In the same table, particular attention should be given to the "other assets" item because it includes durable household goods, which have risen from 6.5 million to 30.4 million sucres. Such an increase may be taken as evidence of the social improvement that can be achieved by family undertakings with access to supervised credit.

On the liabilities side, which shows the state of indebtedness of the farmers, it will be seen that the financial obligations of the families have risen more than the volume of credit received. Nevertheless, it is worth looking more closely at the debt formation itself. Mortgages were grouped, according to the creditors, as being in favor of the IERAC or the BNF. Those in favor of the IERAC have fallen by 45 percent, while those in favor of the BNF have risen by 19 percent. In any event, during the period under review mortgage debts have fallen by 29 percent of the original figure.

Debts backed by chattel mortgages, mainly loans from the BNF, have increased very greatly--from 5.2 million sucres to 35.6 million sucres, an increase of 578 percent.

Perhaps the most spectacular increase in relative terms is that of "other debts", from 5,000 sucres to 1.7 million sucres. The explanation might well be found in the changed situation; the settlers are now more confident of their capacity to pay and this makes them try to accelerate the improvements they wish to undertake. It might also show the confidence that third parties have in the undertakings by making credit available to them, something they do only when the signs of economic improvement are good.

Although the proportionate increase in indebtedness has been more rapid than the increase in assets, the latter has nevertheless amounted to 137.8 percent net, which clearly shows the solvency of the parties concerned and the positive benefits of the program. Indeed, while in absolute figures the increase in indebtedness amounted to 29.5 million sucres, the increase in assets amounted to 177.7 million sucres, leaving a net capital gain of 148.2 million sucres for the families.

3. Table 3 shows the changes that have taken place in the livestock holdings of the settlers. Livestock is by far the most important part of the family activities; it is to livestock that most of their financial resources are devoted, to the extent that some 90 percent of the proceeds of loans are invested in that line.

Beef cattle not only represent the largest investment but also the most typical activity carried on under the program. The figures show the initial stock in the possession of approved families was 9,730 head; that they received loans to purchase 16,631 head, either for breeding or fattening; and that at the time of the review the families possessed 39,980 head. In other words, even allowing for death and sales of cattle, the cattle stock has increased by an additional 13,619 head, and the value of cattle owned by approved families has risen some 18.4 million sucres at the start to 76.0 million sucres at the time of the review. In other words, the value of cattle held rose by more than three times during the period studied.

One good indication of the changes that has taken place in the enterprises is the figure for the average number of cattle owned by each family. At the beginning of the program the average was 5 head of cattle per family; at the time of the review, it was 22.

Holdings of pigs and poultry cannot be looked upon as commercial activities. They really come under the heading of subsistence farming. During the period loans have been contracted for the purchase or breeding of no more than 1,682 pigs and 1,120 fowls, with a total value of 721,750 sucres.

Poultry farming is of great importance since it provides both meat and eggs for feeding the families. Moreover, in addition to meeting this needs, both poultry farming and pig raising serve to generate some financial return to add to the family budget, and on more than a few occasions sales of this sort have helped to meet payments on loans contracted in connection with the cattle held by the same families. In this region graught animals consist of the horses and mules used for transporting persons and goods.

4. The loans figures show that the program has been rather limited as far as the financing of agricultural crops is concerned. In the period under review crop loans have amounted only to 3,326,583 sucres, and these have been used to improve the cultivation of 2,329 hectares, counting both short seasonal

and perennial crops. This apparent shortcoming is of course the consequence of the particularly one-sided demand for loans in connection with livestock.

Nevertheless, it will be seen from Table 4, covering land use, agricultural production, and yields, that at the start of the program the settlers had some 17,790 hectares under agricultural crops. In a sense agriculture was the basis of their economy as it provided both cash crops and produce that they could use for meeting their own subsistence needs.

Plantains and bananas represented the major crop, accounting for 64 percent of the cultivated area. Technically speaking, plantains and bananas are a recurring crop; they not only form the staple family diet, but they are also used in stock-breeding, especially for pig feed.

Both corn and rice are generally considered transition crops since they are sown on land that will in future be used as pasture. This is no doubt one of the causes of the low yield per unit of area. Nevertheless, there is a clear difference between the yields preceding the start of the program and those obtained under guidance and supervision. Corn and rice are considered to be subsistence crops; in particular, corn is used in pig breeding and poultry farming.

Cacao and coffee are grown only on very small areas, amounting on an average to less than one hectare per farmer, so that it seems likely that expansion of these crops is possible in only a few selected areas. The yields are so low that possibly they serve only to meet subsistence needs.

Under the heading "other crops," which includes yucca, fruit trees, pineapples, and the like, attention should be drawn to the financing of 260 hectares of manila hemp with an investment of 1,820,000 sucres, representing 54.7 per cent of the total loans granted for agricultural crops. The hemp subprogram was concentrated in a particular area where it was something of a speciality, and this led to the establishment of a producer cooperative for the fiber, which has succeeded in reaching the direct export stage, thus raising the producers' income very noticeably.

As may be seen, there is a difference of 2,390 hectares between the area under cultivation at the start of the program and that at the time of the review. In other words, the increase in these lines of production amounted to barely 13.9 percent, and virtually the whole of the increase was financed by loans from the Bank.

The other major land use in the area is pasture for grazing. The figures under this heading show, first, the remarkable

increase in new pastures, reflecting the concentration on livestock. Second, out of the increase of 11,840 hectares of pastures, only 1,852 were financed with loans from the Bank, the remainder (9,988 hectares) having been acquired by the personal efforts of the settlers in their desire to increase the capital value of their holdings. In addition to making loans for the establishment and maintenance of pastures, the Bank has offered financing for fencing pastureland totaling 3,164 hectares. Third, comparing the area under pasture with the number of cattle, it will be seen that at the beginning of the program there were very few head of cattle per hectare (9,730 head for 19,040 hectares), while currently there are rather more than one head per hectare (39,970 head of cattle for 30,880 hectares, including animals of all ages), thus avoiding over-investment.

Finally, comparing the total area owned by the settlers with the various forms of land use reveals that land utilization has increased significantly and that there has been a tendency to leave no resources lying idle. For instance, at the start of the program only 44.6 percent of the land was being utilized, while the present proportion is around 56 percent, notwithstanding the increase in the available area due to new acquisitions by the farmers. If they had bought no additional land, the proportion of total land in use would be 62.1 percent.

5. Table 5 shows the main changes in the income from marketing the farmers' products since the introduction of the program. In this connection, it is well to emphasize that, as with other aspects, the planning refers to the first year's operations of the program or to the year in which the loan was granted, when farmers have had two or more loans. On the other hand, actual income depends on the time for which farmers have been working under the program. This means that participants who joined the program in 1965 have had five years of activity under the program; in that time they could have received one or more additional loans to fulfill or extend their original plan. However, the loans granted in 1969, being initial loans, refer to only the original stage.

In any event, the purpose of the table is to indicate the changes that have taken place during the period of operation of the program, in the volume of income under the various headings. The table shows four different sources of revenue, so that it is possible not only to see the advances made under each heading but also the relative importance of each of them in the budget of the family

undertaking. The sources are: income from cattle; income from agricultural products; other income from the participant's holding; and non-farm revenue.

Moreover, in order to try to estimate the actual income generated by the family undertaking, income was divided into actual cash income derived from the sale of farm products in the market and imputed income, which in turn was divided into the value of products raised on the farm for family subsistence (milk, meat, eggs, bananas, yucca, rice, and the like) and the value of unpaid labor by the head of the family and other members working permanently in the fields. Under this heading of unpaid labor, it is figured that no less than 3,270 persons represented the manpower pool provided by the families of farmers under the program.

In calculating the increases during the program period only cash income has been counted, as there was no way of comparing the value of imputed income before and after the program began. With these preliminary remarks it will be seen that, taking only the income derived from the sale of livestock products, the improvement in the economic status of the families was striking since the increase under this heading amounted to 87 percent during the period under review, or an average rate of 17.4 percent per year.

The increase in income from farm crops was more modest, amounting to 35 percent for the period; however, this is only natural since stockbreeding is the main agricultural pursuit in the area because the climate and soil are propitious for that type of activity, and the farmers naturally engage in that which gives them the greatest yield. In this respect, it is interesting to note that while the planned revenue from stockbreeding (12.6 million sucres) was estimated to be roughly equal to that from farm crops (12.8 million) by the end of the period sales of animals and animal products were some 36 percent higher than those of agricultural products.

The heading "other farm income" refers to income not related to the main activities such as stockbreeding and agriculture but rather to those derived from other sources such as timber, sugar cane, fibers, charcoal, and the like.

The item "other income" refers to activities unrelated to agriculture, stockbreeding, or forestry, and is therefore considered to be non-farm income. It will be seen from the table that income under this heading has risen remarkably, the actual increase being some six times the planned increase.

It might be thought that this expansion of income was brought about by the settler's partly abandoning his agricultural or livestock activities for other work of a more lucrative nature. However, settlers have always undertaken non-agricultural activities in order to round out their budget. Before the introduction of the program they did this by working on neighboring farms as casual laborers; since its advent, they have been freed from this type of dependence, and many settlers now undertake activities that are far more profitable than working for others. Among these may be mentioned running a sales stall beside the highway; buying agricultural products for resale; renting out a house built in the neighboring town; hauling farm produce; and so forth.

In any event, despite the relatively large increase in income under this heading, at the end of the period it still represented only 9.7 per cent of the total, thus clearly indicating that agriculture and livestock were the basic sources of revenue for the settlers.

In trying to estimate real income it is important to bear in mind the large share represented by imputed income, reflecting the subsistence obtained by a family from its farm. This in fact makes it practically self-supporting and accounts for some 50 percent of the farm's economy.

In examining the relative importance of the various sources of income, it will be seen that a number of changes have taken place which, if they continue, would tend to make specialization in livestock even more overwhelmingly desirable, even though no farmer could give up other agricultural activities altogether. The table shows that during the period under review income from agriculture as a percentage of total family income fell by 7.9 percent. The proportion of other farm income also fell noticeably while that of stockbreeding and non-farm activities rose correspondingly.

Another indication of the improvement in the standard of living can be derived from a comparison of the average income available to individual families. It has been calculated that at the beginning of the program each family generated an income of 15,437 sucres per year or 1,286.41 sucres per month. During the time that the program has been in operation this figure has risen to 29,481 sucres per year or 2,456.75 sucres per month, meaning that the average family income has risen by 90.9 percent. Moreover, the farm population in the area has risen by 7.6 percent per year, a figure much higher than the 3.4 percent for the country as a whole.

The improvement in the position of the families under the program will become even clearer if the imputed income is included, thus giving a total monthly average of 4,357.25 sucres, which is considerably higher than that obtainable in other sectors, including manufacturing and services.

6. Table 6 shows in summary form the expenditure by the families on running and maintaining their farms. The change during the period call for some interesting observations, as well as showing how skillfully the program has been run.

In Table 6 expenditures have been broken down in such a way as to show the main farm costs, not omitting the cost of capital.

It is worth noting that although we are dealing with a family economy, the farmers nevertheless generated 11.3 million sucres worth of labor to meet the needs of other family groups.

The heading "purchases of livestock inputs" shows that actual outlay was well above the planned or budgeted figure, and this was of course in line with the farmers' need to provide for the larger number of cattle. Similarly, it had been envisaged that expenditure on tools would be relatively low; but the increase in activity and particularly in casual labor for others led to the actual outlays being some nine times the budgeted figure.

The only heading where actual expenditure came near the estimates was that for minor repairs on dwellings, fences, and the like. Most of the other actual expenditures practically doubled during the period.

The item "other expenditures" was also far above the planned figure, having increased by some 130 percent over the period. The main factors leading to that growth were probably health and education of the children. The health costs, which had been completely unforeseen, in many cases led to very serious difficulties in household budgets; they arose because one of the main defects of the area is a lack of health services and conditions favorable to health.

It is quite normal that the item "payment of interest" should have risen as shown in the table because the figure of 966,690 sucres was intended to be the amount payable on loans contracted in the first year and other interest payable in the same period. The amount of 3,231,630 sucres shown in the next column represents the total paid in interest over the whole period.

The increase in the outlay on family maintenance means that, despite the rise in the cost of living and the increase in the size of the family, there has been a rise in the outlay on food, and hence an improvement in the family's defenses against disease.

In brief, the supervised credit program has generated incomes for other sectors of the economy amounting to 36.8 million sucres, and the multiplier effect has helped to shore up the economic progress that is taking place in Santo Domingo de los Colorados.

There is, however, one factor of considerable importance that ought to be borne in mind in examining the composition of expenditures, namely, that the loan for assistance in voluntary land settlement has represented only a small proportion of the funds expended. While it would be reasonable to consider loans for short-term agricultural crops (1,058,045 sucres) and for the purchase of agricultural or livestock implements and inputs (71,250 sucres) as operating costs, the remainder of the outlay has been found by the settlers' own efforts, mainly through the sale of agricultural and livestock products. In other words, the family undertaking has itself raised the funds necessary for operating expenses to the extent of 97 percent, and this is another indication of the serious-mindedness and business acumen of the families.

The average annual expenditure per family unit has in fact been 19,916 sucres, an increase of 9,928 sucres or 99.4 per cent over the planned amount.

In calculating total expenditures, imputed outlays had been added to monetary outlays, allowance being made in particular for wages earned by the head of the family and relatives who receive no cash reward for their work.

At the bottom of Table 6 are the figures showing the net economic situation of the family undertakings. The first two lines show total revenue less total expenditure, both actual and imputed, for the families as a whole. These is a net balance in favor of the families both at the beginning of the period and at the end, although there is no way of making a direct comparison between the two sets of figures because at the beginning of the period no allowance was made for imputed values.

Although the component figures differ considerably, the planned yield and the actual yield were very close, since the former was 35.3 percent and the latter 33.4 percent, a sufficiently high return for any type of economic activity.

A better basis of comparison will be found by using only cash income and cash expenditure figures. Although the results will be similar to those already described, it will be seen that the increase in expenditures was proportionately greater than that in income, and that nevertheless net monetary income during the period was 75.5 percent higher than had been planned.

Looked at from the standpoint of the administration of the program, the existence of this net profit would appear to show that the recipients of the credit were in a position to repay their principal and interest. Hence, at first glance there should be no excuse for overdue payments, let alone a growing list of persons whose payments are in default. It is of course an accumulation of individual cases that has brought about this situation.

7. In order to show the positive medium-term and longer-term achievements of the farmers under the program, we have prepared Table 7, which sets out under various headings the capital invested either in the farm undertakings or in the form of an increase in the assets of the individual families.

The various incentives available to the settlers have led them to more than double their assets during the program period.

The most interesting features of the various items of Table 7 are summarized below:

No loans were made available for land purchase; nevertheless, the settlers have invested more than 14 million sucres of their own resources and on their own initiative in purchasing both agricultural and urban land amounting to 8,900 hectares over and above the area with which they started the program, and this may be considered as a demonstration of the economic stability achieved by the families. On the other hand, of course, this type of acquisition can be criticized as representing a tendency to lay hands on all the available land for themselves. In any event, it is preferable that agricultural land should be purchased by people living in the area rather than by absentees. Furthermore, persons possessing more land than the amount laid down as being eligible for inclusion under the program were not entitled to new program credits and had therefore to seek financing from the Bank's Credit Division.

The settlers contributed a relatively small amount to the purchase of cattle, but the figures show that borrowers not only invested all the money that they received from the Bank in purchasing cattle but that they added thereto the equivalent of 1.3 million sucres from their own resources, thus showing the purposefulness of small farmers in seeking improvements when given the opportunity.

Another example of investment in the farm that shows the great efforts made by the settlers is to be seen in the heading dealing with the establishment and fencing of pasture grounds. During the program period the Bank has granted more than 3.4 million sucres for this purpose; the farmers have, however, disbursed some 12.3 million sucres under the same heading. In other words, they

have exceeded the planned expenditures by some 260 percent, thus greatly improving the land coming within the program.

In fact, buildings and improvements to the land have absorbed a relatively small part of investment in the farms, investment under this heading coming to less than 1 million sucres, and part of that has been used for the construction of pig sties, slaughterhouses, and so forth. It may therefore be considered that the amount invested in cattle management is far too small compared with the sum spent on purchasing livestock and expanding herds, which had reached some 40,000 head of cattle at the time of the survey.

Under the heading of permanent and semi-permanent crops, the most important item has been hemp plantations, which have absorbed the majority of the planned investment. Nevertheless, the farmers have planted a greater area than had been planned, and have devoted their own resources to cacao, coffee, pineapples, plantains and bananas, as well as to other permanent crops.

There has been very little expansion of pig farming and poultry breeding under the credit program. On the other hand, the settlers have invested more than 1.3 million sucres during the period in maintaining the stock of pigs and poultry used for their own subsistence.

Another important area in which considerable investment took place during the period was that of household goods such as beds, radio sets, bicycles, sewing machines, and the like, all of these being items that are not only favorable to an increase in the standard of living but also a demonstration that it is in fact taking place.

We have left to the end the heading "construction and improvement of housing" of which a more detailed analysis will be found in Part Two of this report. The statistical data alone show that the settlers attribute the greatest importance to the improvement of their dwellings, which are so essential to every aspect of life. The Bank met all demands for loans for the improvement of housing which amounted to only 744,000 sucres. But in fact the settlers spent more than 19.2 million sucres of their own funds, thus showing that individual efforts under this heading have been tremendous, and that the trend is unlikely to be reversed.

In brief, while it had been envisaged that the families taking part in the program would make an investment of some 46.5 million sucres in the capital of their properties, they have actually invested 97.6 million sucres, a figure 109.6 percent greater than had been planned.

8. The last of the tables setting out in statistical form the achievements of participants in the program is Table 8, which is a balance sheet of the position of the family undertakings at the end of the financial year. Only the money values have been taken into account in order to show the solidity of the undertakings as entities that can stand on their own feet in a money economy; in other words, subsistence factors have been eliminated and only figures that are accountable in the normal sense have been included.

This table shows that the actual excess of income over expenditure during the program period was 7.6 million sucres higher than had been planned, including non-farm income. But considering that the net income of the farms was 6.2 million sucres, it can be noted that the income produced was 23.8 percent, which should be considered adequate, or indeed high, for an activity of this sort.

In the period under review, the results diverged from the plans considerably; in particular, net revenue was 75.5 percent more than had been planned. However, taking only farm earnings and excluding non-farm income, there was still a profit of 18.4 percent, a far from discouraging figure and one well above those currently given for the yield of agricultural activities, which are often considered to be unprofitable.

Finally, to conclude the statistical survey of the various economic aspects of the program, a table has been included to show the results obtained according to the length of time that participants have been in the program and according to the size of their undertakings. Table 9 sets out the results under those two headings on the basis of 154 cases, representing 1540 participants, where the information was complete. The data were tabulated by an IBM machine which was programmed for the following comparable factors, namely, total assets, number of cattle, and area under cultivation. The following comments on the data in the table are relevant:

(a) The number of loans granted in each year between 1964 and the end of 1969 gives some idea of the number of participants under the scheme. The figures are:

1964/65	410
1966	80
1967	420
1968	400
1969	<u>240</u>
Total	1,550

The settlers who joined the program in the first year increased

their assets more than those joining later. This is understandable since the supervised credit received by those joining later has had less time in which to influence the work. The upward trend is quite clear, as indeed it should be, since any investment requires a minimum period in which to bear fruit.

On the other hand, there is no definite trend in the rate of increase in livestock. On the contrary, although the farmers joining in the first year achieved increases of more than three times their original numbers of cattle, and there was a logical reduction in the rate of increase for the second year, in the third and fourth years there has again been increasing growth. The reasons for this state of affairs may be that:

1. In 1967 and 1968 there was a relatively large expansion of the supervised credit program, both in the number of participants and in the volume of credit granted for purchasing livestock; and
2. During the same period a number of the farmers who had joined the program during the first year received a second loan to increase their investment, which in general included the acquisition of livestock.

However, the rate of growth fell more than proportionately during 1969 because the IDB funds that were used to finance 80 percent of the program came to an end in March of that year, and thereafter the program had to operate on the basis of repayments and BNF funds.

As to the area under cultivation, those who joined the program early succeeded in increasing the area of the land they were working more rapidly in the next three years than latecomers. While there is still a trend toward pushing back the forest and expanding the cultivated area, the rate is slower than that achieved by the first comers.

Unfortunately, there is no way of making a comparison between income at the beginning of the period and present income--a comparison that would be the best way of showing the changes that have come about in the position of the participating families--because there is no information on the income received by the families during the year before they joined the program.

If the actual income received by families and the credit granted in any given year are compared, it will be seen that dependence on external financing (i.e., loans from the Bank) has declined with the increase in time for which the settler has been a participant in the program. It may thus be reasonable to consider that the farmers are moving toward a position of self-financing. For, while loans granted during 1964-65 equalled

49 percent of the real income received by families at the time of the review, for families joining in 1969 the figure was 81.5 percent.

(b) In order to discuss the effect of the size of the various undertakings, the farms connected with the program have been divided into three groups as under:

1) Up to 30 hectares...	440 cases
2) Between 31 and 50 hectares...	670 cases
3) 51 hectares and over...	<u>430 cases</u>

Total 1,540

An examination of the appropriate data shows that the greatest effort to increase the capital value of the farms took place in those of up to 30 hectares, where the asset value has increased by 195.8 percent. Next in the amount of increase achieved are the farms of 51 hectares and over. However, in absolute terms, on the basis of an average figure for the capital value, the farmers with 51 hectares and over have increased their assets most, since calculated in this way the value of each large farm has increased by 137.232 sucres while medium farms have increased in value by an average of 84,821 sucres and small farms by an average of 102,005 sucres.

So far as livestock is concerned, the medium-sized farms having increased their herds by 318 percent, compared with 279 per cent for the others. In addition, the medium-sized farms have the highest productivity of the area, probably because they are the most appropriate size for working by single families.

When we come to the area under cultivation, the small farmers will be found to have made the greatest efforts to expand, being followed by the medium farms and large farms in that order. This is perhaps natural, first, because being smaller, the rate of land utilization is greater; second, the owners of small farms have had to make greater efforts to obtain income in addition to that from livestock and to meet their subsistence needs.

B. SOCIAL EFFECTS AND TECHNICAL AND ADMINISTRATIVE ASPECTS OF THE PROGRAM

Part B of the survey was intended to discover the advances in the social field made by the families participating in the program, and to throw light on the technical and administrative aspects of the credit arrangements.

1. SOCIAL ASPECTS

1. The Family

The survey sample covered 185 participants so that the universe was 1,850 borrowers. In principle, we can assume this corresponds to the same number of families. An investigation into the composition of families led to the following conclusions:

<u>Description</u>	<u>Size of Universe.</u>
1. Number of persons depending on the work of the head of family: Sons	4,150
Daughters	4,780
Others	540
2. Head of family and spouse	<u>3,760</u>
TOTAL NUMBER OF FAMILY MEMBERS	13,230
Average size of family	7.2
3. Number of family members helping to work the farms	1,420
4. Heads of family directing the work on the farm	<u>1,850</u>
TOTAL MANPOWER ORIGINATING IN THE FAMILIES THEMSELVES	3,270
5. Number of children in school	<u>3,360</u>
6. <u>Breakdown of children by type of occupation:</u>	
Children working on the farms	1,420 15.9%
Children at school	3,360 37.6%
Young children or children who neither work on the farm nor are in school	<u>4,150</u> <u>46.5%</u>
TOTAL CHILDREN	<u>8,930</u> <u>100.0%</u>

These figures show that the Program had by the date of the review assisted some 13,200 persons belonging to 1,850 family units, and making an average of 7.2, or in practice 7, members per family.

According to the current sociological and economic theorists, we would seem to be faced by a typical case of population explosion, likely to stand in the way of any real progress. Large population increases are clearly an underlying cause of the persistence of under-development, and they in turn are brought about by the backwardness of families and the community as a whole. On the other hand, an analysis of the economic factors revealed by the survey may provide an argument showing that the pessimistic view of the increase in population need not prevail. For, despite the high birth rate found among the participants in the program, their economic and social status has visibly improved in a relatively short time, as was shown in the earlier parts of this report. The people have purchased more agricultural land and urban lots, particularly in the villages surrounding Santo Domingo; they have built or improved their homes; they are strongly oriented toward providing education for their children even when this means paying high fees; they have improved their feeding habits; they have paid wages to other people, thus turning themselves into sources of income; their assets have increased on average by 145.8 per cent, and so forth. Finally, their average net capital has increased by 137.8 per cent, individual figures being much higher for those families that joined the program at the beginning and have received two or more successive training credits.

Although there is no organized market for the output of these settlers--which is in itself a veritable bottleneck in the development process--they are still making marked progress because they are in permanent possession of their land; they have a sufficient area under cultivation to maintain a steady expansion of the family undertaking; the soil is of good quality; a satisfactory road network makes it possible to move their products; they have access to appropriate financing for expanding their undertakings; although limited, technical training is available on the organizational side; the farmers are entirely devoted to their land, so that there is no absenteeism; and they have taken an irrevocable decision to fight for an improvement in their standard of living over the longer term.

The purpose of breaking down the figures for children by the type of activity in which they engage was to show the burden that has to be borne by the head of family in keeping the children alive and providing education for them. For no more than 15.9 per cent of children assist their father with agricultural tasks; 37.6 per cent go to school; and 46.5 per cent are either young children or girls who, if they do not work on the land, assist their mother with household duties.

Child education is perhaps one of the most important of the social effects of the program. The survey showed that there is virtually no child of school age who is not attending an educational center of some sort.

The great sense of responsibility of the fathers in this respect is reflected in the fact that they spare no efforts to provide the best possible education for their children. There are many families who have children studying both in Santo Domingo and in Quito, especially in the middle grades, although the cost exceeds 300 sucres per month per student. While they consider the economic burden to be rather heavy, they are really proud of contributing to the progress of their children.

It is clear that this improvement in the educational status of the families opens the way to new jobs and work opportunities, thus preventing the next generation from becoming a burden on the limited land available.

## 2. Rural Homes

Another of the important effects in the field of social betterment for the families participating in the program is that related to their homes.

As a start, it is worth recalling that in the loan agreement between the IBD and the IERAC great emphasis was placed on the financing of rural homes, to the extent that 43.8 per cent of the loan funds were earmarked for that purpose.

The BNF took the position that it would be better to lay greater emphasis on productivity, striving to raise the volume of investment in agricultural undertakings and to improve administrative efficiency, in the certainty that once the settlers began to receive additional income, they would themselves work toward those social improvements that go with it.

In fact, experience with the program showed that the demand for loans for domestic housing was almost negligible, while requests for credit for livestock purposes rose very rapidly. It became necessary to bring the various parts of the loan together in a common pool that could be made available in accordance with demand.

The proof that the position of the BNF was correct can be seen from the very encouraging outcome: 54.6 per cent of the 1,850 family units who have received loans for extending their livestock activities have built a new home or improved the existing one.

But perhaps the most interesting aspect of this clear social improvement is the way in which the settlers financed the investment in their homes, thus showing the efforts of which individuals are capable when they have basic security for a considerable time to come.

The figures below speak for themselves:

Total investment in home construction or improvement....

	\$ 19,257,000	100.0%
Financed from own resources....	18,513,000	96.0%
Financed from loans....	744,000	4.0%

The inquiry into accommodation included questions on its desirability for living in and its relative convenience. Out of the 148 answers received, 107 or 72 per cent considered that their housing was satisfactory, while 41 indicated that it was not sufficiently large or convenient.

Although in many cases no indication was given that the settlers had built, improved or enlarged their homes, some indicated that they found them satisfactory while others did not. There were cases in which, despite a considerable investment effort, lack of space or convenience still remained a problem, largely because the families continued to increase in size, and often new children were born into the families during the review period.

### 3. Organization

75 farmers representing 40.5 per cent of the sample belonged to organizations, mainly cooperatives. This is a clear demonstration that the BNF has played a useful role in the organizational field. While it has not itself been directly concerned in cooperatives, the members of such institutions have received considerable assistance from the Bank.

An inquiry into the type of organization and the services rendered to members gives the general impression that the farmers do not have any very clear idea of the nature of the organization of which they become members, and hence give a wide range of answers regarding the purposes and objectives thereof.

The farmers' answers may be tabulated as under:

PURPOSES OF ORGANIZATION AND SERVICES RENDERED

<u>Purposes and Services Rendered</u>	<u>Number replying:</u>	<u>Total</u>
1. Stockbreeding		10
2. Construction of communal works		70
3. Specific communal services:		
Electrification		30
Marketing		60
Loans and loan advice		50
4. General unspecified services:		
Mutual assistance		30
Social or economic assistance		100
Other services		40
5. Land purchase, legalization of land holdings, and protection of land holdings		90
6. Urban accommodation		90
7. No services		150
8. No reply: don't know		<u>30</u>
	<b>TOTAL</b>	<b><u>750</u></b>

When asked whether they were satisfied with the services provided by their organization, the farmers replied as follows:

Yes	430
No	120
No answer	<u>200</u>
Total	<u>750</u>

The question of the extent to which settlers left their co-operative organizations was also looked into. It was found that relatively few did so, since only 5 per cent of the farmers indicated that they had withdrawn from a cooperative. On the other hand, it is perhaps worth noting that some 20 per cent replied that cooperatives did not offer any useful service.

Many of the farmers making up the rank and file of cooperative membership seemed to feel that the most important problems

facing the system can be resumed under the following headings: Lack of competence by the bureaus; the presence of a number of negative elements in the organization; lack of training in the philosophy and fundamentals of cooperation for every member of the movement; lack of organization in general, meaning that there is a shortage of staff able to run co-operatives efficiently and instill the feelings that would drive the movement forward to greater heights.

## 2. TECHNICAL AND ADMINISTRATIVE FEATURES

### 1. Handling of Requests

One of the administrative features causing a comparatively large number of unfavorable comments on the loan service of the BNF is the apparent slowness with which requests are handled. This is of course a general problem encountered by the BNF in connection with the land settlement credit program, but it is also an administrative problem.

An analysis of the time for which customers have to wait for loan requests to be handled showed that the average delay was some two months, which may be considered unduly long for an ordinary banking activity, but which may perhaps not be unreasonable when a considerable number of factors have to be taken into account, a farm has to be thoroughly inspected, and plans have to be drawn up for different types of agricultural activity.

In addition to these factors, there are basically three others that lead to delays in handling loan requests. These are:

- (a) During the past two years, lack of funds has made it necessary to cut back the loan service, not directly by reducing operations but by delaying the processing of a request, if necessary with the knowledge of those concerned, until outstanding funds have been collected or new credits have been made available with which to complete the loan transaction;
- (b) There is a lack of supervisory staff compared with the increase in the number of demands for credit. This shortage is particularly noticeable because the same staff have also to deal with the work of the Banking Division. Six supervisors have in fact issued 1,850 training loans; and
- (c) The participants themselves often do things that cause delays in handling their request, such as providing incomplete information, a wrong address, and so forth.

## 2. Loan Conditions

Persons applying for training credits are often not only short of funds but also suffer from a low level of education. For this reason one of the first things that has to be done is to ensure that the potential borrower understands the principles on which the operation is based and the terms on which the loan will be made available. In particular, he has to be made clearly aware of the need to comply with the plan for running the farm, as well as the terms covering the duration, rate of interest, grace period, and amortization payments of the loan, among other things.

The survey inquired whether borrowers had understood the terms on which loans were made available; 153 out of 154 replied that they had done so. If they really did, this would mean that 99.3 per cent of the participants were sufficiently aware of the conditions imposed on them by the Program.

## 3. Loan Supervision

In a Training Credit Program, one of the most important features, indeed the feature on which the success or the failure of the program depends, is supervision in the broad sense of the term, meaning a whole range of technical and administrative activities running the gamut from program promotion to collection of the loan, and including control and supervision of the investment as a form of technical assistance designed to guide the farmer in developing the productivity of his undertaking.

In planning the review of the program, it seemed useful to try to quantify the fieldwork of the supervisors, and to break it down into functions like those mentioned above. In practice it proved impossible to obtain the information, not only because the borrowers were unable to distinguish between one type of visit and another, but also because--except for the first, which dealt almost entirely with planning--the visits covered both control and supervision.

In any event, the review brought to light the results described below, which must be considered as indicative of the effect of supervision on the program as a whole.

Each participant in the program has received on average some four inspection or supervisory visits, a number that could be considered satisfactory if it applied to a single year. However, in practice most participants in the program have been with it for more than a year. In these circumstances, the

average of four visits seems rather inadequate, the low number is to be explained by the fact that each supervisor handles on average 308 families.

The table below gives a clear indication of the working of the program in this vital field.

FREQUENCY OF SUPERVISORY VISITS

<u>Number of Visits Received</u>	<u>Numbers visited: Total Questioned</u>	<u>Percentage of Total</u>
0	20	1.1
1	10	0.5
2	360	19.4
3	470	25.4
4	270	14.6
5	230	12.4
6	120	6.4
7	20	1.1
8	10	0.5
9	-	-
10	20	1.1
More than 10	50	2.9
	<hr/>	<hr/>
Sub-Total	1,580	85.4
No information	270	14.6
	<hr/>	<hr/>
TOTAL	<u>1,850</u>	<u>100.0</u>

4. Visits by Clients to the Bank

An examination of the frequency with which clients visited the Bank and the reasons for which they did so can throw light on a number of features of the program. The review showed that on average participants visited the Bank 15 times a year for the reasons set out below:

1. Steps to speed up handling of the request	4 times
2. To receive or pay in money	3 "
3. To consult the supervisor	2 "
4. To request an extension of credit,	2 "
5. To seek technical assistance (veterinary)	2 "
6. Other reasons (to seek postponement of a payment date, renewal of loans, friendly visit, etc.)	2 "
Average Number of Visits to the Bank	<u>15</u> "

This large number of visits to the Bank creates a variety of problems which can be summarized as under:

- (a) Credit becomes more expensive for the Bank's clients because they are obliged to pay for transport to Santo Domingo and their stay there, even though they do not make the journey simply for the purpose visiting the Bank, but combine the visit with other activities;
- (b) The farm has to be left untended by the head of family, generally for the whole day, thus entailing some risk and certainly a loss of work, together with the need to pay someone in his place;
- (c) Inconvenience to borrowers, who are thus led to form an unfavorable opinion of the program; and
- (d) Administrative bottlenecks arising from the need to receive the same persons so many times. This leads to loss of time for the Bank's officers and increases the administrative costs.

#### 5. Veterinary Technical Assistance

The review showed that only 340 participants in the program, or 18.3 per cent of the total, had been visited by the veterinary officer working in collaboration with the Bank. The general opinion of the participants was that the veterinary officer's visit was useful, yet only 50 of them considered it desirable. Most of the 340 participants received a single visit from the officer; however, a considerable proportion received more than one, so that the service can be considered to have been valuable.

In any event, the figures show how inadequate the veterinary facilities are for a program that is heavily weighted in favor of livestock. Looked at in another way, the single veterinary

officer was unable to visit 81.7 per cent of the participants, with a consequent risk of illness and disease afflicting the cattle, which are after all being raised in a humid and tropical area.

The effects of this lack of veterinary service will become clearer in the section of the report discussing the farmers' main aims.

6. Technical Assistance by the National Agricultural and Livestock Extension Service

The review indicated that 350 participants in the program had been visited by an extension officer of the Ministry of Production. In several cases families had received more than one visit, and there were two cases where families had received 10 and 12 visits respectively, perhaps on farms where experimental work was being carried out.

The figures mean that only 18.9 per cent of the participants in the program benefitted from this Government service, and that most of the farmers were beyond its reach. There were even some participants who were ignorant of the meaning of an agricultural or livestock extension service.

In seven cases in the sample, representing 20 per cent of the borrowers, it was found that visits had been received both from the BNF and from the Agricultural and Livestock Extension Services. This overlapping undoubtedly means a duplication of effort, an increase in the cost of the services rendered and less efficiency from the standpoint of the participants in the program. It is due to a lack of that institutional coordination which the Bank has tried to bring about on various occasions.

In any event, it is clear that 62.2 per cent of the participants in the program failed to receive even the limited technical assistance offered by the two agencies together.

This state of affairs was confirmed when the question of whether the farmers wished to receive technical assistance was put to them. 64.2 per cent of the replies were affirmative. The next question was in what fields did the farmers in the area of Santo Domingo de los Colorados wish to have technical assistance. The answers are tabulated below:

FIELDS IN WHICH THERE IS A DEMAND FOR  
TECHNICAL ASSISTANCE

<u>Type of Farm</u>	<u>No. Replying: Total Questioned</u>	<u>Per cent of Total</u>
1. Cattle, including the establishment and management of pastures	1,030	55.6
2. Pig breeding	30	1.6
3. Fowl raising	30	1.6
4. Animal husbandry in general	100	5.4
5. Agricultural crops in general	230	12.4
6. Specific crops		
Coffee	30	1.6
Cocoa	30	1.6
Fruit	20	1.1
Corn	10	0.5
Fibers (abaca - hemp)	30	1.6
7. Agricultural machinery	10	0.5
8. Did not wish for technical assistance	<u>100</u>	<u>5.4</u>
Sub-Total	1,650	88.9
No Answer	<u>200</u>	<u>11.1</u>
TOTAL	<u>1,850</u>	<u>100.0</u>

7. Loan Supervisory Service

The farmers considered the supervisors' visits to be of major importance for the successful operation of their farms. In all, 143 farmers gave affirmative answers to the question of whether they wished for such visits, 82 of them giving their reasons. Only eight replied that they did not wish for such visits, and 34 did not reply.

The most representative of the answers of those who considered the visits useful--and thus strengthen the program by expressing confidence in the Bank--are set out below:

"The supervisors' visits are very useful because they enable the inspectors to see how well the farmer is working, examine the state of the livestock, and assess the increase that has taken place in the value of the farm;

The supervisors' visits make the farmer feel confident in the value of his work;

The supervisory visits are necessary as a way of guiding and controlling the proper use of the loans. The inspectors can make sure that the funds have been properly invested and help to see that the farmer carries out the operation plan;

The visits are necessary to assist the farmer in overcoming stockbreeding problems;

The visits are useful because the settler needs guidance and because the supervisor can explain to the settler what has to be done to act in accordance with the plan;

The supervisors provide technical guidance and help to improve the farmer's knowledge;

The visits are useful because they provide suggestions for improving the running of the farm, offer advice on a number of working problems, and ensure that the payment dates are recorded;

The visits are useful because the supervisor acquires direct knowledge of the farmer's needs;

They are useful because they provide an outside opinion on the farmer's work and give him an idea of how well he is progressing;

I hope that the inspectors will visit me frequently to see the progress that I am making."

On the other side of the picture, among the eight who found the visits of little value, there were none who criticised the service. On the contrary, what they were complaining about was that the visits were not regular enough. Nevertheless, there were some participants who considered that the supervision was ineffectual. The comments are set out below:

"The supervisors have not provided technical information, but have only inspected the work;

It would be good if the supervisors could really provide supervision;

Such visits are useful, but they have not achieved much on my farm;

They are useful, but I would prefer the visits to take a different form;

Yes, they are useful, but there have not been any;

Yes, they are useful, but only if they provide real supervision;

I would like them to see what I have done;

Supervision isn't necessary, and the visits aren't useful."

While on balance there is ample support for the work carried out by the supervisors, the minority view--especially if it is expressed frankly and clearly--deserves careful consideration in an attempt to overcome the limitations that certainly exist.

#### 8. Delays in Repayment of Loans

Past experience with supervised credit indicated that this program ought to have experienced a relatively low proportion of late repayments, amounting to between 5 per cent and 8 per cent of the total. It was therefore envisaged that, once the program reached maturity and the grace period was ended, repayments would occur at such a rate as to make the program self-financing. The actual situation has been considerably different for a number of reasons, some of which were justified.

There has in fact been a rather high delinquency rate: 27.5 per cent of the people in the sample failed to make repayments on the due date, meaning that 510 loans out of a total of 1,850 reviewed were being repaid behind schedule. In addition, the accounting services of the Branch showed that at the end of 1969 overdue loans amounted to 8 per cent of the total.

In defence of the suitability and rectitude of the borrowers, an analysis of the causes of late payments shows that many of them were due to circumstances beyond the control of the borrower, as may be seen from the table set out below:

CAUSES OF LATE REPAYMENTS OF LOANS

<u>Causes of Delay</u>	<u>No. Replying: Total Questioned</u>	<u>Percentage of Total</u>
1. Domestic disasters and family difficulties (sickness, death, etc.)	130	7.0
2. Low price for livestock and lack of means for reaching the market	120	6.5
3. Death, disease, and theft of cattle	70	3.7
4. Lack of markets and low output of agricultural produce (crops)	40	2.1
5. Credit sales of produce, including livestock, on which it has proved impossible to collect	30	1.6
6. Building a dwelling and/or purchasing other property	30	1.6
7. Forgetfulness	20	1.0
8. Other causes (short time in which to pay first installment, loss of money, shortage of funds for other products, change in investment plan, etc.)	<u>70</u>	<u>3.7</u>
Sub-Total	510	27.2
No reply and/or payments up to date	<u>1,340</u>	<u>72.8</u>
TOTAL	<u>1,850</u>	<u>100.0</u>

Despite the existence of a situation that may be considered unsatisfactory for this type of program, the people's desire to meet their obligations as soon as they escape from the difficulties causing them to become delinquent is overwhelmingly strong. Out of 133 farmers who replied to the question "will the loan be repaid on time?", 117 or 87.9 per cent replied "yes." 7.4 per cent said that they would be unable to meet the deadline, and 4.3 per cent said that they were uncertain of their capacity to pay.

An investigation of the resources used by the borrowers to meet their payments when due showed the extent to which the farmers will go to keep their livestock and do everything in their power to ensure that it remains in good condition. For it would seem

natural that in a program where 90 per cent of the available funds have been used to finance the expansion of stockbreeding, cattle would be the main source on which to draw for repayment. In practice, the farmers hold on to their cattle, which they consider their most valuable asset, and try to make their repayments with funds derived from other products, usually the fruit of their own efforts, thus enabling them to increase the wealth originally founded on credit. This desire on the part of the farmers in the area of Santo Domingo de los Colorados can be seen from the following table:

FUNDS USED FOR MAKING REPAYMENTS

<u>Sources of Funds</u>	<u>No. Replying:</u>	<u>Percentage</u>
	<u>Total Questioned</u>	<u>of Total</u>
1. Sales of a single product (1)	580	31.2
2. Sales of agricultural produce	80	4.2
3. Sales of both agricultural produce and cattle	470	25.3
4. Other sources of funds	<u>40</u>	<u>2.0</u>
Sub-Total	1,170	62.7
No reply	<u>680</u>	<u>37.3</u>
TOTAL	<u>1,850</u>	<u>100.0</u>

(1) Agriculture or livestock

On December 31, 1969, late payments could be tabulated as under:

		% of
Total payments overdue	2,983,622.81 sucres	total 8.03
Less than 60 days late	538,074.17	1.04
60 to 180 days late	714,925.17	1.95
More than 180 days late	1,680,632.47	4.61

9. Financing New Loans

The confidence of the farmers in the program, which is reflected in their strong position as businessmen, took the form of a positive answer to the question "do you wish to receive more credit?". 76.4 per cent of the replies were affirmative, indicating that the potential demand for credit by around 1,070 of the farmers already in the program could amount to about 40 million sucres.

To this amount, which might be called the internal demand of people already committed to the program, there should be added the amount requested by farmers daily seeking to have their

demand for credit processed as soon as they obtain the papers attesting their ownership of a farm.

A rough calculation of the amount that would be needed to meet the demands of the present and of the immediate future in this program alone would be 80 million sucres.

The people are already experienced in stockbreeding and the review of the probable use to which new funds would be put confirmed the strong pull in that direction. The views of the settlers on the subject are set out in the table below:

PROBABLE USE OF NEW FUNDS

<u>Type of Investment</u>	<u>No. Replying: Total Questioned</u>	<u>Percentage of Total</u>
1. Stockbreeding	910	82.0
2. Mixed livestock	30	2.7
3. Other investment in cattle	80	7.2
4. Other investments	90	8.1
TOTAL	<u>1,110</u>	<u>100.0</u>

10. Attitude toward the Bank Staff

The attitude of the participants toward the Bank staff was obtained by asking the following questions: "Are they friendly to customers?" "Have they shown professional ability?" "Are they cooperative and understanding with the customer?" And "Are they aware of the conditions in which the customers work and live?" The first three questions referred to the administrative staff as well as others.

The majority of participants gave affirmative answers, indicating that the staff working in the Branch were suitable for the job and that the borrowers had confidence in the Bank as represented by its officers.

ATTITUDE TOWARD BANK STAFF

<u>Questions on Staff Members</u>	<u>Administrative</u>		<u>Supervisors</u>	
	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
1. Are they friendly to the customers?	1,460	80	1,530	10
2. Have they shown professional ability?	1,530	10	1,510	30
3. Are they cooperative and understanding with the customer?	1,480	60	1,540	0
4. Are they aware of the conditions in which the customers work and live?	-	-	1,520	20

11. Benefits of the Program

The participants in the program were asked to express their views on the benefits that they had received during the program period. An analysis of the replies showed that the program had provided very great benefits for the farmers, particularly because of the changes that it had brought about in the economic circumstances of their families, with the resulting social improvements. These views are borne out by the economic data discussed at some length in Part One of this report. The comments of 174 settlers who replied to the question are tabulated as under:

BENEFITS RECEIVED BY SETTLERS DURING THE PROGRAM PERIOD

<u>Views of Settlers</u>	<u>Percentage of Total</u>
1. Duration of loan suited to the type of investment and payment possibilities	36.8
2. Low rate of interest and loans granted without first discounting the interest	17.2
3. Has encouraged the expansion of stockbreeding by providing a considerable volume of credit	14.9
4. Has provided effective assistance to small farmers without funds and has shown an interest in helping borrowers to improve their status	14.4
5. Has given small farmers confidence in their ability to organize their own independent undertaking and has financed the whole of the investment by providing direct credit	6.3
6. Has assisted in raising the capital value of the farms by means of well-planned investment made available at the right time and backed by the animals themselves	5.7
7. Has provided considerable assistance in processing loans and has required no additional guarantee	4.7
	<u>4.7</u>
TOTAL REPLIES	<u>100.0</u>

12. Less Favorable Aspects of the Program and Difficulties Encountered during the Program Period

It was thought desirable to find out which features of the program the participants considered undesirable or even counter-productive, so that changes could be made when their attitude proved to be justified. Their comments have all been

recorded, although some of them are exaggerated. The main opinions are tabulated in summary form below:

UNSATISFACTORY OR UNDESIRABLE FEATURES  
OF THE PROGRAM

<u>Expression of Disapproval</u>	<u>Percentage of Total</u>
1. The procedures are cumbersome, requiring a great deal of paper work. The authorities demand quantities of information, and the cost of travelling to negotiate the loan is high.	16.2
2. Interest has to be paid every six months regardless of whether the farmer is making money or not.	9.1
3. Inspectors are slow to make the first visit. There is inadequate supervision and a lack of technical assistance.	8.1
4. The Bank staff shows a lack of patience in dealing with the participants and is slow to attend to them when they visit the Bank. Too much complaint is made when participants are late with payments.	7.1
5. Other administrative difficulties: the loan is disbursed in installments. Assets may not be alienated. Guarantees must be provided. Loans only for short periods. Interest rates are high.	9.1
6. Everything to do with the arrangements is unsatisfactory. They have provided no benefit whatsoever.	4.0
7. Matters outside the control of the Program: (lack of communications, speculation in the price of livestock, etc.)	4.0
8. There are no unsatisfactory features. No comments	<u>42.0</u>
TOTAL REPLIES	<u><u>100.0</u></u>

Some farmers also made other comments on the operation of the program, and these may be summarized as follows:

The program is good and is meeting the objectives of helping small farmers who are short of funds but wish to work. A large proportion of the farmers assisted by the program have made economic gains;

The Bank should have access to larger funds with which to finance both agriculture and stock breeding. Preference should be given to loans for steers for fattening, as they represent a secure investment with short-term returns;

The Bank should provide appropriate technical assistance and have at least two full-time veterinary officers on its staff. Consultations with veterinary officers at the office of the Bank are not very satisfactory. There should be an information service providing data on farms where good stud bulls can be acquired. There should be proper technical supervision and a distribution of documents giving advice on the techniques of livestock management as well as on agricultural topics;

Some attempt ought to be made to overcome the difficulties encountered by the farmers in paying interest every six months;

The Bank ought to find a way of participating in the marketing of the products by the borrowers, perhaps opening sales points for the purpose.

13. Finally, the participants were asked for their views on what the Bank should do to provide better service to its clients. As some of the participants offered two or more suggestions, we have indicated the number of times that suggestions were made, in order to give an idea of the importance to be attached to them. The suggestions are tabulated below:

SUGGESTIONS AS TO WHAT THE BANK SHOULD DO TO IMPROVE  
ITS SERVICE

	<u>No. of Participants Making the Suggestion</u>
1. The Bank should establish a waiting period for overdue payments before taking any legal action. If this is impossible, it should at least make it possible to roll over the payments.	14
2. Loans should be processed more rapidly and the arrangements should be less cumbersome; frequent visits to the Bank should be avoided. Less information should be required from farmers already known to the Bank and the loans should be granted more promptly.	18
3. The amount of credit for a given operation should be increased. Credit should be made available more easily for new crops.	22
4. An information section should be attached to the Bank's offices in order to guide clients in their operations, and the number of staff responsible for the Bank's internal processes should be increased.	7
5. Reduce the rate of interest and/or do not charge interest.	8
6. Extend the period for repayment of loans.	20
7. Make periodical visits to the farmers specifically for supervisory purposes. Get to know the farmers' difficulties and conditions of work in more detail. Improve the supervisory service.	20
8. Include the payment of interest in the grace period.	1
9. Open more Bank agencies (El Carmen, Puerto Limon).	4
10. Grant loans for buying farms and/or help in selling farms.	3
11. Participate in seeking outlets for the farmers' products.	1
12. Set up a Technical Advice Department. Provide full time technical assistance, especially in the veterinary service. Organize a regular schedule of visits by veterinary officers to the farms.	46

13. Let the Bank be responsible for selecting and purchasing livestock and vaccinating it before turning it over to the borrowers. Keep a register of farms that buy and sell cattle. Let the Bank run a store for selling veterinary pharmaceuticals. 4
14. Help in road building. 1
15. Are satisfied with the way in which the Bank now operates. 10
16. Have no opinion. Do not wish to take part because of having had difficulties with the Bank, especially on the legal side. 10

14. Loans that have cause difficulties and/or loans that ought to be written off

In the sample chosen for review there were 21 cases in which, according to the normal standard for supervised credit, the loans would have become problem cases, or have been written off as failing to meet the social or economic targets of the program.

While it is true that 33 per cent of the persons involved in the cases have repaid their loans, the whole purpose of the program has nevertheless been subverted. For instance, there are cases in which farms have been sold to persons living in Quito or outside the area, thus giving rise to a return to the absentee landlord system, something that is entirely contrary to the intention of the land settlement scheme in the Santo Domingo area.

The incidence of these problem cases is tabulated below:

LOANS GIVING RISE TO DIFFICULTIES AND/OR LOANS THAT OUGHT TO BE WRITTEN OFF FOR THE PURPOSES OF THE PROGRAM.

Type of Difficulty	No. Replying: Total Causing Difficulties	Percentage of Total
1. Farm sold	60	3.2
2. Farm abandoned	70	3.8
3. Loan taken over by others, and absenteeism	20	1.1
4. Death of the borrower	10	0.5
5. The borrower lost everything financed with the loan	10	0.5
6. Impossible to obtain details	40	2.2
TOTAL	<u>210</u>	<u>11.3</u>

In this way, it has been shown that, with a comparatively small investment of some 10 million sucres per year and over the fairly short period of five years, the training credit has been a useful tool for improving the social and economic circumstances of 1,850 settler families, of whom the majority are enjoying better living conditions and contributing in a positive fashion to the economic development of the area.

There have been some errors, and some people have expressed dissatisfaction with the program, but the review has brought these difficulties to the surface so that improvements can be made and efforts undertaken to provide better service, which is one of the permanent endeavors of the Bank.

The work around Santo Domingo has given the BNF the experience with which to prepare new programs with greater confidence, for the benefit of other agricultural areas throughout the country.

REVIEW OF LAND SETTLEMENT CREDIT PROGRAM FOR  
THE SANTO DOMINGO DE LOS COLORADOS AREA

Summary of Financial Position of Agricultural Undertakings  
(In Money Terms Only)

<u>Income and Expenditure</u>	<u>Planned</u>	<u>Actual</u>	<u>In Sucres</u>	
			<u>Excess of Actual over Planned Value</u>	<u>Per cent</u>
1. Income from live-stock & Agriculture	25,474,510	40,993,960	15,519,450	60.9
2. Other farm income	1,721,600	4,187,450	2,465,850	143.2
3. Total farm income (1 + 2)	27,196,110	45,181,410	17,985,300	66.1
4. Total operating costs	8,610,320	19,610,350	11,000,030	127.8
5. Net farm income (3 - 4)	18,585,790	25,571,060	6,985,270	37.6
6. Non-Farm Income	1,363,000	9,358,500	7,995,500	586.6
7. Family Maintenance	9,686,300	17,235,200	7,366,900	74.6
8. Net Available Income (5+6-7) Surplus (+) or Deficit (-) for the operation as a whole	10,080,490	17,694,360	7,613,870	75.5

Source: Survey by Santo Domingo Bank  
Tabulation: Training Credit Department

## 15. NEW BNF PROGRAMS

1. During the past few years, the BNF has been compelled to organize its own agricultural training credit programs despite its comparative lack of resources. The decision to do so was brought about in the first instance by pressure from the rural areas that wished to have assistance from the Bank; second, by the successful outcome of the Santo Domingo Program, which convinced the Bank authorities that programs combining the provision of funds with technical assistance are the most satisfactory arrangement for encouraging the development of the small and medium-sized undertakings that are the majority in the country as a whole; and, third, the Bank is obliged to undertake such programs in order to fulfill the provisions of its charter.

The first program that the Bank tackled on its own account was one intended to encourage tea growing in the eastern part of El Puyo, where there are already over 400 hectares of plantations. It is hoped to raise the figure to 600 hectares with an investment of about 15 million sucres.

The prospects are very favorable as the farmers have received continuing technical assistance and supervision and have an assured market for a minimum of ten years with guaranteed minimum prices and future adjustments in accordance with the price of the final product of the world market. This is the first example of a program linking the industrial sector, which is interested in having a stable source of supply, with the agricultural sector consisting of small farmers cultivating between 3 hectares and 10 hectares of tea.

At the end of 1970, the BNF took part in an operation to prevent a crisis from developing in Esmeraldas province by offering an agricultural training credit program involving an initial investment of 2 million sucres. In view of the situation at the time, the technical survey preceding the selection of areas--previously recommended--was not carried out, and work in the four cantons involved was devoted only to selecting participants.

To take advantage of the possibilities of irrigation in the Rio Portoviejo Valley opened up by the Poza Honda Dam, the BNF has started an agricultural training credit program supported on the technical assistance side by officers from the Ministry of Production under an agreement with that Ministry.

These examples show that:

1. The BNF conceives of the agricultural credit training program as a very flexible device. It can organize programs to fit many different circumstances provided that they offer direct benefits to small farmers;
2. In countries like Ecuador it is essential to lay permanent foundations, so that programs may be organized without difficulty wherever the rural communities need them; and
3. It is essential to establish development centers throughout Ecuador to provide the impetus for other sectors in the area.

2. The BNF is working on the following agricultural training credit programs for small farmers:

PNF AGRICULTURAL TRAINING CREDIT PROGRAMS

<u>Franchises</u>	Amounts in thousand sucres						<u>Program Status</u>
	<u>Program estimates for five years</u>		<u>Budget estimate for 1972</u>		<u>Loans made first half 1972</u>		
	<u>No. of Families</u>	<u>Loan</u>	<u>No. of families</u>	<u>Loan</u>	<u>No. of families</u>	<u>Loan</u>	
Tulcan )					23	474.9	In operation since July 1971
Sn. Gabriel )	660	12,000	120	2,400	24	242.8	
El Angel )					2	12.0	
Otavalo	370	6,300	50	1,000	60	995.0	Started in 1972
Quito	750	22,500	100	3,000	14	367.1	In operation since July 1971
Sto. Domingo	1,500	35,000	250	6,000	188	4,998.1	In operation since September 1964
Cavambe	500	5,000	50	1,000	-	-	Started in 1972
Latacunga	1,250	35,000	150	3,000	-	-	Started in 1972
Ambato	400	8,000	-	-			Now being worked out
Riobamba	1,500	24,000	-	-			Now being worked out
Guaranda	500	8,000	-	-			Now being worked out
Azogue	250	7,700	150	2,800			In operation since 1972
Canar	600	8,000	50	1,000			In the preliminary stages
Loja	500	10,000	50	1,000			Being worked out
Nacara	500	10,000	100	2,000			In preparation
Cuenca	500	10,000	100	2,000			Being worked out
Esmeraldas	800	12,000	100	2,000	66	1,319.9	In operation since 1970
Portoviejo	500	14,000	100	3,000			Started in 1972
Patateño )			-				Being worked out
Quevedo )	1,500	30,000	-				Being worked out
Vinces )			-				Being worked out
Guayaquil )			150	4,000	123	3,092.2	Being reorganized
Milagro )	2,000	50,000	-				Being reviewed
Daule )			-				Being worked out
Falzar )			-				Being worked out
Machala	500	12,000	-				Being worked out
Galapagos	150	2,000	50	1,000			Being worked out
Tena	800	16,000	80	1,600			In initial stages
Puyo	500	12,000	100	4,000	59	2,308.9	In operation since 1968
Limon	500	12,000	-	-			Being worked out
Macas	400	10,000	80	2,000			Started in 1972
Zamore	400	10,000	-	-			Being worked out
<b>TOTALS</b>	<b>17,830</b>	<b>382,500</b>	<b>1,830</b>	<b>42,800</b>	<b>559</b>	<b>16,810.9</b>	

#### IV. ROLE OF TECHNICAL ASSISTANCE

As part of the Alliance For Progress, it was intended to provide loans for small farmers in the form of supervised credit on a fairly large scale. Starting with four areas, namely, Milagro-Yaguachi, San Gabriel-El Angel, Chone, and Puyo, in the first year, the intention was to add five or six sub-programs each year until there was a total of 35 and a similar number of Branches. The loan to be provided by AID had been put at \$17.6 million, in addition the BNF was to provide a national contribution making a total of around 400 million sucres for the initial investment. Any repayments were to be reinvested, and borrowers were also to supply funds.

In carrying out this program, the BNF and Ecuador committed themselves to the following steps:

First, to establish a mission to carry out feasibility studies at a cost of \$30,000 on the ability of the BNF to undertake this type of program, with most of the work being carried out by Ecuadoran staff. The mission submitted a report to the effect that the program was feasible;

Second, the BNF was to set up an office devoted entirely to running the program; it thus established the Training Credit Department. Third, staff had to be trained to operate the program. The BNF organized a training course in supervised agricultural credit for 36 professionals, which was attended by veterinary officers, agronomists, BNF branch inspectors, IERAC supervisors, and extension and home improvement officers from the Ministry of Production.

Fourth, the BNF was to make a survey of the areas in which the program would be undertaken. A survey was undertaken of the first area, Milagro-Yaguachi, and the report was published in its entirety by the BNF to serve as a model for later plans.

Fifth, the BNF undertook to prepare the regulations governing the grant of agricultural training credits, and these are still in force. The various forms for processing the loans were to be designed and printed, and these too are still in use.

Sixth and last, the BNF undertook to receive the assistance of an AID expert to help get the program off the ground. This expert remained in Ecuador for two years without showing what he could do, in the first place because the program was never started, and in the second, because he made no effort to instruct anybody, at least in theoretical matters.

Although the BNF fulfilled its commitments correctly and to the utmost of its abilities, when the time came to sign the loan agreement and hand over the first installment, AID began to drag out the negotiations and procrastinate whenever it was necessary to obtain new data or documents. Then political events in the country became involved with the loan; first the United States encountered balance of payments problems, then there was the action by the President of Ecuador at Punta Del Este, and finally the expulsion of the U.S. Ambassador to Ecuador. The loan was cancelled at the moment when the first four programs ought to have come into existence in 1966.

REVIEW OF LAND SETTLEMENT CREDIT PROGRAM IN THE  
SANTO DOMINGO DE LOS COLORADOS AREA

Table 1

General Data on Program

<u>AREAS AND AMOUNTS INVOLVED</u>	<u>Area at Start Has.</u>	<u>Present Area Has.</u>	<u>Increase Actual</u>	<u>Percent</u>
(a) Land held by settlers (Area in the Program)	81,235	90,135	8,900	10.9
(b) Participants divided according to size of land holding				
Up to 30 Has.	140			
31 to 50 Has.	670			
Over 51 Has.	<u>430</u>			
Total Number Reporting	<u>1,540</u>			
		<u>Planned</u>	<u>Approved</u>	<u>Percent</u>
(c) Loans Granted		58,189,050	48,491,335	
(d) Loan Status of Program:				
1. Repayments (instalments and loans returned)			11,879,210	25.0
2. Loans outstanding (current and overdue)			36,612,125	75.0

Note: (1) The Franch statistics show that the Branch made 1,964 loans, but in preparing the sample some were excluded either because the borrowers came in the category of artisans or small industrialists, or because they were handled by the Fanning Division.

Source: Survey by Santo Domingo Branch.

Tabulation: Training Credit Department.

REVIEW OF LAND SETTLEMENTS CREDIT PROGRAM FOR THE  
SANTO DOMINGO DE LOS COLOMOS AREA

Table 2 Financial Situation of Participants

<u>Assets and Liabilities</u>	<u>Value at Start</u>	<u>Present Value</u>	<u>Increase</u>	
			<u>Actual</u>	<u>Percent</u>
<u>A. - ASSETS</u>				
1. Land and Buildings	87,818,850	181,239,930	93,421,080	106.4
2. Cattle	18,377,000	75,957,200	57,580,200	313.3
3. Pigs	3,672,150	4,459,700	787,550	21.4
4. Poultry	1,235,850	1,623,850	388,000	31.4
5. Draught Animals	3,427,500	3,688,000	260,500	7.6
6. Tools and Agricultural Equipment	892,950	2,263,850	1,370,900	153.5
7. Other assets, including domestic goods	6,183,700	30,432,500	23,948,800	389.4
TOTAL ASSETS	121,908,000	299,665,030	177,757,030	145.8
<u>B. - LIABILITIES</u>				
1. Mortgages	9,075,910	6,465,660	-2,610,250	-28.0
a) with IFRAAC	6,877,910	3,845,320	-3,032,590	-44.0
b) with HLF	2,198,000	2,620,340	422,340	19.2
2. Loans against pledges	6,246,850	35,642,970	30,396,120	477.9
3. Other liabilities	5,000	1,732,340	1,727,340	2,464.6
TOTAL LIABILITIES	11,337,760	43,839,960	29,502,100	205.0
NET ASSETS	107,570,240	255,825,070	148,254,930	137.8

Source: Survey by Santo Domingo Branch.

Prepared by: Training Credit Department.

REVIEW OF LAND SETTLEMENT CREDIT PROGRAM FOR THE  
SANTO DOMINGO DE LOS COLORADOS AREA

Livestock	Changes in Livestock Position		In Numbers and Sucres	
	At Start	Planned Acquisitions	Current Position	Percent Increase
1. Cattle				
A. Total Number	9,730	16,631	39,980	
Stud animals	370	668	1,360	
Cows	3,690	4,191	11,330	
Calves	1,830	5,612	10,970	
Bulls	1,560	2,192	8,690	
Fulllocks	2,280	3,908	7,630	
B. Value (sucres)	18,377,000	37,873,880	75,957,200	313.0
2. Pigs				
A. Number	16,870	1,683	16,900	
B. Value (sucres)	3,672,150	700,300	4,459,700	21.4
3. Poultry				
A. Number	59,770	1,120	60,110	
B. Value (sucres)	1,235,850	21,450	1,623,850	31.0
4. Draught Animals				
A. Number	3,250	270	3,650	
B. Value (sucres)	3,427,400	391,000	3,628,000	7.6
<b>TOTAL VALUE OF LIVESTOCK</b>	<b>26,712,500</b>	<b>38,989,630</b>	<b>85,728,750</b>	<b>220.9</b>
Loans granted for Livestock purchases up to December 31, 1969		<u>38,989,630</u>		

Note: There are some differences between the survey results and the Franch figures: as the Franch figures for "Planned Acquisitions" are likely to be more accurate, those shown in Annex 1 of the Franch report have been used in this column.

Source: Survey by Santo Domingo Branch.

Tabulation: Training Credit Department.

REVIEW OF LAND SETTLEMENT CREDIT PROGRAM FOR THE  
SANTO DOMINGO DE LOS COLORADOS AREA

Table 4 Land Use, Agricultural Production, and Yields

	Position at Start		Present Position		Yield	
	<u>Has.</u>	<u>Output</u>	<u>Has.</u>	<u>Output</u>	<u>At Start</u>	<u>Present</u>
Plantains, bananas, etc. (bunches)	11,000	3,697,650	10,930	3,685,500	336.0	337.0
Corn (quintals)	2,750	35,870	3,900	52,220	13.0	15.0
Rice "	1,090	9,350	870	20,960	8.5	21.0
Cacao "	940	540	1,050	1,980	0.6	1.9
Coffee "	1,010	2,350	1,560	2,830	2.3	1.8
Other crops	<u>1,000</u>	-	<u>1,280</u>	-	-	-
TOTAL AGRICULTURAL CROPS	17,790	-	19,590	-	-	-
Pastures	<u>19,040</u>	-	<u>30,880</u>	-	-	-
TOTAL AREA UNDER CULTIVATION	<u>36,830</u>	-	<u>50,480</u>	-	-	-
Total Area owned by settlers	81,235		90,135			
Proportion of land in use	45.3		56.0			

Source: Survey by Santo Domingo Branch.

Tabulation: Training Credit Department.

REVIEW OF LAND SETTLEMENT CREDIT PROGRAM FOR THE  
SANTO DOMINGO DE LOS COLORADOS AREA

Table 5                      Marketing Results: Income of Undertakings

<u>Source of Income</u>	<u>Planned Income</u>	<u>Actual Income</u>	<u>Excess of Actual over Planned Income</u>	
			<u>Amount</u>	<u>Percent</u>
1. Sale of Livestock	12,635,320	23,629,750	10,994,430	87.0
Plus: Imputed income from livestock	-	23,741,830		
a) Subsistence products	-	7,903,910		
b) Family labor	-	15,837,920		
2. Sale of agricultural produce	12,839,190	17,364,210	4,525,020	35.0
Plus: Imputed income from agriculture	-	18,427,160		
a) Subsistence products	-	6,751,780		
b) Family labor	-	11,675,380		
3. Other farm income	1,721,600	1,187,450	2,465,850	143.2
TOTAL INCOME FROM LIVESTOCK AND AGRICULTURE	27,196,110	47,373,400	17,985,300	66.1
4. Other income (non-farm)	1,363,000	9,358,500	7,995,500	586.6
TOTAL INCOME	28,559,110	56,731,900	25,980,800	90.0

Relative importance of Sources of Income (per cent)

1. Income from livestock	44.2	49.0
2. Income from agriculture	44.9	37.0
3. Other farm income	6.0	4.3
4. Non-farm income	4.9	9.7

Average gross monetary income per family (sucres)	15,437	29,481	14,044	90.9
Average gross total income (monetary and imputed) per family (sucres)	15,437	52,287	36,850	-

Note: The excess of actual income over planned income was calculated on the basis of monetary income only.

Source: Survey by Santo Domingo Branch.

Tabulation: Training Credit Department.

REVIEW OF LAND SETTLEMENT CREDIT PROGRAM FOR THE  
SANTO DOMINGO DE LOS COLORADOS AREA

Table 6 Farm Operating Costs, Family Maintenance, and Overall Balance

<u>Items of Expenditure</u>	<u>Planned Outlay</u>	<u>Actual Outlay</u>	<u>Excess of Actual over Planned</u>	
			<u>Amount</u>	<u>Percent</u>
1. Family maintenance	9,868,300	17,235,200	7,366,900	74.0
2. Wages paid to outsiders	6,050,590	11,346,100	5,295,510	87.5
3. Purchase of agricultural inputs	-	213,200	213,200	-
4. Inputs for stockbreeding	38,250	1,246,300	1,208,050	3,189.0
5. Purchase of tools	33,000	357,170	324,170	982.3
6. Minor repairs	288,450	307,000	18,550	6.4
7. Payment of Interest	966,690	3,231,630	2,264,940	234.3
8. Other expenses	1,233,340	2,858,950	1,625,610	131.9
<b>Total Operating Costs</b>	<b>18,478,620</b>	<b>36,845,050</b>	<b>18,366,930</b>	<b>99.4</b>
Plus: Imputed Costs	-	27,536,270	-	-
<b>TOTAL COSTS</b>	<b>18,478,620</b>	<b>64,381,320</b>	<b>-</b>	<b>-</b>
<u>Average Cost per Family</u>				
a) Monetary Outlay	9,900	10,916	1,028	99.4
b) Monetary Outlay plus imputed costs	9,900	31,800		
<u>Overall balance</u>				
Total Income (monetary and imputed)	28,559,110	26,771,900		
Less: Total Operating Costs (monetary and imputed)	18,478,620	64,381,320		
<b>NET INCOME</b>	<b>10,080,490</b>	<b>32,750,080</b>		
<b>TOTAL MONETARY INCOME</b>	<b>28,559,110</b>	<b>26,771,900</b>	<b>25,980,800</b>	<b>90.9</b>
Less: TOTAL MONETARY OPERATING COSTS	18,478,620	36,845,550	18,366,930	99.4
<b>NET MONETARY INCOME</b>	<b>10,080,490</b>	<b>17,691,360</b>	<b>7,613,870</b>	<b>75.5</b>

SOURCE: Survey by Santo Domingo Branch.

TABLEAU: Training Credit Department.

REVIEW OF LAND SETTLEMENT CREDIT PROGRAM FOR THE  
SANTO DOMINGO DE LOS COLORADOS AREA

<u>Investment Categories</u>	<u>Farm Investment - Capital Assets</u>		<u>In Sucres</u>	
	<u>Planned Investment</u>	<u>Actual Investment</u>	<u>Excess of Actual over Planned Volume</u>	<u>Percent</u>
1. Land Purchase (agricultural and urban)	-	14,010,000	-	-
2. Purchase of cattle	37,873,880	39,194,000	1,320,120	3.0
3. Pigs and equipment	700,300	1,296,500	596,200	85.1
4. Poultry and equipment	21,450	197,000	175,550	818.4
5. Establishment and enclosure of pastures	3,440,200	12,386,200	8,946,000	260.0
6. Permanent and semi-permanent crops	2,914,208	7,119,400	4,175,192	141.8
7. Construction of barns and sheds	402,550	990,000	587,450	146.9
8. Home construction or improvement	744,000	19,257,000	18,513,000	2,488.3
9. Other investment in durables including domestic items	<u>129,222</u>	<u>3,136,000</u>	<u>2,706,778</u>	<u>630.6</u>
TOTAL INVESTMENT	<u>46,555,810</u>	<u>97,586,100</u>	<u>37,030,290</u>	<u>109.6</u>

Note: There are differences between the survey results and the Branch figures. As the statistics for the "Planned Investment" column of Annex 1 of the Branch statistics are probably more accurate, they have been used in this table.

Source: Survey by Santo Domingo Branch.

Tabulation: Training Credit Department.



REVIEW OF LAND SETTLEMENT CREDIT PROGRAM FOR THE SANTO DOMINGO DE LOS COLORADOS AREA

Table 9

Status of Participants

A. Divided by length of Participation

	1964-65		1966		1967		1968		1969		Total	
	At Start	Present	At Start	Present	At Start	Present	At Start	Present	At Start	Present	At Start	Present
Loans approved (thou.sucres)	9,417	-	1,978	-	13,060	-	7,026	-	4,729	-	38,210	-
TOTAL ASSETS (thou.sucres)	35,004	93,400	7,510	19,850	30,980	76,130	26,530	54,870	18,333	34,800	118,390	279,050
Cattle (numbers)	2,690	12,290	620	1,950	2,970	12,380	1,630	7,550	1,940	4,640	9,850	38,810
Area under cultivation (Has.)	10,150	16,240	2,260	3,640	10,340	13,630	7,600	10,720	4,860	5,710	35,210	49,940
TOTAL INCOME (thou.sucres)		<u>19,008</u>		<u>3,346</u>		<u>15,197</u>		<u>11,720</u>		<u>5,798</u>		<u>55,170</u>
a) Income from livestock		9,594		1,971		9,471		6,319		2,119		31,034
b) Income from agriculture		9,414		1,475		5,726		5,401		5,798		24,136
Rate of Increase (per cent) of:												
Total assets		166.8		164.3		145.7		106.8		89.8		135.7
Number of cattle		356.9		214.5		316.8		363.6		139.2		294.0
Area under cultivation		60.0		61.0		31.8		41.0		17.5		41.8

B. Divided by Size of Undertaking

	Up to 30 Has.		31 to 50 Has.		51 Has. and larger		TOTAL	
	At Start	Present	At Start	Present	At Start	Present	At Start	Present
Loans approved (thou.sucres)	9,400	-	15,827	-	12,983	-	38,210	-
TOTAL ASSETS (thou.sucres)	22,920	67,800	50,240	107,010	45,230	104,240	118,390	279,050
Cattle (numbers)	2,060	7,810	3,760	15,710	4,030	15,290	9,850	38,810
Area under cultivation (Has.)	6,810	10,240	13,810	20,710	14,590	18,990	35,210	49,940
TOTAL INCOME (thou.sucres)		<u>11,584</u>		<u>24,157</u>		<u>19,429</u>		<u>55,170</u>
a) Income from livestock		7,503		11,103		9,429		31,034
b) Income from agriculture		4,081		10,054		10,000		24,136
Rate of Increase (per cent) of:								
Total assets		195.8		113.0		130.5		135.7
Number of cattle		279.1		317.8		279.4		294.0
Area under cultivation		50.3		49.9		30.1		41.8

NOTE: The figures in this table refer only to the cases (154) for which complete information was available.

SOURCE: Survey by Santo Domingo Branch.

TABULATION: Training Credit Department

COUNTRY PROGRAM

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- MINISTRY OF PRODUCTION/CENTRAL BANK TRUST FUND -

FARM DEVELOPMENT PROGRAMS IN ECUADOR

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Compiled by:  
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Trust Fund  
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Quito, Ecuador  
December, 1972

COUNTRY PROGRAM PAPER

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## I. INTRODUCTION

The major position of the Agriculture and Livestock Sector in the economy of Ecuador is manifest: it provides some 34 per cent of the gross domestic product; it provides employment for more than 50 per cent of the labor force; and its products bring in 80 per cent of the country's export earnings. Nevertheless, the production and marketing conditions are such that agriculture is the most backward sector and the least productive in the country.

In a recent study, the economist Gonzalo Guzman<sup>1/</sup> has undertaken a detailed analysis of the special features of agriculture in Ecuador and the structural characteristics that have led to its backwardness. He has also provided interesting data regarding the contribution of the National Banking System to the financing of agricultural credit.

The figures in Mr. Guzman's study show that during the years 1966-1970 the National Banking System devoted somewhat more than one billion sucres to financing the agricultural sector compared with total credits of 11 billion sucres; in other words, agriculture received rather less than 15 per cent of the total.

The Central Bank provided 23 per cent of total credit in 1970, while the National Development Bank (BNF) provided 6 per cent, and the commercial banks 71 per cent.

An analysis of the average amounts loaned and the terms on which the loans were granted shows that, whether considered from the standpoint of the number of operations or of the volume of transactions, credit was basically used for financing short-term investments of up to one year.

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<sup>1/</sup> Guzman, Gonzalo: The Financing of Agricultural Undertakings by Means of a Development Program, Quito 1972

Only the BNF has any arrangements for medium or long-term financing.

With respect to the size of the loans, it should be noted that most of them are in the range below 25,000 sucres.<sup>2/</sup>

Some 80 per cent of all the credit operations carried out by the BNF come within the range below 50,000 sucres. Although it may be some evidence of the democratization of credit, this comparatively low ceiling is clearly a restraint on the provision of capital for undertakings.

In brief, it will be clear that the distribution of credit through the banking system, whether considered on the basis of the relation to total credit or on the basis of the periods for which credit is granted, is not working in the right direction, since the Agricultural Sector--which certainly needs credit more than any other--receives somewhat less than 14 per cent of the total credit granted by the system. The result is that it is impossible for agricultural undertakings to obtain sufficient capital or to reach normal levels of productivity if they need medium or long-term investment or a relatively large volume of investment per unit of product.

#### THE SMALL FARMER PROBLEM

According to the figures in the National Agricultural Census of 1968, 91 per cent of all agricultural undertakings operate on an area of not more than 20 hectares; between them they occupy less than 30 per cent of the total area of the Sierra. Gonzalo Guzman has indicated that 75 per cent of the undertakings are owned and that the other 25 per cent are run on some form of tenancy covering 1,201,092 hectares. It is these that are largely responsible for the backwardness of the Agricultural Sector.

There are some 152,700 small farmers, most of whom find it very difficult to take advantage of the existing technical assistance and credit services. Before granting credit the commercial banks usually require submission of satisfactory guarantees and an undertaking by the farmer to finance a given

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<sup>2/</sup> Exchange rate: US\$1 = 25.25 sucres

proportion of this project with his own funds. These requirements have led to the permanent dependence of the small farmer on the lender, discounter, or intermediary.

Through its special credit programs, such as its property improvement credits, the BNF has become the main institution providing credit for small farmers. This it does through rural administration and social betterment schemes that offer technical assistance either directly or through development agencies. Other public and private institutions also take part in these arrangements on a small scale. Among them may be mentioned IERAC, the Andean Mission, CESA, and FED.

According to the BNF report for 1970, the Land Settlement Credit Program made 309 loans with a value of 5,940,000 sucres during 1970. For the whole period September 1964 to December 1970, 2,273 loans amounting to 54,432,000 sucres were made under the scheme.

Although he lives by agriculture, the small farmer who does not own his land finds himself constrained within a vicious circle: he has no collateral to offer in order to obtain credit, and the lack of credit prevents him from raising his agricultural output and thus raising the funds with which to acquire the property he works on. Moreover, no single banking institution will grant loans for land purchase.

#### FARM DEVELOPMENT PROGRAM

The intention of the Farm Development Program is to set in motion the modernization of the agricultural sector by putting managerial services at the disposal of small farmers, thus enabling them to acquire land, obtain production credits, and apply for technical and administrative assistance.

A tripartite agreement between the Ministry of Production, the Central Bank of Ecuador, and USAID (Ecuador) led to the establishment of the Farm Development Program and a Guarantee and Development Fund has been set up to provide agricultural undertakings with assets. The initial financing of the Fund was made possible by AID Loan No. 518-L-032, amounting to U.S.\$3.6 million (90 million sucres) from the United States to the Government of Ecuador through the Ministry of Production.

The Central Bank acts as the Government's trustee and fiscal agent. It does not deal directly with the final users of the Fund but through Government institutions and private organizations wishing to participate and prepared to sign the appropriate subsidiary loan agreements.

The Trust Fund Office which is the real basis of the Program deserves the attention of the monetary authorities of the country, as it implies that the Central Bank will play a new role in working out credit and monetary policy for the development of the productive sectors of the economy; for the first time it will be the channel for handling both internal and external funds and it will have the responsibility for encouraging both public and private banks and other financial institutions to take a more active part in providing funds for agricultural credit.

## II. DESCRIPTION OF THE PROGRAM

### A. Background

#### 1. Historical Summary

On November 23, 1970, the Republic of Ecuador acting through the Ministry of Production, the Central Bank of Ecuador, and A.I.D. signed loan agreement No. 518-L-032 in an amount of U.S.\$3.6 million to be devoted to financing the Farm Development Program.

Under Regulation No. 573, dated December 28, 1970, the Monetary Board of Ecuador set up the Trust Fund Office within the Central Bank of Ecuador.

On May 20, 1971, the Government of Ecuador and the Central Bank of Ecuador signed an agreement by which the Republic of Ecuador as co-signer irrevocably authorized the Central Bank as trustee to manage the funds arising from loan No. 518-L-032 in accordance with the terms set out in the loan agreement.

On September 24, 1971, the first subsidiary loan agreement was signed between the Central Bank of Ecuador and the First National City Bank. So far, the Central Bank of Ecuador has signed subsidiary loan agreements with the BNF, the Cooperative Bank of Ecuador, the Bank of the Pacific, and First National City Bank.

On June 22, 1972, the Technical Executive Committee of the Program approved the first loan in favor of the BNF in an amount of 5 million sucres, to be used for financing loans to agricultural undertakings approved by the Program in the six-month period July to December 1972.

On the same date, the Technical Executive Committee approved the first two operation and investment plans, prepared by the Program for the Pedro Carbo and San Felipe cooperatives in amounts of 1,443,735 sucres and 3,131,446 sucres respectively.

At its meeting of July 14, 1972, the Technical Executive Committee approved the opening of credits in favor of the Cooperative Bank of Ecuador and the Bank of Pacific in an amount of 5 million sucres each.

The Instructions for the procedure for granting sub-loans to agricultural undertakings and the repayment by those undertakings to the participating financial institutions were also approved, although A.I.D. has not yet ratified them. The Instructions set out very clearly the procedures to be followed in preparing an operations and investment plan, and getting it approved, as well as those for making the sub-loan to the beneficiary agricultural undertaking, and, finally, the repayment by the trustee to the participating financial institutions.

So far, requests for sub-loans have been received by branches of the BNF, the Cooperative Bank of Ecuador and the Bank of the Pacific, as follows:

<u>AGRICULTURAL UNDERTAKING</u>	<u>NO. OF MEMBERS</u>	<u>PARTICIPATING BANK</u>	<u>SIZE OF LOAN REQUESTED</u>
Pedro Carbo	35	Bco.Nac. Fomento	S/.1,443,735.00
San Felipe	20	Bco.del Pacifico	" 3,131,446.00
Los Angeles	37	Bco.de Cooperativas	" 525,455.52
Narcisa de Jesus	26	Bco.del Pacifico	" 1,878,540.00
La Union	18	Bco de Cooperativas	" 974,092.00
	<u>136</u>		<u>S/.7,926,268.52</u>

According to the Director's report, the Program is carrying out a great deal of promotional and technical assistance work in close cooperation with the National Federation of Rice-Growers Cooperatives (FENACOPARR) so

that by the next winter season a much larger number of co-operatives shall be in a position to put forward operation and investment plans and to take advantage of the credit arrangements.

## 2. Relations with the National Credit System

In accordance with the purposes of the Loan Agreement, the Trust Fund Office of the Central Bank of Ecuador has been working to provide incentives for public and private banks to take a share in the risks and burdens of agricultural credit. The sub-loans made by the participating Financial Institutions to the agricultural undertakings approved by the Program and are repaid by the Central Bank of Ecuador through the Trust Fund Office and provide them with a return of some 4 per cent. In addition, a participating financial institution can obtain a guarantee from the trustee for up to 80 per cent of any sub-loans on payment of a fee of 2 per cent per annum on the amounts guaranteed, thus reducing the risk to the participating Financial Institutions to a minimum.

Furthermore, the Program provides continuing technical assistance not only in the organization of the agricultural undertakings, but also in the purely agricultural aspects of the work, and in control of the investment. This arrangement not only ensures that the Program makes a direct and positive contribution toward improving production and yield; it also provides a guarantee for the participating financial institutions granting loans to the agricultural undertakings.

## 3. Other Program Activities

In order to extend its influence beyond what it could achieve with its own staff and to provide credit and technical assistance to a larger number of agricultural undertakings, the Program has made contact with other rural development institutions such as the Ecuadoran Institute for Agrarian Reform and Land Settlement (IERAC), the Ecuadoran Agricultural Services Center (CESA), and the National Federation of Rice-Growers Cooperatives (FENACCOOPARR), which are entitled to act as collaborating agencies in helping to organize the agricultural undertakings and preparing operation and investment plans.

#### 4. Relations with Existing Local Institutions

The Program intends to fill the gaps in the activities of existing institutions. For instance, the IERAC, the Federations of Cooperatives, and the CESA all operate in the area of social betterment and the organization of peasant groups. At a given moment in their development, these groups will be eligible for credit under the Program on terms that have been specially worked out for this type of loan. The terms are:

- Amount - Up to 100 per cent of the cost of the operation and investment plan, including investment in infrastructure, the acquisition of machinery, and marketing operations;
- Interest - 10 per cent per annum on the unpaid balance;
- Duration - Up to two years for operating loans and up to 10 years for investment loans with grace periods of up to two years.

It is also intended to provide guarantees for land purchase as part of the financial operations of the Program.

#### 5. Relation Between Tenant Holdings and Low Output

The main features of agricultural activity in the Rio Guayas Valley--the area to which the Program applies--and more especially the circumstances of the small farmer for whom the Program is conceived may be described briefly as follows:

In the first place, so far as land holding is concerned, it may be said that the Rio Guayas Valley is occupied by a large number of share-croppers, short-term tenant farmers, squatters and others whose claim on the land is equally tenuous.

Rice is certainly the major crop in the area.

Rice cultivation is carried out in accordance with traditional practices in which irrigation, drainage, flood control, seed selection, fertilization and phyto-sanitary protection are noticeably absent. It is of course easy to understand why small farmers do not risk undertaking

on their own account the infrastructure work required to obtain better results from the soil. The most obvious reasons are that the soil does not belong to them and that most of the essential infrastructure work requires substantial investment.

The credit and technical assistance facilities available to these small farmers have hitherto been inadequate both quantitatively and qualitatively.

In consequence, yields have been very low, the average yield of rice amounting to no more than some 28 quintals per hectare. The situation has been made worse by the total lack of any protection against natural disasters such as drought or flood.

B. OBJECTIVES

1. General

(a) Declared Objectives

The declared objectives of the Program are:

To start a process of facilitating land holding and land use on reasonable terms for a large number of peasant families;

To encourage the organization of agricultural undertakings in which small farmers play a genuine part to assist farmers in obtaining access to the land, provide them with technical and organizational assistance, and enable them to undertake self-financing productive operations in such a way as to overcome the lack of managerial skills without running into the difficulties created by government paternalism;

To encourage the formation of capital in the agriculture and livestock sector;

To provide a more effective channel for public and private funds, both domestic and foreign, to benefit agriculture, for the purpose of raising the income and improving the standard of living of the rural population;

To increase the output of basic foodstuffs, to provide raw materials for domestic consumption and to increase the volume of export products as a means of improving the country's balance of payments;

To provide a source of rural jobs and funds, thus checking the trek to the cities.

(b) Longer-term Objectives

For the time being, there is too little experience to make it possible to identify new objectives.

2. Loan Conditions

(a) Terms

It is intended that the participating Financial Institutions shall make loans available to the agricultural undertakings formed by small farmers on special conditions that may be called "development terms".

The terms on which loans will be made available to the beneficiary groups are as follows:

Amount - A loan will be granted for up to 100 per cent of the cost of the operation and investment plan. Included in the loan will be funds to cover general administrative expenses; labor; the cost of seeds; fertilizers, fungicides, herbicides, and other similar inputs; the cost of using or renting agricultural machinery; expenses involved in short-cycle cash crops; expenses of harvesting and marketing, and operating loans. The amount lent by the participating Financial Institutions may also cover the financing of investment in infrastructure works such as irrigation canals, drainage ditches, and flood control dykes; the cultivation of permanent and semi-permanent crops; the acquisition of agricultural machinery and equipment; the purchase of livestock; the establishment of nurseries; and any other investment whether in fixed or movable assets, excluding dwelling houses.

(b) Duration

Operating loans are made for periods of up to two years and investment loans for periods of up to 10 years with a grace period of two years.

C. ORGANIZATION

1. General

The advisory, executive, coordinating, and supervisory organs of the Program are as follows:

- a. The Credit Advisory Commission of the Ministry of Production, consisting of representatives of the Ministry of Production and the Ministry of Finance, is to be responsible for the general Program policy;
- b. The Technical Executive Committee consists of the Minister of Production or the Under-Secretary of that Ministry, the Minister of Finance or a representative, the Manager of the Trust Funds or his representative (with a voice but no vote), the Technical Director of the Economic Planning Board or his representative, and the Director of the Technical Executive Committee. The Committee is the senior organ of the Program;
- c. The Program Office is the executive unit of the Program. It has offices in Guayaquil with sub-offices in Babahoyo, Daule, and el Triunfo. This Office is responsible for carrying out the Program;
- d. The Trust Fund Office of the Central Bank of Ecuador, acting as Trustee for the Program, is responsible for the administration both of the capital and of the operating funds of the Program;
- e. The participating Financial Institutions are both public and private banks that have indicated an intention of taking part in the Program, and have signed the appropriate subsidiary loan agreement with the Central Bank; they must also be in a position to make loans to the agricultural undertakings intended to benefit from the Program;
- f. Cooperating Agencies. The Program is designed to accommodate participation by institutions carrying on social betterment and rural development activities, such as the IERAC, the CESA, and Federations of Cooperatives.

It is the responsibility of the Program Office, and particularly of the Director, to arrange for coordination with the Technical Executive Committee--for which it acts as the Secretariat--and the Trust Fund Office, and to ensure

proper communication with the participating Financial Institutions and the cooperating agencies.

## 2. Local Structure

The Program Office is located in Guayaquil and consists of the Director, a Specialist acting as Supervisor, and Adviser specializing in land tenure problems, a planner, an accountant, and secretarial staff. The technical staff consists of agricultural engineers, agronomists, and a specialist in cooperatives. These people are organized into working groups and are responsible for individual agricultural undertakings divided on a geographical basis.

So far the Program has set up three agencies: in Babahoyo, Daule, and el Triunfo. The technical teams consist of a team leader and field workers. The specialists work with whichever team needs their services.

## D. PARTICIPATING GROUPS

### 1. Selection Criteria

Under the Program Rules and Regulations, "Agricultural Undertakings are business associations already established, consisting of farmers whose principal activity is the production and/or sale of vegetable products or livestock, which apply for admission to the Program and show that they are properly organized and are of good moral standing. In no circumstances shall the Program be open to business groups whose main purpose is speculation in the marketing of agricultural produce or livestock."

There are three categories of agricultural undertakings, as follows:

- a. Legally constituted agricultural undertakings that are not the possessors of any landed property;
- b. Legally constituted agricultural undertakings that are the possessors of landed property and need technical assistance and agricultural credits; and
- c. Groups of small farmers who may in due course be in a position to form either producers' or service undertakings in the agriculture and livestock field.

The basic terms and conditions on which agricultural undertakings and groups may have access to the Program are as follows:

They must be situated in the Rio Guayas geographical area, or in any other areas laid down by the Program;

They must be legally constituted or be in the process of constitution; once legally constituted, they must be run by a Manager;

They must apply for access to the Program, through the Program Director;

They must show some organizing and financial ability, for instance, by taking a decision to play an active role in a betterment plan or in social and economic development;

They must accept the advice of the Program and they must sign the appropriate Technical Assistance Agreements;

Finally, they must show that they are economically and financially viable by preparing operation and investment plans to improve their business position.

## 2. Assessment

The assessment of the success or otherwise of the agricultural undertakings admitted to the Program is made on the basis of certain criteria designed to highlight the impact of the Program on the undertakings in the organizational, social, and economic fields. The extent to which the operation and investment plan is carried out is one of the criteria. The sort of question that is asked is: how far has the plan been fulfilled, and how far have the agricultural undertakings met their financial obligations?

## 3. Number and Type of Participating Groups

It is one of the duties of the Program Director to forecast the number and types of agricultural undertakings in being for any given period.

## 4. Other Sources of Credit

Many agricultural undertakings are in debt in connection with the acquisition of land, often to business

houses selling agricultural and chemical products, or to operators of owned or leased agricultural machinery.

5. Cross Section of the Agricultural Community

The country people organized into agricultural undertakings, which are all cooperatives, are for the most part rather homogenous in the sense that they have all spent many years virtually unreached by the health, education, agricultural, technical assistance, or credit agencies of the country. Some cooperatives own their land or are paying for it; others are in the process of acquiring land; while yet other groups of small farmers are still only squatters or renters and are therefore organizing in order to acquire title to the land as well as to be in a position to benefit from the services of credit and technical assistance agencies.

E. LOAN POLICY AND PROCEDURES

1. Practice

As a result of the agricultural undertakings only began to start in August 1972. Hence, the only experience with the policy and procedures at this early stage is given on practical part A, Section 1 of the last sub-section of page.

2. Rate of Interest

In accordance with Monetary Regulation No. 622, dated June 14, 1972, loans granted by the participating Financial Institutions to agricultural undertakings admitted to the Program will bear a maximum rate of interest of 10 per cent per year. Credit operations carried out by the Central Bank of Ecuador with the participating Financial Institutions through the Guarantee and Development Fund shall bear interest at the rate of no more than 6 per cent per year.

In addition, the maximum rate of interest on the guarantees offered by the Guarantee and Development Fund to the participating Financial Institutions has been fixed at 2 per cent per year.

3. Collateral

For the time being, and until more experience has been gained, it is not intended to make any changes in the interest rates.

4. Other Sources of Revenue for the Program

Other rural development institutions interested in collaborating with the Program in making credit and technical assistance available to the undertakings with which they are connected will assist in covering the administrative costs of the Program.

F. RECOVERY OF LOANS

1. Duration of Loans

As described in Section 2(b)--Loan Conditions--above, an agricultural undertaking admitted to the Program must repay any loan in accordance with the schedule laid down in the operation and investment plan. The maximum duration for loans is:

For operating loans:	2 years
For investment loans:	10 years with a grace period of two years

In the event of a delay in meeting repayment obligations, agricultural undertakings will be expected to pay an additional 2 per cent per year on the outstanding balance.

2. Method

Although the case has not yet arisen in practice, it is intended that the participating Financial Institution making a loan to an agricultural undertaking shall be responsible for obtaining repayment. The repayment is to be in cash.

3. Sanctions

It will be up to the participating Financial Institutions concerned to take steps to deal with agricultural undertakings that are tardy in making repayments.

4. Rolling Over

The participating Financial Institutions will also be responsible for deciding on their own policy and procedure for rolling over loans. Nevertheless, the Program Director, who is responsible for the supervision and control of investment through his experts, may suggest or recommend to a participating Financial Institution that a loan be rolled over.

G. OUTLAYS AND SOURCES OF FUNDS

1. Profits and Losses on Loan Operations

There is not yet sufficient experience to provide this information.

2. Administrative Costs

There is no complete information under this head either.

3. Savings by Participating Groups

It is the intention of the Program that the agricultural undertakings should build up their own capital by means of contributions from their members. It is however too soon to report on results under this heading, as little experience has been acquired to date.

4. External Financing

Monetary Regulation No. 622, dated June 14, 1972, set up the Guarantee and Development Fund within the Central Bank of Ecuador under the auspices of the Trust Fund Office.

The Guarantee and Development Fund consists of:

- a. The proceeds of A.I.D. Loan No. 518-L-032 up to the sucre equivalent of U.S.\$3.4 million;
- b. Advances by the Central Bank of Ecuador representing a credit equivalent to U.S.\$3.4 million intended to finance the Program, the conditions for use and repayment being compatible with the needs of the Program;
- c. The capital and interest recovered from the approved agricultural undertakings through the participating Financial Institutions, to the extent that the sums thus recovered are not committed for paying off the advances from the Central Bank, payments to be made under the Guarantee and counter-Guarantee arrangements of the Guarantee and Development Fund with the participating Financial Institutions, the omission owing under the Trust Fund arrangements of the Central Bank, and the amount set aside for the technical assistance and operating costs of the Program.

- d. Any other sums that may be earmarked for the Guarantee and Development Fund by natural or juridical persons, whether national or international.

5. Institutional Solvency

The necessary experience for providing this information is not available.

6. External Balance of Payments

The experience necessary for providing this information is not yet available.

H. OTHER FACTORS

1. Technology

a. Scope of Loans

Loans are granted to the agricultural undertakings by the participating Financial Institutions on the basis of operation and investment plans. Those plans cover the construction of essential infrastructure works, as well as the acquisition of machinery, fertilizers, insecticides, and other inputs that are likely to lead to the use of improved technology.

b. Advisory Services and Supervision of the Program

The technical assistance and the supervision of the use to which the credits are put constitute the basic elements of the Program, since it is through them that it is hoped to bring about the modernization and rejuvenation of the agricultural sector. The Program therefore offers the following services and advantages:

Social betterment;

Advice in connection with the organization and running of agricultural undertakings;

Advice on the procedures for land acquisition;

Field visits;

Agricultural technical assistance by means of short courses, meetings, films, shows, etc.;

Advice on arranging for soil studies and the design of infrastructure works;

- Preparation of operation and investment plans;
- Assistance in following up loans;
- Control and supervision of investments;
- Advice for the managers of agricultural undertakings.

As a means of extending the agricultural technical assistance provided by the Program, the agricultural undertakings will be obliged to receive an agronomist who will live with them and work as field supervisor for the crops cultivated by the undertaking. In this way a middle grade professional will be available to bring appropriate techniques to the farmers.

c. Other Arrangements for Transferring Technology

The Program is making the necessary arrangements to strengthen its agricultural technical assistance activities for the purpose of spreading information on modern techniques as widely as possible. For this purpose, it will obtain the assistance of other institutions, including commercial firms, to organize field days, film shows, or the establishment of small model farms.

d. Description of the Technology Involved

The Program is based on technical assistance and credit as being the two elements likely to rejuvenate the agriculture sector. The Operation and Investment Plans prepared by the agricultural undertakings as the basis for requests for loans are intended to lead to the adoption of improved farming techniques covering the whole range from infrastructure works--to ensure the availability and proper use of water supplies--and the use of selected seeds and fertilizers, to the introduction of phyto-sanitary controls. The Program is also intended to lead to the acceptance of supervised credit, and the loan conditions have been written accordingly. For instance, one of the conditions for granting loans is the acceptance by the agricultural undertaking of technical assistance provided by the Program; another is that the participating Financial Institutions will only make funds available to the agricultural undertakings in accordance with the investment schedule set out in the operation plan, to which changes may only be made with the approval of the Program Director. Furthermore, subsequent payments will only be made once the Program officers have certified that the funds received by the agricultural undertaking have been

used to finance the expenditures, works or purchases envisaged in the Operation Plan.

e. Guaranteed Sales and Price Support

The Program also helps the agricultural undertakings to market their output. As is well known, there is no adequate agricultural minimum price mechanism in Ecuador and the marketing arrangements are those in force for many years past. In consequence, the producer is subject to exploitation by wholesaler and intermediaries. In an attempt to assist the approved agricultural undertakings benefitted by the Program, the Director is helping them to make contact with mills, factories or wholesalers handling the various agricultural products, for the purpose of obtaining better sales terms and, where possible, future sales contracts for the crops they produce.

f. Social Security

In Ecuador, there is no social security scheme for agriculture.

g. Other Marketing Arrangements coming under the Program.

The Program believes that to improve marketing methods would require the adoption of a whole range of measures for which both time and experience would be needed. In addition, the small farmers would require to be properly organized if they are to carry out the various operations efficiently. Nevertheless, as a first step it is intended that the collection and sale of the output of an agricultural undertaking should be handled on a joint basis.

h. General Marketing Conditions

As there is no real experience, it is difficult to comment on this topic. Nevertheless, in the field of rice, for instance, where the millers act more or less as monopsonists, it would seem possible in the future, when the output of rice is reasonably large and the growers have been properly organized, either to acquire or rent a mill or, if no mill is available, to reach an agreement with the model mill established by the Government to process the rice harvested by the approved agricultural undertakings.

i. Profits and Risks

The operation and investment plans so far drawn up envisage that with the introduction of new techniques the yield on capital should be between 18 per cent and 34 per cent. It will of course be necessary to wait for several complete agricultural cycles in order to discover what the yield actually is. The completion of infrastructure projects will in some cases enable the soil to be worked during the summer while in others it will extend the areas under cultivation to the benefit of the agricultural undertakings by making possible both a better use of manpower and an increase in revenue.

III. ASSESSMENT

The lack of experience in carrying out the Program makes it impossible to write anything under this heading.

IV. THE ROLE OF TECHNICAL ASSISTANCE

A. A.I.D. Contribution

The A.I.D. contribution in establishing and supporting the Program has been very great, as may be seen from the following summary:

1. Full-time assistance by the USAID advisers in carrying out the Program;
2. Grant or non-returnable funds that made it possible to undertake the preliminary and most difficult tasks of laying the groundwork and bringing the Program into being;
3. Establishment of in-service training grants, which made it possible to select and train professional level personnel to work in the Trust Fund Office;
4. At the stage where it became necessary to train staff in the preliminary work and preparation of operation and investment plans, A.I.D. made it possible to conduct courses and seminars under the chairmanship of Mr. Wade Gregory, an agricultural economist from the U.S. Department of Agriculture;
5. A.I.D. has also provided facilities enabling a number of persons at the Director and Executive level to make study visits abroad.

B. Contributions by other Donors

Hitherto no financial or technical assistance has been received from other international agencies for the Program.

C. Effects

The lack of experience in running the Program means that it is rather premature to discuss this topic.

D. Recommendations

It is recommended that A.I.D. should continue to provide technical assistance during the development period of the Program in order to assist in finding rapid solutions to the problems that may arise. It is desirable that A.I.D. should keep up-to-date records of all the problems encountered by the Program so that the solutions proposed may be appropriate to the circumstances.

With reference to the role that A.I.D. can play in identifying credit programs in support of the small farmer, we cannot fail to express our profound gratitude for the great sensitivity and skill with which A.I.D. has supported programs of social and economic betterment for the rural population of Ecuador.

Sources

1. Guzman, Gonzalo - Financing and Agricultural Undertaking by Means of Credits for a Training Program. Quito, Ecuador, 1972.
2. Loan Agreement AID/E No. 518-L-032.
3. Operating Regulations for the Farm Development Program.
4. Monetary Board Regulation No. 662, dated June 14, 1972.
5. Operation and Investment Plans for the following cooperatives: San Felipe, Pedro Carbo, La Union, and Narcisa de Jesus.
6. Quarterly Reports by the Program Director.

COUNTRY PROGRAM

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THE DIRECTED AGRICULTURAL CREDIT PROGRAM  
OF THE  
NATIONAL FEDERATION OF SAVINGS  
AND CREDIT COOPERATIVES OF ECUADOR

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## SUMMARY

The Directed Agricultural Credit Program was established by the FEOAC in 1965. It began operations with five cooperatives; ten others were added in 1966, nine in 1967 and two more in 1968.

### I. INTRODUCTION

Since small farmers do not have access to traditional credit sources, the savings and credit cooperatives alleviate, in part, the credit needs of member farmers.

An analysis of loans granted in 1970 and 1971 reveals

	<u>Types of Loans</u>	<u>Membership No. of Members</u>	<u>Amount of Loans (in Sucres)</u>
1970	Crop production	3,019	12,296,681
	Livestock production	<u>1,490</u>	<u>6,672,535</u>
	Total	4,509	18,969,216
1971	Crop production	3,248	13,083,640
	Livestock production	<u>1,680</u>	<u>9,814,222</u>
	Total	4,928	22,897,862

Small farmers, because of their limited assets, lack the necessary economic resources to make use of agricultural inputs and therefore cannot improve their production. The cooperatives solve part of their problem by granting them loans.

With loans obtained from their cooperative, the small farmers can obtain funds without lengthy processing and at lower interest rates than from other institutions.

### II. PROGRAM CHARACTERISTICS

#### A. Background

##### 1. History

The program consists of 34 cooperatives distributed through 11 provinces in the mountain, coastal, and eastern areas of the country, with 11,600 members who use this credit for agriculture and stock raising.

##### 2. Relationship to the national credit system as a source of credit:

The cooperatives use, as their source of credit, the Cooperative Bank and, in many cases, the Provincial Development Banks.

3. Other program activities:

Technical assistance on proper credit utilization and in the application of new agricultural techniques.

4. Relationship to previously existing local institutions:

As a clearing house for savings and credit cooperatives, FECCOAC is connected with the following agencies and institutions: the Ministry of Production, FAO, AID, COLAC, and the Cooperative Banks.

5. Agricultural patterns and potential:

According to data obtained from the Planning Board, the average per capita income in the rural areas of our country is US \$250. If we compare that with the US \$300 to US \$320 income of the urban population, we see the need for promoting a more balanced, over-all development among the various sectors of the nation.

Agriculture is the principal source of wealth in our country. Unfortunately, the future of our agriculture is not very promising. If it is to be considered a means for food production, it must be admitted that it is still deficient.

The agricultural sector constitutes 63% of the population and generates 33% of the GNP.

Most of the loans granted by the savings and credit cooperatives are for the following crops:

<u>Product</u>	<u>Average National Production</u>
Wheat	17.5 quintals
Rice	11.4
Potatoes	111.1
Corn	10.0
Coffee	6.5
Cacao	3.9
Barley	11.0
Lentils	5.2
Peas	8.2

With technical assistance and the use of inputs provided to small farmers who are members of the savings and credit cooperatives, it is hoped that production will increase by more than 80%.

With loans for agricultural production, it is estimated that the area under cultivation will increase from 4,800 hectares to 8,400 hectares by 1975.

## B. Objectives

### 1. General objectives

The purpose of the savings and credit cooperatives are: To instill a sense of savings in the public as a basis for creating capital for mutual assistance projects; to utilize these financial resources productively, especially in stockraising and agriculture since such a high percentage of our population depends upon this activity; to increase both production and income in order to improve the standard of living of our rural population.

### 2. Loan terms

a. Purposes. Loans granted by rural savings and credit cooperatives include consumer loans, though the cooperatives try to channel the highest percentage possible into productive activities. To date, most of these loans have been used to purchase fertilizers, insecticides, fungicides, and in a few cases for irrigation. Livestock loans have been used for fattening cattle and hogs and also for poultry production (eggs and meat).

b. Term. Due to their very limited resources, the cooperatives generally make short-term loans to their members, and only in a few special cases, medium-term loans. With more capital and proper planning, long-term loans can be instituted for permanent crops and expansion of herds.

### c. Organization

1. General Structure. FEOAC, a legally recognized organization, is charged with the educational program and sponsoring the extension of services to its affiliated cooperatives and sets up the direct credit program. Its administration consists of the following: Annual Assembly of Members, Board of Directors, and Manager.

The management, through its Extension, Education, Directed Credit, and Audit Departments, is in close contact with the cooperatives, and through them, with the members.

Although actually each cooperative enjoys administrative autonomy in granting and collecting loans, FEOAC's Department of Directed Credit aids in the planning and proper use of agriculture and livestock loans.

2. Local Structure. Each cooperative has an administrative structure comprising: Annual Assembly of Members, Supervisory Committee, Credit Committee, Board of Directors, Manager - Assistant Accountant, and Field Inspector.

d. Beneficiaries:

1. Selection Criteria. Any farmer who is a member of a cooperative, may receive loans from it with the sole proviso that he qualifies within the provisions of its Bylaws and Regulations. The farmers who utilize the Directed Credit program have the advantage of receiving larger loans, and moreover, of receiving technical assistance. The size of their holdings is not taken into account.

2. Graduation policy. Each cooperative has its credit committee, which reviews the financial standing and the character of members seeking loans, and also studies their savings and the investment plans previously prepared by the member with advice from livestock experts.

3. Number and type. The farmer's loan capacity can be seen from the size of his land holding, shown in the following table, obtained through the sampling taken:

Less than 1 hectare	16.8%
1-3 hectares	32.6%
4-8 hectares	22.0%
More than 9 hectares	14.5%
No response	14.1%

The following tables give an idea of the breakdown by products:

Agriculture		Livestock	
Potatoes	44.5%	Cattle	57.2%
Wheat	28.1%	Hogs	35.3%
Rice	19.1%	Poultry	35.7%
Barley	16.9%	Other	16.5%
Fruit	1.9%		
Other	33.4%		

4. Other sources of credit. The lack of credit sources available to small farmers is one of the reasons for the creation of savings and credit cooperatives.

5. Profile of an agricultural community. The members of these cooperatives are mostly low-and middle-income people, and their holdings are approximately the same size. It is estimated that only 0.3% of the small farmers take advantage of these loans granted by cooperatives. In general, small farms are overshadowed by large and progressive estates, which have access to bank credit.

e. Loan policy and procedures

1. Portfolio. In accordance with the cooperative regulations, some farmers may obtain extraordinary loans (on the basis of their savings) in addition to the regular agricultural and livestock loans. The policy of the cooperatives on this point is to avoid a situation in which the members would have several creditors, and therefore they always try to finance their agricultural projects in a comprehensive fashion.

2. Interest rates. Until 1971, the charge was 10% annually or 1% monthly on the unpaid balance. Beginning in 1971, they have charged 12% annually or 1.5% monthly.

3. Collateral

4. Other Subsidies

5. Evaluation Techniques. The manager and/or the field inspector (extension agent) evaluates the utilization of these credit lines by personal visits to the farms. Moreover, these evaluations are followed by visits of agricultural and livestock experts who render technical advice to the borrowers. The number of farm visits generally depends upon the investment plan and the need for advice. The borrowers (members) must furnish personal references on their moral and financial standing (farm owner, tenant, or worker), income, and record of repayment of previous indebtedness.

f. Collections

1. Repayment record. We can only state that the default rate of the cooperatives does not exceed 10%.

2. Procedure. The borrowers make their payments on the due dates, which generally coincide with the sale of their crops.

When a member fails to make his payment within the stipulated period, the manager seeks repayment by means of personal visits or letters, and, in certain cases, he may even resort to the courts.

Payment is made in cash or, in some cooperatives, may be made in kind (wheat, rice). In the latter case, the cooperative receives the product, confirms delivery to the mills by a delivery receipt, sends a statement to the member showing the loan balance and deducts a percentage to cover transportation and administrative costs.

g. Costs and financing.

1. Portfolio earnings and losses

2. Administrative costs

3. Beneficiary savings. Although the members, who are small farmers, have adopted the savings habit to the extent of their means, for them to be able to accumulate larger individual capital and consequently to obtain more capital for the cooperative, a compulsory savings requirement of up to 10% of the loan has been established.

4. External financing. Since the savings of the members are not large enough to cover all loan requirements, the cooperatives have had to seek aid from outside sources such as FEACOAC (by supplying fertilizers), cooperative banks, development banks, foreign cooperatives and local development institutions.

5. Institutional stability.

6. External balance of payments.

h. Supplementary factors

1. Technology

a. Guidance, Packaging, and Packing. Part of the loans are granted in inputs such as fertilizers after tests on the soil have been made. The fertilizers and pesticides are applied with the assistance of professionals since the borrowing members covered by the Directed Credit program must accept and act on certain technical recommendations.

b. Program extension and supervision. Supervisory services are handled through (a) managers or field inspectors who take care of the investment part of the loan and (b) the agricultural experts from the extension service of the Ministry of Production who provide technical assistance and see that it is applied. Brief courses are organized at the cooperative level to train farmers in the cooperative movement and agricultural techniques. Likewise, seminars are organized at the national level in order to train managers and field inspectors in the techniques needed to supervise the membership.

c. Other arrangements for the transfer of technical knowledge. In order to provide technical assistance to the members of these rural cooperatives, FEACOAC has an agreement with the Ministry of Production whereby the extension agents of the Agricultural Extension Service render this assistance. Several cooperatives have received this assistance at different intervals from commercial firms or other local government agencies.

The technical assistance programs of the Extension Service have been increased by assigning additional personnel to work with the cooperatives.

To insure the regularity of the government's technical assistance programs, FEACOAC (and sometimes the cooperatives themselves) pay the transportation costs of the experts (travel and per diem). To coordinate the agreement on technical assistance for agricultural services with FEACOAC, the Ministry maintains a professional coordinator who supervises and assigns the work to the extension agents assigned to work with the cooperatives in the provinces. Close coordination between technical assistance and credit is of primary importance since separately neither can achieve the results it is hoped to obtain in increasing production and improving social conditions. Technical assistance has been successful and the beneficiaries hope that it will continue to be so.

d. Agricultural techniques. By adopting improved techniques, the members are increasing production. In a survey among the members of a Directed Credit program, the following acceptance rates were observed:

Use of insecticides	78.9%
Use of fertilizers	73.2%
Use of herbicides	43.0%
Use of improved seed	52.1%
Use of balanced stock feeding	37.3%
Vaccination	64.1%

In general, extension agents are persons with training in teaching methods as well as a practical and theoretical knowledge of agriculture.

## 2. Supplies and sales

a. Supplies for the program. The cooperative members obtain inputs in the following manner: (1) Through direct delivery to the cooperatives having their own warehouses and as a line of credit. (2) Through delivery orders from private warehouses, also as credit, and (3) Through direct purchase from warehouses by the member with the loan money, depending on the investment plan.

It is the members themselves who handle inputs after receiving assistance from the extension agents. There is no government subsidy. The members pay market prices.

b. Program infrastructure. The credit program for agricultural production does not include the building of secondary roads nor irrigation projects unless the cooperatives in some way sponsor these as community improvement factors. The cooperatives as such would not be able to afford the building of adequate storage facilities.

c. General access and availability. To date, the private sector handles the supplying of inputs, but FEACOAC is attempting to create a general supply center to achieve a more adequate, prompt distribution to its members.

The high cost and the shortage or complete lack of inputs, especially fertilizers, lead frequently to incorrect usage, and this is a limiting factor in the expected production. Fertilizers therefore do not have the impact that can be obtained.

d. Guaranteed sales and price support. Up to a certain point, two products (rice and wheat) have a guaranteed market for sale of the total crop at fair prices. Other products such as beans, lentils, and peas, do not enjoy stable prices though the market absorbs the production. Potatoes are subject to the greatest price fluctuation in the market, and this causes problems in the growers' income. Some members join together in order to obtain better transportation rates and to market their products in areas that pay better. Likewise, some co-operatives are involved in harvesting and marketing the crops through their management.

e. Insurance. To date, the cooperatives do not offer their members any insurance against crop loss or damage. FEACOAC is interested in this service and is making the necessary studies.

f. Other program marketing arrangements. Little work has been done in this field. Recently, plans for marketing production have been drawn up.

g. General marketing conditions. One of the principal obstacles in marketing is the existence of middlemen who impose prices and conditions.

h. Earnings and risks. The introduction of certain techniques such as the use of fertilizers, pesticides, improved seeds, etc., has contributed to crop improvement, but other methods must be used to obtain better results in production, which should be accompanied by adequate marketing.

### III. EVALUATION

#### A. Performance

##### 1. Apparent uses of credit

In almost all cases, loans are used for the intended purposes. In many cases, certain loans intended for production, when applied for, are, before being invested for this purpose, used in transactions producing immediate returns (purchase and sale of cattle). There is no information on the use made of loans earmarked for "personal expenses."

## 2. Results

In addition to the obvious increases in production and income other areas were also developed.

a. Technology. The farmers increased the technological level of their inputs.

b. Savings and sources of financing. In order to provide capital for the cooperatives, there is a compulsory requirement that the member must save up to 10% of the total amount of the loan; in most cases, the members have agreed to this procedure.

c. Employment. Twenty-five per cent of the members of the cooperative savings and credit institutions in rural areas are farmers who earn their living from agriculture either as owners or tenants.

d. Political and social structure. More than a political influence, the cooperative movement in rural areas has had a social influence, since it has brought people together in organized groups for purposes of mutual assistance. It has been observed that the members with greater resources (9 hectares or more) tend to improve their condition. Members are eager to increase the size of their holdings, and they therefore apply for loans to purchase land.

## 3. Image

The members are satisfied in part with the benefits derived from their cooperatives for agricultural purposes, both because are easy to obtain and because of the low interest rates but they criticize the small amounts of money available. More capital is needed to meet requirements.

General image of the program. The loan programs of the savings and credit cooperatives for agricultural production are considered to be an outstanding success, though from the experience gathered an adjustment is needed in order to obtain better results. The fact that, in its program of activities, the Ministry of Production has stressed its work with cooperatives coupled with the fact that international agencies are prepared to increase their assistance corroborates this view.

## B. Evaluation and Feedback Procedures

### 1. Program evaluation procedures.

A significant fact revealed by the evaluation was the increase in membership, in savings, and in loans granted. The program was evaluated by means of a sampling of cooperatives and borrowers.

## 2. Feedback and Changes in the Program

In the evaluation, by relating production and income to the adoption of practices, loans, and technical assistance, the impact of the program on members can be observed.

### C. Conclusions on Loans to Small Farmers

We can affirm from experience that technical assistance and any other development program designed to bring about change is useless unless credit is readily available. The progress achieved by some organized groups is due to the fact that these three factors have been combined.

#### 1. Principal problems of small farmers

**Economic:** They do not have access to all sources of credit, and local loan companies exploit them by charging high interest rates.

**Social:** There is a lack of education, housing, health, and nutrition standards.

**Political:** As a result of the lack of education, small farmers are easily exploited by the demagoguery of certain political leaders.

#### 2. The role of credit in the solution of these problems

The loan programs of rural cooperatives have given small farmers access to sources of credit, which in turn has allowed them to provide a better education for their children. In addition to the loan itself are political action, disease prevention, and nutritional education.

#### 3. Credit and new technology

A large amount of institutional credit is essential in order to achieve a higher technological level since, with sufficient capital, the cooperatives could satisfy all requests for improved seeds, agricultural inputs, and machinery and irrigation projects needed by the farmers to obtain larger yields.

#### 4. How to improve the program

The most important factor in the growth and success of the Federation (FEACOAC) has been the faith that its leaders and administrators have placed in the system. And, the positive benefits of the financial assistance received from AID are undeniable. This assistance becomes more significant, however, when it is granted without middlemen and when it is used for plans and programs designed by the Ecuadoreans themselves.

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We must also give recognition to the FAO whose participation, although small in scope, has helped us with our programs.

My very personal view is that we must pay greater attention to the programs which aid the small farmers directly, especially credit, technical assistance, etc.

## PROBLEMS AND RECOMMENDATIONS

The results of the Directed Credit programs have so far been positive though not spectacular. There is no doubt that credit combined with technical assistance is a feasible concept. In our analysis of the program we have found certain deficient elements, with the most critical deficiencies being:

1. A lack of adequate credit.
2. A lack of effective technical assistance.
3. Marketing problems.

In this last section, we shall summarize these deficiencies and follow each analysis of the problem with recommendations for improvements. The five problems are: Credit, Technical Assistance, Marketing, Managers and Members.

### A. CREDIT

Problem - The major problem with credit is the lack of funds to satisfy the minimum credit requirements of the program. One of the reasons for this lack of funds is that many of the cooperatives do not have any contacts with the available credit institutions from which they might obtain additional funds.\*

Recommendations - Our recommendations to FEEOAC for strengthening the financial basis of the cooperatives in the program are:

1. To select for these Directed Credit programs those cooperatives in good financial standing which might be interested in this program.

We would suggest that the following three requirements be fulfilled:

- a. The cooperatives must have shown a systematic normal increase in their savings over the preceding year.
- b. The cooperative must be able to pay for the services of a manager and a field inspector.
- c. The majority of the members of the cooperative must be farmers.

The criterion of a systematic normal increase in savings gives us an approximate indicator of the financial growth and stability of the cooperative. If necessary, another criterion might be used. The requirement that the cooperative be sufficiently solvent to employ a

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\* We have observed that some cooperatives have been forced to limit their granting of loans and the majority have suspended the granting of preferential loans (5 or 10 x 1).

manager and a field inspector is absolutely necessary since the credit program in each cooperative cannot be effective without the services of a manager and the supervision of a field director. The requirement that the majority of the members be farmers will insure that both the manager and the other officials dedicate themselves to the success of the program.

2. To help the cooperative manager to establish and maintain a permanent relationship with the available sources of credit.

Available sources of credit include the Cooperative Bank, the Development Banks, CARITAS, cooperatives in foreign countries, and local sources such as churches and commercial banks. FEEOAC should help the cooperatives find sources of credit and assist the manager in fulfilling the requirements needed to obtain a stable line of credit. FEEOAC should also make every effort to persuade the credit institutions, especially the Cooperative Bank, to simplify their requirements for rural cooperatives and to set credit terms that fit the needs of each cooperative.

3. To establish a credit fund, under the control of FEEOAC, which may be utilized in the financing of the Directed Credit program.

This fund may be obtained from domestic or international credit sources.

Problem - Another problem we encounter with the credit program, is that it has not been organized as a separate and distinct section with the cooperatives. There are no points of reference for the inclusion of cooperatives or individuals in this program. There is no separate accounting system. The investment plans are not standardized. No minimum requirements have been established for the Directed Credit loans. No evaluation system has been instituted. Nor has responsibility for obtaining technical assistance been fixed. There are no methods of control. The following recommendations are made in order to help FEEOAC formulate a more clearly defined program.

Recommendations

1. Each cooperative should have a field inspector working in its Directed Credit program. This paid field inspector, working either part time or full time under the supervision of the manager, should assume the following responsibilities:

- a. To work along with the member in preparing an investment plan.
- b. To provide technical assistance to the member.
- c. To obtain technical assistance from agronomists for groups of members facing similar problems.

d. To visit each member with a loan periodically in order to help him, confirm that the loan is being used as was originally planned, and if needed, to make changes in the investment plan.

e. To review the member's investment plans with him as soon as he has paid off his loan, and obtain the information needed to ascertain the measurable production results.

2. The cooperative should also carry separate accounts for Directed Credit loans. Aside from the separate accounting, there should be a separate file exclusively for the members under this credit program which would also contain their investment plans. This would be very useful for control and evaluation purposes.

3. Credit guidelines for loans granted under Director Credit should be established. We make the following recommendations:

a. A minimum savings of S/400 would authorize a minimum loan of S/2,000, that is five times the amount of the savings.

b. Systematic savings by the member for a minimum of three months before he may request a loan.

c. The limits for Directed Credit loans should be from five to eight times the amount of the savings.

d. Terms for the loan should be based upon the product. (For example: five years for cacao, four years for livestock, etc.)

e. The amount of the loan should be adequate to completely finance the operation, taking into account the borrower's financial resources. (For example: one hectare of wheat S/1400, one hectare of potatoes S/8,00, a rice-paddy S/1,00.)

f. Directed Credit loans should be granted on credit lines so that the member receives it in several payments, in accordance with his investment plan.

g. Capitalization or savings by the members in the program should be 5% instead of 10% which we regard as too high for the majority of our members.

h. Members that do not use their line of credit in accordance with the original plan or who are reported by the field inspector will lose the right to receive the rest of their line of credit and be totally suspended from the program.

4. An investment plan should be prepared for each loan. An investment plan should be a learning process for the member, and he should understand each step taken as he works out the plan with the field inspector. This plan should include all cost estimates, including the cost of his and his family's labor, a time schedule, production estimates, prices, and, finally, earnings. These estimates should be compared as closely as possible with the real costs when the member finishes paying off his loan.

5. Methods of systematic evaluation should be incorporated within the program. Three aspects of this program requires evaluation:

a. The effectiveness of technical assistance. There should be an on-going informal evaluation based upon reports presented by the FECOAC credit program director or a member of his staff. The cooperatives' field inspectors, the manager, the agronomists, and the members should be informally interviewed after the field visits.

b. Loans, savings, and members. The Annual Reports should include figures on the increase or decrease of the number of members in the program, the number and amount of the loans, and figures on the savings of the members. The information for these indicators would be based on the records of the cooperative participating in the program.

c. Production results. There should be an annual summary based upon the reports prepared by the field inspector of each cooperative, taking this information from the investment plans. This information could be obtained when the member pays off his loans.

## B. TECHNICAL ASSISTANCE

Problem - All the cooperatives lack adequate technical assistance to give the members in the program. In some cases 75% of the members have received this assistance, while in others only 25% have received it. Since Directed Credit requires technical administration of the loans, it is imperative to furnish the needed technical assistance.

### Recommendation

1. The field inspector, with the help of the manager, the cooperative Board of Directors, and FECOAC, should establish and maintain an on-going relationship with technical assistance sources. Possible sources of technical assistance are:

a. Governmental organizations (Agricultural Extension Service of the Ministry of Production, Andean Mission, INIAP, National Wheat Commission, National Rice Commission, etc.

- b. Commercial companies (FERTISA, El Campo, Kruger, etc.)
- c. FEACOAC (some agricultural experts have been "loaned" to FEACOAC to work on the program).
- d. Agronomists from the School of Agronomy.
- e. Agricultural experts engaged by cooperatives or groups of cooperatives to work with the members.
- f. Cooperative members who have acquired skills either through personal experience or from courses. This is a valuable source which is often not utilized.

Problem - Technical Assistance, when it is available, often has a limited effect on improving production, that is to say, the technical assistance provided seems to be of very poor quality.

This deficiency is not due to a lack of professional knowledge; rather, it stems from inadequate teaching methods and a lack of effective communication between the expert and the farmer. The problem is to improve the informational process and the teaching of skills.

#### Recommendations

1. Agricultural experts must improve their educational methods. This is a key factor in improving the quality of the technical assistance provided. It is not the lack of knowledge itself, but the way in which it is made available to the farmers that creates problems in the credit program. For this educational process to be effective, the expert himself requires information on his own effectiveness (feedback). He should be familiar with several teaching methods and should learn more about the problems and skills needed for communication. There are three possible ways of improving the teaching techniques of the experts:
  - a. There should be periodic meetings between the agricultural experts of an area (governmental, commercial, private, etc.) and the field inspectors, managers, farmers, and FEACOAC representatives. The main objective of these meetings would be to provide both the experts and the field inspectors with the necessary feedback on the effectiveness of their programs. Common problems and ideas could be discussed.
  - b. There could be visits by other agricultural experts and communications experts for the purpose of illustrating teaching methods, discussing communication problems and barriers, group dynamics, and problems in general. These visits would stress the educational process but they would also be a good opportunity to discuss new agricultural techniques.
  - c. There could be "living laboratories" on human relations for agronomists, field inspectors, and managers.

2. The experts should work with small groups of members but not with individuals except in special cases. Group teaching can be as effective as individual instructions, especially when we are dealing with practically uneducated farmers who are timid about asking questions. These farmers, in a group, would learn from each other as well as from the expert. Group teaching is also more efficient and effective because in this fashion the expert can render services to a much larger number of farmers than if he tried to deal with them individually.

3. Demonstration parcels or animal experimental projects should be set up for the main products or potential products of each cooperative in the region. This traditional method should be applied with the members in the credit program, with emphasis on costs. Moreover, an effort should be made to introduce other crops in the area, if conditions permit.

#### C. MARKETING

On the bases of our observations, we can affirm that the program is truncated, and it will not fulfill all its goals unless it is complemented by a marketing program. We wish to point out a few of the problems that will impede the effective accomplishment of this goal.

##### Problems

a. The individualism of the members. They believe they get better prices if they sell their harvests privately. There is a mutual distrust among the members. Also, they market their products according to tradition.

b. A lack of operating capital. This prevents the members from having the means to sell their products in other areas where they might get better prices or terms.

c. Not knowing what crops are best suited to the soil. There are no lines of demarcation between optimal areas for each crop, and this means that the members often till marginal areas. There is a lack of economic-technical criteria on soil quality, climate, marketing needs, demands, etc., and this often creates surpluses at harvest time (potatoes, for example) that exceed current demand.

d. The lack of adequate storage facilities. In certain areas all the crops are gathered at one time, which increases the supply, while demand remains constant and thus prices drop. This is due to a lack of adequate facilities to store the crop and await better prices.

e. Price fluctuations. As a result of these aforementioned factors, we find that the members receive ridiculously low prices for their products which often do not even cover their fixed and operating costs,

and cause losses which counteract both the efforts of the cooperativists and impede the goals pursued by the supervised credit program.

f. The problem with the municipal authorities. They make demands or set up obstacles by, for example, forcing sales to certain purchasers, fixing prices arbitrarily, imposing fines, etc., to which demands the farmer cannot accede without damage to his own economic situation.

#### Recommendations

a. To carry out an in-depth study of marketing of the main products of the cooperatives in these areas where the credit program is in effect. This study should seek to teach and make the members aware of the need and advantages in selling their products collectively; for example, proper and systematic advertising.

b. To obtain the coordination of governmental organizations for adequate planning, based on technical-economic criteria, in assigning crops to areas best suited to them.

c. To secure from the respective authorities coordination in the installation of storage areas for harvested crops.

d. Setting of minimum prices by the governmental authorities as the basis of a realistic assessment of production costs.

e. Obtaining special credits for the transportation of harvests.

#### D. MANAGERS

Problem - Some managers have very little interest in promoting the credit program. This lack of interest would seem to stem, at least in part, from the fact that this program involves more work and time for them.

#### Recommendations

1. The field inspector, under the supervision of the manager, should assume the daily responsibilities evolving from the program. His job should include preparing the investment plan in conjunction with the member, field visits, and arranging to have the agricultural experts furnish technical assistance.

2. The managers should have some economic incentive for participating in the program. (Increase the interest by 0.5% on all loans under the Directed Credit program.)

Problem - Some managers have a very low opinion of Directed Credit programs and the administrative methods used in their cooperatives. This lack of understanding is due to a lack of defined reference points and inadequate training for carrying out the program.

Recommendations

1. A manual on Directed Credit (being prepared by FEEOAC) should be distributed to managers, field inspectors, agricultural experts, and members.

2. As a prerequisite for entering the program, all managers of participating cooperatives should be given a training course.

3. A FEEOAC representative should periodically visit each cooperative participating in the program in order to discuss problems with the staff and especially with the manager of the cooperative.

Problem - Most of the managers have never bothered to establish close and permanent relations with the organizations or individuals that aid the cooperatives with both credit and technical assistance. This defect seems to stem either from the manager's lack of knowledge of the sources available and/or a lack of personal motivation.

Recommendations

1. FEEOAC should prepare a directory of the organizations which provide technical assistance or credit sources to cooperatives and publish it annually. This directory should be sent to all cooperatives.

2. Each manager, working with FEEOAC, should establish the contacts needed to obtain the necessary technical assistance and credit for their cooperatives.

E. MEMBERS

Problem - Many of the members in the credit program lack a basic knowledge of the program. More than 80% of the members understand little or nothing of what Directed Credit really means. Only half the members in the program have attended courses offered by the cooperative.

Recommendations

1. To design graphic material which will explain clearly and promote the concept of Directed Credit; for example, slides, color pictures, comic books, posters, and pamphlets, in general. The cost of these materials should be paid for by agencies such as USAID, COLAC (Latin American Confederation of Credit Cooperatives), and other international organizations.

2. Arrange visits with members of cooperatives to discuss problems and ideas relating to Directed Agricultural Production Credit. FEEOAC is currently sponsoring these visits.
3. Offer courses on Directed Credit and the cooperative movement.

COUNTRY STUDY

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EVALUATION OF THE  
DIRECTED AGRICULTURAL PRODUCTION CREDIT PROGRAM  
IN ECUADOR

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by:  
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## I. SUMMARY

### Description

The Directed Agricultural Production Credit program began in Ecuador in 1965 with the objective to combine credit at preferential terms with technical assistance for the farmer. Marketing is not an element of the program. This evaluation study was designed to measure the results of this program in terms of increased production and increased income for the sixteen cooperatives which were, according to the National Federation of Savings and Loan Cooperatives (FECOAC), in the operating phase of the program. These sixteen cooperatives are located in six provinces of Ecuador, in the mountains and on the coast, and have members who grow a wide range of products such as rice, corn, potatoes, wheat, barley and raise cattle, milk cows, pigs, chickens, sheep, and guinea pigs. Half of the farmers who received loans in 1971 owned three hectares or less of land. Only 14% owned 9 or more hectares.

Each of the sixteen cooperatives was visited and their records were carefully examined. In 1971, 1,171 cooperative members in the sixteen cooperatives obtained a production loans for agricultural purposes for a total of about six million sucres (U.S. \$ 240,000). About 60% of these loans were to raise animals and 40% for agri culture.

The managers of each cooperative were interviewed and a random sample of members from nine of the sixteen cooperatives were also interviewed. Farmers who did not belong to the DAPC program were also interviewed as a control group. The findings and recommendations of this evaluation study are based on this data and on the observations of the research team.

### Results

The results of the DAPC program are positive although not dramatic. Production increases of least 20% are reported by 43% of the DAPC members compared to 37% of the control group, with only 24% reporting production declines compared to 30% of the control group. These results, although not spectacular, conform to the impressions gained by the research team in the field. Income increases were also reported in the last year (1971) by DAPC members. All the specific indicators support these conclusions, some more striking than others. The research team concludes that the concept of directed credit is viable but that many problems need attention if stronger results are to be obtained.

### Problems

The three principal problems of the DAPC program are lack of adequate credit, lack of effective technical assistance, and marketing problems. In addition there is the administration problem that the DAPC program has not been set up as an entity within each cooperative. That is, there are no separate records kept of DAPC loans and there are no common guidelines for cooperatives for the program. In technical assistance, besides the lack of available agronomists for cooperative members, there is a serious problem with the effectiveness of the teaching methods of the agronomists who are available. Finally, there is the marketing problem which tends to frustrate the final goal of obtaining increased income from better production. Farmers sell their products on their own to middlemen or in the markets of the nearby village at low prices. A marketing phase to complement the DAPC program appears to be necessary in order to complete the program's objectives of higher income through more efficient production.

### Summary of Recommendations

FECOAC should assist the managers of DAPC cooperatives in establishing and maintaining relationships with available technical sources in the field. Agronomists from the Ministry of Production should be provided by FECOAC when other technical assistance sources are not available. In addition, FECOAC should set up the DAPC program as a separate entity with specific guidelines, training courses, and with the requirement that a field inspector work for each cooperative to help the manager. Outside loans from credit institutions for each cooperative should be arranged especially for DAPC loans to members. Continuous training programs and supervision for both the cooperative managers and field inspectors should be implemented by FECOAC. The marketing problem should be studied in depth in collaboration with other interested institutions, especially of the government, and efforts should begin to attain stable, reasonable prices for the products of the members.

## II. OBJECTIVES AND METHODOLOGY

### Background

This is an evaluation study of the Directed Agricultural Production Credit Program (DAPC) of the National Federation of Credit and Savings Cooperatives (FECOAC) of Ecuador. It is concerned with the current state of the program in 1971, with the results of the program as of December, 1971, and with ways of strengthening it.

In a larger sense this study is also concerned with the viability of the concept of directed production credit. The concept of directed credit is deceptively simple to combine credit for production with technical assistance. Credit for production, according to FECOAC, should include (1) an investment or Work Plan, (2) payment of the loan in installments as needed instead of in a lump sum, (3) control of the loan by field inspectors, and (4) obligatory savings of part of the loan, usually about 10%. Technical assistance requirements are (1) attendance at preparatory courses which may include subjects such as cooperativism, technical practices, and explanations of the directed credit concept, (2) attendance at demonstrations of technical practices, (3) use of improved seeds and animals, (4) use of fertilizers and vaccination of animals, and (5) use of methods to control animal parasites and soil worms. In practice, however, many complicating factors enter into the picture, such as availability of credit, availability of appropriate technical assistance when needed, weather, marketing problems, fluctuating prices, understanding by the borrower of the concept itself; in short, all the problems which usually attend poor farmers in underdeveloped countries.

The testing of this concept began in 1965 with a pilot project in the northern mountain province of Carchi. The program was rapidly expanded to include many other cooperatives. However, this study is not concerned with the growing pains of the program which have been written about by a number of observers and participants from different perspectives. \*

\* "Manual de Crédito Dirigido para Producción Agrícola", Percy Avram and Ney López, 1968.

"A Study of a Pilot Project in Directed Agricultural Production Credit in Ecuador", John S. Davis, November, 1969.

"Programa de Crédito Dirigido a la Producción, a Través de Cooperativas de Ahorro y Crédito Informe de Desarrollo", Carlos Flores Romero, January, 1970.

"Estadísticas de Evaluación del Programa de Crédito Dirigido en las Cooperativas Rurales Afiliadas a FECOAC", Ing. Agr. Arnulfo Ibarra, Dec. 1970.

Our purpose is to provide an informed base for further improvement of the program.

But before launching directly into the description of the DAPC program and its results we shall set forth the objectives and methodology of the study. It is important for the reader to know the sources of information and methods of analysis used which provide the basis for our conclusions so that he can make his own judgements as to their validity.

#### Objectives

The objectives of this evaluation study are:

- To accurately describe the DAPC program.
- To evaluate the results of the DAPC program.
- To analyze factors affecting the DAPC program.
- To recommend improvements for the DAPC program.

#### Methodology

Seventeen credit cooperatives were designated by FECOAC as those which were fully integrated into the DAPC program.\*\* Sixteen of these cooperatives comprise the universe for this evaluation study. One small cooperative, Sucúa, was excluded because it is located in the province of Morona Santiago in the Oriente (jungle) and would have been costly to visit. Each of the sixteen cooperatives was visited. The manager was interviewed; data from the records of the cooperative on all production loans for 1971 were gathered; and 284 structured interviews were obtained from a random sample of loan recipients from nine of these sixteen cooperatives.

In addition two control groups were sought. One group of farmers who were members of credit coops and had received production loans but had not received technical assistance (28 interviews). The other group was farmers who had received technical assistance but had not had production loans (50 interviews).

Criteria for inclusion of individuals in the DAPC program for purposes of this study were:

- (1) Member of one of the sixteen designated cooperatives.
- (2) Recipient of a loan during 1971 (including renewal of a loan in 1971).
- (3) Purpose of the loan for agricultural production or raising animals.

Excluded were recipients of loans for commerce, artisan machinery or materials, personal emergencies, home building or furnishing, or purchase of personal items. Also excluded were recipient of loans to buy or rent land because these transactions, although related to greater production of crops or animals, are not presently included within the scope of available technical assistance.

\*\* Two other groups of cooperatives are in various stages of progress toward becoming full-fledged members of the DAPC program according to a report prepared by Ing. Arnulfo Ibarra in December, 1970. (Estadística de Evaluación del Programa de Crédito Dirigido en las Cooperativas Rurales afiliadas a FECOAC").  
13 Cooperatives beginning to use directed credit; 18 cooperatives in the study and promotional phase; the overall total number of cooperatives in some phase of the DAPC program is 47.

The study was conducted in four phases:

1. November 8 - 19: Planning, basic data gathering, interviews with managers, preparation of questionnaire, pretest of questionnaire, preparation of code for the questionnaire.
2. November 22 - 26: Basic data gathering, interviews with managers, preparation of the sample, training of the six-man interview team.
3. November 29 - December 31: Basic data gathering, interviews with managers, conducting interviews with cooperative members and control groups, coding of the completed questionnaires.
4. January - February, 1972: Data processing, analysis, and report writing.

The Sample

The descriptive data about the actual scope of the DAPC program were based on a complete sample of all sixteen cooperatives. In some cases when the coop was visited in November or early December, 1971, estimates were made for these months. The basis for each estimate, when necessary, is explained in the notes to Table Three. All but one of the sixteen cooperative managers were interviewed (see Annex A for the interview schedule) by Rodrigo Mera or Roberto Cruz, usually together. The one exception was due to the absence of the manager. His assistant was interviewed instead.

The sample of members of DAPC cooperatives was drawn as follows:

- (1) The sixteen cooperatives were grouped into four areas (Carchi, Pichincha, Tungurahua-Bolívar, and Los Ríos-Guayas).
- (2) Two cooperatives in each area were selected by agreement between the FECON Director, Ldo. Manuel Benítez, and the research team. Some were designated by the Director, others were selected at random.
- (3) The only change was that the research team decided to add, for sampling purposes, an additional cooperative in the province of Carchi. The additional cooperative (San Pedro Huaca) was only three kilometers from one already selected (Santa Teresita) and had originally been part of it. Thus nine cooperatives were sampled instead of the original eight.
- (4) The cooperatives sampled were:
  - (a) In Carchi (all three) - Carchi, Santa Teresita, and San Pedro Huaca.
  - (b) In Pichincha (two of four, selected at random) - Progreso and Paulo VI.
  - (c) In Tungurahua-Bolívar (two of the six) - John F. Kennedy (Tungurahua) and Guaranda (Bolívar).
  - (d) In Los Ríos (two of the three) - Daule and Pueblo Viejo.

These nine cooperatives represent 73% (853 members) of the total number of DAPC cooperative members in 1971 (1,171 members).

- (5) A complete list of DAPC members (those with production loans for 1971) was prepared for each of these nine cooperatives. A random sample was selected of about 45 members with the goal of obtaining at least 30 to 35 interviews. This flexibility was necessary due to the difficulty of locating an individual and,

sometimes, due to the distance between the members home and the cooperative headquarters. Most of the cooperatives were visited on market day to facilitate contacting the selected interviewees in town rather than in his fields. The goal of 30 to 35 interviews per cooperative was reached in all but one case, Guaranda, where resistance and lack of cooperation of the manager was encountered. Apparently, in Guaranda many cooperative members had been advised by outsiders a couple of weeks prior to the team's visit not to give any information to strangers because strangers never fulfill their promises of help or assistance. The warning was to refuse to be interviewed by other outsiders. They refused.

- (6) The sample was as follows:

<u>Cooperative</u>	<u>No. DAPC Members</u>	<u>Sample</u>
Carchi	195	36
Santa Teresita	111	25
San Pedro Huaca	54	22
Progreso	96	38
Paulo VI	31	31
John F. Kennedy	71	35
Guaranda	106	28
Daule	124	34
Puebloviejo	<u>65</u>	<u>35</u>
Totals	853	284

- (7) The sample for each cooperative was weighted according to the proportion of DAPC cooperative members in the cooperative to the overall total in order to arrive at estimates for the total DAPC program membership. The seven cooperatives that were not sampled were assumed to be sufficiently similar in basic characteristics to some of the sampled cooperatives to be included in the overall total on a weighted basis. Each of these seven cooperatives were matched with a sampled cooperative as follows:

<u>Cooperative Not Sampled</u>	<u>Cooperative Sampled</u>	<u>Province</u>
Yaruquí	Progreso	Pichincha
Puéllaro	Paulo VI	Pichincha
San Miguel	Guaranda	Bolívar
San Pedro	Guaranda	Bolívar
Magdalena	Guaranda	Bolívar
San Antonio	Puebloviejo	Los Ríos

#### Analysis of Information

Description of scope of the DAPC program in 1971 is based on the records of each of the 16 cooperatives. Descriptive analysis of the interviews with the cooperative managers and the description of each cooperative are done by Rodrigo Mera and Roberto Cruz based on their visits with each cooperative.

Analysis and evaluation of results of the DAPC program are based on the data obtained from 284 interviews of DAPC cooperative members. Results are measured in terms of income differences from 1970 to 1971, and in terms of production increases of 20% or more between the last harvest and the previous one. In some cases there were two harvests in one year, in others, only one harvest per year. Increases in annual production were based on last year (1971) and previous year (1970) differences. Comparisons are made with the control group, composed of individuals without credit but with technical assistance and of individuals not receiving technical assistance but receiving credit.

Various factors, such as size of land holding, amount of credit, number of contacts with an extensionist, or use of farm plan are analyzed to see what effect they have on increased income or production.

#### Recommendations

The last phase of the study consists of recommendations for strengthening the DAPC program. They are based on the evidence provided by the interviews with cooperative members, managers, and on the impressions of the research team.

### III. DESCRIPTION OF DAPC PROGRAM

In this section we present, first, general descriptive information about a number of factors relating to the DAPC program. Second, we set forth brief descriptions of each of the sixteen cooperatives in the DAPC program based on the impressions gained by the research team in their visits to each one.

#### Scope of the Program

The scope of the DAPC program can be indicated by: the number of participants, the number of cooperatives, the amount and type of loans, cost per participant, locality, average size of land holdings of participants, and the products of the participants. Each of these factors are discussed below. All the information pertains to the year 1971. In addition, three tables summarizing the loan data are included (Tables One, Two and Three).

#### Number of Participants

1,171 participants which represent 23% of the active members of the sixteen DAPC cooperatives. Rules for defining active members vary from cooperative to cooperative but generally they include members with savings of \$/ 100 or more or who have made deposits or received loans within the past six months. (See Tables One, Two and Three below for details).

#### Number of Cooperatives

16 cooperatives were designated as DAPC cooperatives by FECOAC for purposes of this study.

#### Amount and Type of Loans

In 1971 a total of \$/ 5,919,208 (US\$ 236,800) in production loans were granted by these sixteen cooperatives -- 42% (2,494,124 - US\$100,000) for agricultural loans and 58% (\$/ 3,422,084 - US\$ 136,800) for animal loans. (See Tables One, Two and Three below for details).

#### Cost per Participant

The cost per cooperative for the year 1971 was \$/ 11,390 (US\$ 456). This estimate was calculated by prorating the general cost of FECOAC per cooperative (indirect costs) and the direct costs of extensionists who are working with the program. (See Table Four).

#### Locality

The DAPC program is national in scope including four provinces in the Sierra (mountains) of Ecuador and two provinces on the coast.

Average Size of Land Holdings

An estimate based on the weighted sample of participants of land holdings for the entire program is as follows:

Less than one hectare	16.8%
1 - 3 hectares	32.6%
4 - 8 hectares	22.0%
More than 9 hectares	14.5%
No response	<u>14.1%</u>
TOTAL	100.0%

Products of Participants

Principal products of participants vary with the region: in the province of Carchi, potatoes, wheat and cattle; in Pichincha, wheat, barley, corn, cattle and chickens; in Tungurahua, potatoes, wheat, fruit trees, cattle, chickens and pigs; in Bolívar, wheat, barley, pigs and cattle; in Los Ríos, rice and corn; in Guayas, rice. For the program as a whole products produced are:

<u>Agriculture</u>		<u>Animals</u>	
Potatoes	44.5%	Cattle	57.2%
Wheat	28.1%	Pigs	35.3%
Rice	19.1%	Chickens	35.7%
Barley	16.9%	Others	<u>16.5%</u>
Fruits	1.9%		
Others	<u>33.4%</u>		144.7%

The percentage 143.9%

The percentage represents the proportion of all DAPC members who produce the listed item. Totals are more than 100% because most members produce more than one product.

Technical Assistance and Promotion

Technical assistance in agriculture is provided by one full-time agronomist on loan to FEEOAC from the Ministry of Production. In addition, some cooperatives have obtained the assistance of Agriculture Extension Service agronomists and other agronomists such as those working for agricultural product companies or who are members of agricultural college faculties. Promotion of the directed credit program is done by the regular extensionists of FEEOAC.

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TOTAL DAPC COOPERATIVES	TOTAL DAPC PARTICIPANTS		TOTAL DAPC LOANS			TOTAL AGRICULTURAL LOANS			TOTAL ANIMAL LOANS		
	No.	% OF ACTIVE MEMBERS OF DAPC COOPS.	SUCRES	No.	AVERAGE (SUCRES)	SUCRES (% OF TOTAL)	No.	AVERAGE (SUCRES)	SUCRES (% OF TOTAL)	No.	AVERAGE
16 COOPERATIVES	1171	23%	5,919,208	1573	3765	2,494,124 (42%)	899	2750	3,422,084 (58%)	674	5077

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TABLE TWO

SUMMARY DAPC INFORMATION BY PROVINCE (1971)

PROVINCE	DAPC PARTICIPANTS		TOTAL DAPC LOANS			AGRICULTURAL LOANS			ANIMAL LOANS		
	No.	% OF ACTIVE MEMBERS	SUCRES	No.	AVERAGE SUCRES	SUCRES % OF TOTAL	No.	AVERAGE SUCRES	SUCRES % OF TOTAL	No.	AVERAGE SUCRES
CARCHI	360	24%	2,319,285	443	5,235	503,927 (22%)	131	3,847	1,815,358 (78%)	312	5,818
FICHINCHA	289	27%	1,456,837	315	3,885	394,380 (27%)	167	2,362	1,062,457 (73%)	208	5,108
TUNGURAHUA	96	21%	423,942	227	1,868	303,973 (72%)	142	2,141	119,969 (28%)	85	1,411
BOLIVAR	201	18%	1,113,083	239	4,657	698,583 (63%)	175	3,992	414,500 (37%)	64	6,477
LOS RIOS-GUAYAS	225	27%	606,061	289	2,097	596,261 (98%)	284	2,100	9,800 (2%)	5	1,960

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TABLE THREE

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## DAPC INFORMATION BY COOPERATIVE - 1971

COOPERATIVE	DAPC PARTICIPANTS		TOTAL DAPC LOANS			AGRICULTURAL LOANS			ANIMAL LOANS		
	No.	% OF ACTIVE MEMBERS	SUCRES	No.	AVERAGE SUCRES	SUCRES % OF TOTAL	No.	AVERAGE SUCRES	SUCRES % OF TOTAL	No.	AVERAGE SUCRES
CARCHI	195	25%	1,402,896	259	5,417	226,433 (16%)	66	3,431	1,176,463 (84%)	193	6,095
SANTA TERESITA	111	30%	713,713	130	5,490	178,648 (25%)	36	4,962	535,065 (75%)	94	5,692
SAN PEDRO (HUACA)	54	14%	202,676	54	3,753	98,846 (49%)	29	3,408	103,830 (51%)	25	4,153
YARUQUI	96	38%	526,548	120	4,388	103,683 (20%)	39	2,658	422,865 (80%)	81	5,221
PAULO VI	31	11%	173,044	32	5,408	40,474 (23%)	17	2,381	132,570 (77%)	15	8,838
FUELLARO	66	45%	226,236	93	2,433	85,176 (38%)	65	1,310	141,060 (62%)	28	5,038
PROGRESO	96	25%	531,009	130	4,085	165,047 (31%)	46	3,588	365,962 (69%)	84	4,357
JOHN F. KENNEDY	71	20%	362,930	189	1,920	246,961 (68%)	106	2,330	115,969 (32%)	83	1,397

TABLE THREE (Continuation)

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DAPC INFORMATION BY COOPERATIVE 1971

COOPERATIVE	DAPC PARTICIPANTS		TOTAL DAPC LOANS			AGRICULTURAL LOANS			ANIMAL LOANS		
	No.	% OF ACTIVE MEMBERS	SUCRES	No.	AVERAGE SUCRES	SUCRES % OF TOTAL	No.	AVERAGE SUCRES	SUCRES % OF TOTAL	No.	AVERAGE SUCRES
LA LIBERTAD	25	25%	61,012	38	1,606	57,012 (93%)	36	1,584	4,000 (7%)	2	2,000
GUARANDA	106	14%	455,034	136	3,346	314,034 (69%)	105	2,991	141,000 (31%)	31	4,548
SAN MIGUEL	25	20%	207,968	25	8,319	161,368 (78%)	21	7,684	46,600 (22%)	4	11,650
SAN PEDRO GUANUJO	24	21%	207,666	32	6,489	119,766 (58%)	22	5,444	87,900 (42%)	10	8,790
MAGDALENA	46	24%	242,415	46	5,292	103,415 (43%)	27	3,830	139,000 (57%)	19	7,316
DAULE	124	27%	325,101	172	1,890	324,401 (100%)	171	1,897	700 (0%)	1	700
PUEBLOVIEJO	65	28%	164,560	63	2,612	155,460 (95%)	59	2,635	9,100 (5%)	4	2,275
SAN ANTONIO	36	24%	116,400	54	2,156	116,400 (100%)	54	2,156	0	0	0

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NOTES TO TABLE THREECARCHIData

Agricultural loans for the period January November, 1971, totalled \$/ 196,722 in 59 separate loans. Loans for December, 1971, were estimated by averaging the agricultural loans for January, 1971 and November, 1971. The December, 1971, estimate was \$/ 29,711 in 7 separate loans.

Animal Loans for the period January-November 1971 totalled \$/ 1,099,910 in 182 separate loans. Loans for December, 1971, were estimated by averaging the animal loans for January, 1971 and November, 1971. The December 1971 estimate was 11 loans totalling \$/ 76,553.

SANTA TERESITAData

Agricultural loans for the period January November, 1971 were \$/ 169,382 in 35 separate loans. Loans for December, 1971, were estimated by averaging the agricultural loans for January, 1971, and November, 1971. The December, 1971 estimate was one loan for \$/ 9,266.

Animal loans for the period January November, 1971, were \$/ 519,020 in 92 separate loans. Loans for December, 1971, were estimated by averaging the animals loans for January, 1971, and November, 1971. The December 1971 estimate was 2 loans for \$/ 16,045.

SAN PEDRO HUACAData

Agricultural loans for the period January November, 1971 were \$/ 98,080 in 23 separate loans. Loans for December, 1971, were estimated by averaging the animals loans for January, 1971, and November, 1971. The December 1971 estimate was two loans for a total of \$/ 5,750.

YARUQUIData

Agricultural loans for the period January November, 1971, were \$/ 102,739 in 37 separate loans. Loans for December, 1971, were estimated by averaging agricultural loans for January, 1971, and November, 1971. The December, 1971 loans estimate was two loans for \$/ 944.

Animal loans for the period January November, 1971, were \$/ 396,860 in 74 separate loans. Loans for December, 1971, were estimated by averaging animals loans in January, 1971 and November, 1971. The December, 1971 estimate was seven loans for a total of \$/ 26,005.

PAULO VIData

Paulo VI was visited on December 1 and 2, 1971. It was found that there was only one loan for agriculture or animal production given by the cooperative after the month of July. Therefore, no estimates for December are appropriate since it is unlikely that any loans would be made in that month.



The management of the Paulo VI cooperative distinguishes between directed credit loans and production credit loans. Six of their loans in 1971 were classified as directed credit loans, five of which were for chicken production. The data in the descriptive tables above includes both these directed credit loans and production credit loans.

#### FUÉLLARO

##### Data

The cooperative Fuéllaro was visited on November 24, 1971. Data on production loans were not available for November and December, therefore, estimates have been made for animal production loans for these two months.

Twenty-three animal production loans for a total of \$/ 117,550 were given for the January - October, 1971 period of ten months. Ten per cent of this figure was estimated as the monthly loans rate. Thus the estimate for animal loans for November and December, 1971, was 20% or \$/ 23,510 in five loans.

Agricultural production loans present a different situation. All but five of the 65 agricultural loans were for fertilizer in the January - June, 1971 period. Since the supply of fertilizer was exhausted by June, no further loans were given after this month. Therefore, no estimates have been made regarding agricultural loans for November or December, 1971. These loans for fertilizer were for wheat and potatoes. Incidentally, these 60 fertilizer loans were given without the necessity of a formal application or decision by the loan committee of the cooperative in order to facilitate the use of the fertilizer.

#### PROGRESO

##### Data

Agricultural loans for the period January - November, 1971, were \$/ 130,699 in 41 separate loans. An estimate for December, 1971, was made by averaging agricultural loans for January, 1971 and November, 1971. The December, 1971 estimate was five loans for a total of \$/ 34,348.

Animals loans for the period January - November, 1971, were \$/ 342,460 in 77 separate loans. An estimate for December, 1971, was made by averaging animals loans for January, 1971, and November, 1971. The December, 1971 estimate was seven loans for a total of \$/ 23,502.

#### JOHN F. KENNEDY

##### Data

The cooperative John F. Kennedy was visited December 30, 1971. The data are complete for the year 1971.

One aspect about the pattern of production loans of this cooperative should be noted. Only 71 members of this cooperative, with 357 "active" members on their books have received 180 production loans. There are five members with six or more loans. However, the average loans are much smaller than for other cooperatives.

#### LA. LIBERTAD

##### Data

The cooperative La Libertad was visited on November 17, 1971. Since there were only two animal production loans for the period January - October, 1971, no estimates for November and December, 1971 were made. These two loans were to buy beef calves.

Thirty agricultural loans for a total of \$/ 47,510 were made by the cooperative in the period January - October, 1971. The monthly average is \$/ 4,751 in three loans. The estimate for November and December, 1971, is \$/ 9,502 in six loans.

GUARANDA

Data

The cooperative Guaranda was visited on December 27, 1971, and complete data on agricultural and animal loans for the year 1971 were obtained.

SAN MIGUEL

Data

The cooperative San Miguel was visited on November 18, 1971. For the period January - November, 1971, only 4 animal loans totalling \$/ 46,600 had been given by the cooperative. Two of these loans were large, one for \$/ 20,000 and the other for \$/ 17,000, for the purchase of cattle. Since no logical pattern seems evident in animal loans, no estimate has been made for December, 1971.

Nineteen loans for agriculture were given by the cooperative for a total of \$/ 146,000. An estimate for December, 1971, was made on the basis of the average value of these agricultural loans for the whole period. The December 1971 estimate was for two loans totalling \$/ 15,368.

SAN PEDRO GUANUJO

Data

The cooperative San Pedro Guanujo was visited on December 27, 1971. Its data is complete.

MAGDALENA

Data

The cooperative Magdalena was visited on December 29, 1971. The data on production loans is complete for 1971.

DAULE

Data

The cooperative Daule was visited on December 20, 1971. The data on production loans for 1971 is complete.

PUEBLOVIEJO

Data

The cooperative Puebloviejo was visited on December 17, 1971. The data on production loans is complete.

SAN ANTONIO

Data

Agricultural loans for the period January - October, 1971, were \$/ 97,000 in 45 separate loans. An estimate for November and December, 1971, was made by averaging the loans over this ten-month period. The November - December 1971 estimate was \$/ 19,400 in nine loans.

TABLE FOUR

ESTIMATED EXPENDITURES FOR THE DIRECTED CREDIT PROGRAM IN 1971

Indirect Costs

General Administrative costs <sup>1</sup> \$/ 124,592.77

Direct Costs

Professionals assigned to FECOAC:

Salaries <sup>2</sup> 115,275.00  
 Bonuses 20,500.00  
 Local transportation and per diem <sup>3</sup> 69,754.00

Two Directed Credit Promoters:

Salaries <sup>4</sup> 38,401.26  
 Local transportation and per diem 7,794.90

Directed Credit courses and seminars <sup>5</sup> 12,769.66

FECOAC Extensionists:

Salaries <sup>6</sup> 80,914.96  
 Local transportation and per diem <sup>7</sup> 37,971.96

Education Director:

Salary <sup>8</sup> 9,063.00  
 Local transportation and per diem <sup>9</sup> 1,875.79

Education expenditures <sup>10</sup> 13,956.08  
 Education materials <sup>11</sup> 2,499.44

Estimated Grand Total for the Directed Credit Program in 1971 \$/ 535,366.80  
 (U.S. \$ 21,400) \*

Estimated costs per cooperative in all phases of the DAPC program in 1971 (47 cooperatives) <sup>12</sup> \$/ 11,390.76  
 (U.S. \$ 455)

Estimated costs per member who received production loan in DAPC program in 1971 <sup>13</sup> \$/ 457.14  
 (U.S. \$ 18.30)

Estimated costs per member of all 47 cooperatives who borrowed for production purposes <sup>14</sup> \$/ 143.00  
 (U.S. \$ 5.74)

Estimated costs per active member of all 47 cooperatives in the DAPC program <sup>15</sup> \$/ 32.00  
 (U.S. \$ 1.32)

\* Note: Dollar sucre rate for 1971 was \$1.00 = \$/ 25

NOTES TO TABLE FOUR

1. FECOAC general costs for 1971 \$/ 681,283.42  
Affiliated credit unions in FECOAC in 1971  
according to manager of FECOAC 257 cooperatives  
  
Costs per cooperative in 1971:  
general costs \$/ 681,283.42 = \$/ 2,650.91  
No. of coops. = 257  
  
Number of affiliated cooperatives in all phases of DAPC program in  
1971 according to statistics provided by FECOAC 47 cooperatives.  
  
Estimated cost per cooperative in all phases of the DAPC program:  
 $2,650.91 \times 47 = $/ 124,592.77$
2. Estimated salaries for the professionals of the Ministry of Production  
assigned to FECOAC.
3. Local transportation and per diem paid to professionals assigned to  
FECOAC, including payment to other professionals of the Ministry of  
Production who worked with the program from time to time.
4. DAPC promoters who worked in January through March of 1971.
5. Third Inter American Credit Union Seminar (rural development) financed  
by the Credit Union National Association (CUNA). Ten per cent of the  
general costs was for four extensionists of FECOAC. The number of  
participants was 42.
6. Twenty per cent of the time of the regular extensionists of FECOAC  
was estimated by the manager of FECOAC to be devoted to promotion  
of the Directed Credit program.
7. Twenty percent of extensionist transportation and per diem costs.
8. Ten per cent of the salary of the education director was estimated  
as applicable to the Directed Credit program.
9. Ten per cent of the education director's transportation and per diem  
costs.
10. Ten per cent of the education programs were estimated to be related  
to Directed Credit.
11. Ten per cent of the cost of education materials applied to Directed  
Credit.
12. The estimated cost of each cooperative in all phases of the DAPC  
program is:  
$$\frac{\text{Total costs } 535,366.82}{\text{All DAPC coops } 47} = $/ 11,390.78$$
13. Estimated cost per member of the 16 cooperatives in the operating  
stage of the Directed Credit program (1,171 members):  
$$\frac{\text{Total costs } 535,366.82}{1,171} = $/ 457.18$$

14. Estimate cost of per member of all DAPC cooperatives (47) who probably received production loan in 1971 based on the percentage of the sample (23%).

Number of active members in all 47 cooperatives according to the records of FECOAC = 16,230 members.

Number who probably received production loans in 1971:

$$23\% \times 16,230 = 3,753 \text{ members}$$

Estimate of cost per member receiving (estimated) loans:

$$\begin{array}{r} \text{Total costs } 545,366.82 = \$/ 143.41 \\ \text{Loan recipients } 3,733 \end{array}$$

15. Estimated cost per member of all cooperatives in all phases of the DAPC program:

$$\begin{array}{r} \text{Total costs } 545,366.82 = \$/ 32.99 \\ \text{All active members } 16,230 \end{array}$$

#### INDIVIDUAL COOPERATIVES

In this section each cooperative is briefly described. Included is Table Five which lists the basic general characteristics of the sixteen cooperatives.

#### CARCHI

##### Description

Carchi is one of the four credit unions in the city of Tulcán. This cooperative is composed of 90% farmers. The agricultural products are: potatoes, wheat, barley, cattle, milk cows and, on a smaller scale, pigs and chickens.

##### Administration

The cooperative is progressing well primarily due to competent management. The manager displays great interest in giving and obtaining agricultural technical assistance help for the members from both governmental and commercial sources. The cooperative has acquired a demonstration farm to aid members in learning practical knowledge of new agricultural techniques. There are plans to buy agricultural machinery to serve the members at a reduced cost. The manager is also interested in providing new services such as life insurance on loans and savings offered by the Ecuadorian Insurance Cooperative, an off spring of FECOAC (Credit Union Federation).

The Board and Committees of the cooperative cooperate with the Manager in these efforts and in the administration and field inspection for the cooperative. Financially, the cooperative has obtained funds not only from the Cooperative Bank but also from national banks and other international sources.

##### Problems

The problem of this cooperative are those which are generally found among all cooperatives in the DAPC program: lack of capital, lack of sufficient technical help, and a need for further education of cooperative members.

SANTA TERESITADescription

Located in the town of Julio Andrade in Carchi, this rural cooperative served as the pilot project in directed credit in 1965. During this time the cooperative received intensive technical assistance from FEEOAC for an extended period of time. In this growth period there was a notable increase in the standard of living of the members which was evident by the establishment of a weekly market in this town in order to sell their products. At the present time the cooperative does not maintain their education and promotion programs with the same intensity and appears to be in a slump. The products of the members are potatoes, wheat, barley, cattle, milk cows and some pigs.

Administration

The manager appears to be a man who gave a great effort in the past and now has entered in a decline. His administrative performance and his relations with cooperative members are less effective; he is very capable but appears tired. Perhaps if he changes cooperatives or assumes another job in the D&PC program he will once again become effective. There are also three employees in the cooperative administration who do not appear necessary. The Board and Cooperative Committees cooperate with the manager but without enthusiasm. The members of the cooperative receive technical assistance from an agronomist from the Agricultural Extension Service who has been assigned by FEEOAC to the cooperatives of Carchi. The cooperative has received loans from the Cooperative Bank but due to loan delinquency their line of credit is closed.

Problems

The main problem of this cooperative is loan delinquency caused by low prices for potatoes.

There is also no promotion for new members, no educational programs for present members and no help from the Extensionist of FEEOAC.

SAN PEDRODescription

This cooperative is situated in the town of Huaca in Carchi. It is progressing well in terms of new members and increases in capital. The members are mostly farmers who raise potatoes, barley, and wheat along with cattle, milk cows and pigs.

Administration

The manager is well motivated to provide cooperative education and technical assistance to the members. An agronomist is assigned by FEEOAC to assist the cooperative by periodic visits to the members. Working with the members, the agronomist has established a demonstration plot to raise potatoes on one hectare of land. A model budget has been developed to show the members the costs of each phase of production and whether there has been a profit or a loss.

Problems

Lack of help from the extensionist from FEEOAC; for example, many times the members have net and waited for the extensionist who did not arrive. There is some loan delinquency due to the low prices for potatoes. Many debts have been consolidated and the manager expects a lower delinquency rate in 1972. The D&PC program began in 1968 in this cooperative with a loan rate of 20 times the amount of savings, presently it has a low rate of three times the amount of savings.

### YARUQUI

#### Description

This cooperative, which is in the town of Yaruquí, Pichincha, began a DAPC program in 1966. This cooperative served as a model for the program and was visited by many interested parties both from Ecuador and other countries. It was also used as a pilot project for fertilizer promotion by the United Nations' Food and Agricultural Organization (FAO). The principal products of the area are corn, barley, potatoes, cattle, pigs and chickens.

#### Administration

These innovative activities resulted from the leadership of the cooperative manager and the participation of the Agricultural Extension Service. Presently, the cooperative has fallen into a state of decline; adequate leadership no longer exists due in part to the absence of the manager who lives in Quito and only visits the cooperative on the weekends. The committees no longer meet regularly and technical assistance from the Extension Service is almost totally absent. Scarce capital has resulted in fewer loans and in reduced proportion to savings; instead of 10 times savings, loans are now only given 3 times savings. Available capital is limited to unused loans from the Cooperative Bank. The members, however, continue to receive visits of the field inspector of the cooperative.

#### Problems

The above mentioned factors have produced a negative attitude among the members with many of them withdrawing their savings. Loan delinquencies have risen and have created problems in the repayment of obligations to the cooperative. The sale of fertilizers to cooperative members has practically stopped.

### PAULO VI

#### Description

Located in the town of Tumbaco in Pichincha, this cooperative has dedicated its DAPC program almost exclusively to chicken production because of the availability of technical assistance in the area.

#### Administration

The manager is young but with limited experience in his job. He has acquired his knowledge of directed credit on his own by studying the manual and by attending some conferences. He is interested in the program but has achieved few results because his major effort has been devoted to improving the economic situation of the cooperative. The DAPC program for this cooperative needs technical assistance.

#### Problems

The cooperative apparently lacks the active support of committee members and most of the members themselves.

### PUELLARO

#### Description

This cooperative is in the town of Puéllaro, close to Quito. It is a relatively new cooperative with about half of its members in farming. The level of interest in the cooperative by both the members and the leadership appears very low. This cooperative has not participated in any way in the DAPC programs; there is no technical assistance for members, there

is no control of loans, there is no plan of work, etc. A large proportion of the members that have received loans, raise chickens. Other products of the cooperative members are wheat, potatoes, along with cattle and pigs

#### Administration

The manager is a person who apparently has a very limited understanding of the functions of a cooperative manager even though he has attended at least three basic management courses in cooperativism. Our impression, in our conversations with him, was that he depends a great deal on the guidance and knowledge of the local catholic priest. There are no active Board of Directors or Committees; there were no meetings during the entire year. All the management of the cooperative educational programs, finances and loan control are done by the manager. During the months of September and October new members joined the cooperative due to the prospective availability of credit for fertilizers - 20,000 pounds of fertilizer were promised to the cooperative by FECONAC in November. The entire capital of the cooperative comes from the savings of the members. The cooperative has no relationship with the Cooperative Bank.

#### Problems

In spite of the manager's efforts to motivate the members to attend the annual meetings, there is very low participation. Apparently, the members think of the cooperative only when they need a money or fertilizer loan.

#### PROGRESO

##### Description

This cooperative is situated in the town of Atahualpa in Pichincha. In spite of only two and half years of life, the cooperative has provided credit to many people who previously had none. Not only has the cooperative had a positive influence on its members but also on the community at large. The cooperative members are almost all farmers who raise wheat, potatoes, barley along with chickens, milk cows, cattle and some pigs.

##### Administration

The progress of this cooperative is due to the leadership of the manager and the efforts of the Board and Committees of the cooperative. They have worked to provide cooperative education to the members and provide services such as the sale of fertilizers at a better price and at an exact weight. In addition, an effort is being made to provide services to members that are offered by the Ecuadorean Insurance Cooperative such as life insurance on loans and savings, and to send some members of the cooperative to courses that are given in other parts of the country. The relationship with the Cooperative Bank is excellent.

##### Problems

The management is concerned with obtaining technical assistance for the members to improve the knowledge already obtained from agricultural stores. There is a lack of sufficient fertilizers to fulfill the demands of the members.

#### JOHN F. KENNEDY

##### Description

This cooperative is located in the community of Caserío Huachi-La Magdalen close to Ambato. The cooperative has members from both the rural sector and from the city including professionals who work in the Agriculture School Luis A. Martínez. This cooperative continues to grow due to the confidence

of the members in the manager and the Board of the cooperative. The production loans of the cooperative are for agriculture, cattle and chickens including loans for irrigation, farm labor, potatoes, garlic, flowers, pigs and sheep.

#### Administration

The manager has received many courses in cooperativism and in cooperative management at all levels including the visits to other cooperatives. These experiences have helped him improve the administration of this cooperative. He is interested in providing more services to cooperative members such as technical assistance from the Agricultural Extension Service and a marketing system for the products of the members not only for sale in Ambato but also Quito and Guayaquil. He wants to establish warehouses for the cooperative, obtain certified improved seeds and is trying to introduce new products in the area such as garlic.

#### Problems

The principal problems of the cooperative are lack of capital increases, loan delinquency and the relationship with the Cooperative Bank, which has ceased due to excessive requirements made by the Bank.

#### LA LIBERTAD

##### Description

This cooperative is in the community of Caserío Huachi-La Libertad, near Ambato. This cooperative is only two years old and has mostly members dedicated to agriculture. In 1971 the cooperative began a program in directed credit, giving credit not in money but in products. The cooperative members received technical assistance from agricultural extensionists regularly each week, including help in preparing a work plan for the crops. The members actively participate in cooperative meetings. The principal products of the area are apples, plums and strawberries; in addition, some cattle and chickens are raised. The cooperative is financed from the savings of the members and from loans from the Cooperative Bank.

##### Administration

The Board of Directors and the Committees meet regularly and work closely with the manager for the betterment of the cooperative.

##### Problems

Apparently no major problems, except lack of capital.

#### GUARANDA

##### Description

The cooperative is located in the town of Guaranda. The cooperative has many members from nearby rural zones including a substantial number of Indians who have less education than other members. This is one of the few cooperatives that has an adequate economic situation for ordinary loans but lacks sufficient capital for a strong DAPC program. The production loans of the members are used for wheat, barley, potatoes, cattle and some pigs.

##### Administration

The sound economic situation of the cooperative reflects a capable administration and manager. Nevertheless, the DAPC program is not adequate.

There are good relations with both governmental and commercial agronomists who provide technical assistance to the cooperative members. The cooperative has good relations with the Cooperative Bank and in addition has obtained a loan from the Arizona Central Credit Union of the United States. The management is also seeking to provide other services to the members such as the loan protection and life savings plan and agricultural products such as fertilizers, insecticides, etc.

#### Problems

The manager has not fully accepted the DAPC program because it involves additional work for him, such as giving credit in steps and visiting members on their farms to control the use of loans.

#### SAN MIGUEL

##### Description

Located in the town of San Miguel in Bolívar in a completely rural environment, the cooperative nonetheless give 80% of its loans for commercial purposes.

In 1968 the cooperative started a DAPC program with the help of a loan of about US\$ 5,000 from the Cooperative Bank and with the technical assistance from the Agricultural Extension Service and agricultural product stores. The products of the zone are wheat, corn and some coffee.

##### Administration

The manager has received cooperative courses and is interested in improving services for members such as a store for the distribution of agricultural products. He is interested in the DAPC program but needs to be motivated to provide education in directed credit for cooperative members.

#### Problems

The cooperative requires loan recipients to save 10% of a loan. This policy is opposed by the members of the cooperative who therefore request ordinary loans instead of directed credit loans.

#### SAN PEDRO

##### Description

Located in the town of Guanujo in Bolívar, this small cooperative is composed of about 75% farmers. The products are barley, wheat, potatoes, coffee, pigs, cattle and some milk cows.

##### Administration

The manager apparently does not have a clear concept of directed credit; nevertheless, the members have technical assistance and credit at times reaching 20 times savings. The manager is a very active woman who maintains cordial relationship with Agricultural Extension Service and agricultural product stores which provide technical assistance to the members. The supervision of directed credit is done by the manager personally. The credit committee meets with the manager each week and the other committees when necessary. The capital of the cooperative comes primarily from the savings of the members. The relationship with the Cooperative Bank are good but the cooperative does not have a loan from the Bank because of the delays it has experienced in past years.

#### Problems

The problems of the cooperative are lack of adequate capital and a better understanding of cooperativism by the members.

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LA MAGDALENA

Description

This cooperative is in the town of La Magdalena in Bolívar. The majority of the loans to members are used in business. The agricultural products of members who are farmers are corn, lentils, cattle and pigs.

Administration

The manager is dynamic and supports the DAPC program. He thinks that the directed credit requirement of giving credit in steps is too complicated. He maintains good relations with the Agricultural Extension Service and with agents of agricultural products stores which provide technical assistance to members. The manager has the support of both the Board and Committee members of the cooperative and meets with them regularly.

Problems

The major problem facing the manager has been loan delinquency of the members due to poor harvests caused by bad weather. Loan delinquency were at 12% but now are down to 7%.

DAULE

Description

Located in the town of Daule in Guayas, this cooperative is composed of rural farmers of the area. About 70% of the members are farmers that primarily cultivate rice. The cooperative appears to be progressing steadily.

Administration

The leadership of the manager has led to improved administration by the Board of Directors and the cooperative Committees. In order to provide more technical assistance to the members, the manager has established relationship with the Agricultural School of Daule. He is acquiring technical knowledge from the school which is related to the problems of the members and in addition arranges visits by professionals from the school to groups of members. The cooperative sometimes pays for transportation expenses. He is planning to acquire agricultural machinery to provide to the members. The manager is also planning to develop a marketing system for its members. The majority is also planning to develop a marketing system for its members. The majority of agricultural members of this cooperative also belong to other agricultural cooperatives in order to acquire land. The capital of the cooperative comes from savings of the members, loans from the Cooperative Bank and fertilizers from FECCAAC.

Problems

Loan delinquency of the members due to poor harvests is the major problem. The cooperative either makes arrangements for payments with the delinquent member or assigns collection to a lawyer. The direct technical assistance by professionals of the Agricultural School is diminishing for lack of money to pay their transportation costs. There is also a lack of capital.

PUEBLOVIEJO

Description

Located in the town of Pueblo Viejo in Los Ríos, this cooperative appears to be progressing well after a period of slump. About half of the members of the cooperative are farmers who produce rice, corn and cattle.

Administration

The new manager is young and dynamic and makes up for lack of knowledge with enthusiasm. The manager's enthusiasm appears to be shared by the Board of Directors. The DAPC program is being partially implemented but there is no technical assistance available to members. The cooperative has not established relations with either governmental or private sources of technical assistance.

Across the street from the offices of the cooperative is an agricultural school which might be able to provide some technical assistance to cooperative members.

The capital of the cooperative is provided by the savings of the members as well as loans from FECONAC and other credit sources.

Problems

The main problems are complete lack of technical assistance for members of the cooperative and lack of basic cooperative and technical education for the members. Some members have attended courses but have not shared their new knowledge with other members. There is also a lack of capital.

SAN ANTONIO

Description

This cooperative is in the town of Montalvo in Los Ríos. The principal products of the area are rice, coffee, cacao and corn.

Administration

The manager of the cooperative is a nun who has just recently assumed this job. Apparently there is little activity in the cooperative, perhaps because of the manager's lack of experience and knowledge of the cooperative movement. There have not been relationships established by the cooperative and the available agricultural technicians, in spite of the knowledge by the manager that an agronomist of the Ministry of Production works in the area.

Problems

The manager was uninformed about the DAPC program and did not show much interest in the program after it was explained to her. This lack of interest may be caused by the lack of communication between the Extensionist of FECONAC and the cooperative.

TABLE FIVE

GENERAL INFORMATION ABOUT DAPC COOPERATIVES 1971

COOPERATIVE	REGISTERED MEMBERS	ACTIVE MEMBERS	CAPITAL (1971)	DATE OF LEGAL FORMATION	YEARS OF OPERATION OF THE CREDIT UNION	PROVINCE
CARCHI	996	780	350,844	4/13/65	6.6	CARCHI
S.N.T. TERESITA	397	356	1'609.162.18	11/26/64	7.8	CARCHI
SAN PEDRO (HUAC.)	395	378	1'076.551.49	4/ 3/67	4.7	CARCHI
YARUQUI	280	250	1'206.701.97	7/22/66	5.4	PICHINCHA
PAULC VI	300	270	639.597.28	1/17/69	2.0	PICHINCHA
PUELLARO	165	148	299.343.75	4/17/69	1.6	PICHINCHA
PROGRESO	431	390	1'321.757.27	5/27/69	1.5	PICHINCHA
JOHN F. KENNEDY	494	357	75.108.00	6/ 4/64	1.5	TUNGURAHUA
L. LIBERTAD	152	98	170.991.02	1/ 7/69	2.0	TUNGURAHUA
GUARANDA	1270	733	3'785.841.02	2/19/64	7.8	BOLIVAR
SAN MIGUEL	135	124	761.790.41	8/28/67	4.3	BOLIVAR
SAN PEDRO (GUANUJO)	118	112	61.053.00	9/25/63	8.8	BOLIVAR
M.G.D. LEN.	232	190	369.925.52	7/ 1/68	3.4	BOLIVAR
DAULE	600	465	873.851.75	8/17/65	6.3	GUAYAS
PUEBLOVIEJO	240	232	365.919.13	9/23/68	3.2	LOS RIOS
SAN ANTONIO	173	150	311.692.66	10/ 1/69	2.2	LOS RIOS
TOTALS .....	6384	5038	12'797.995.50			

135

**IV. OPERATION OF DAPC PROGRAM**

In this section we present an overview of the operation of the DAPC program from the point of view of the managers of the 16 cooperatives. Four subject areas are discussed: Orientation, (knowledge and interests of the managers), Process of Granting and Administering Production Loans, Technical Assistance and Investment Plan. In addition, are set forth some other aspects of cooperative operation which relate indirectly to the DAPC program. These other four aspects are: attendance at meetings by members, training of managers, relations with the Cooperative Bank, and marketing.

**A. Principal Aspects of the Operation of the DAPC Program**

**1. Orientation, knowledge and interests of cooperative managers**

Our interviews with the managers of the DAPC cooperatives covered the basic points of the program and other aspects of the cooperatives (See Annex A).

On the basis of our interviews, we can classify the 16 managers as follows:

- a. Ten of the managers had a clear understanding of the directed credit concept.
- b. Four had a general idea of directed credit.
- c. And two had no idea what directed credit was.

Another classification of the cooperative managers based on their interest in the DAPC was:

- a. Of the ten managers who understood directed credit, five were very positive in supporting the program. Three apparently were neither overly interested nor negative. The last two of this group didn't manifest any interest whatsoever in the DAPC.
- b. All four of the managers who had a general idea of the DAPC program were interested in knowing more and establishing the program in their cooperatives.
- c. One of the two managers who knew little about directed credit showed some interest after discussing the program with him. The other remained uninterested.

The following table summarize these classifications:

**KNOWLEDGE AND INTEREST OF THE DAPC COOPERATIVE MANAGERS**

KNOWLEDGE	INTEREST			TOTAL
	POSITIVE	AVERAGE	NEGATIVE	
Clear understanding of directed credit	5	3	2	10
General idea of directed credit	4	.	.	4
Had no idea of directed credit	.	1	1	2
<b>TOTAL</b>	<b>9</b>	<b>4</b>	<b>3</b>	<b>16</b>

Generally speaking all those with an understanding of the DAPC thought that DAPC is one of the most valuable methods of improving agricultural and animal technology of the members and increasing production.

Some comments by managers illustrate their orientation toward the DAPC program:

- \* "Directed credit is one of the best things we could have, especially to increase the technical knowledge of the members".
- \* "It's the only way that a member can begin to receive technical help from the agronomist".
- \* "Directed credit is good because it helps members learn new techniques, but it has not succeeded in the case of the cultivation of garlic for lack of good seeds and capital".
- \* "The production of potatoes increased but the price decreased, therefore, we haven't been able to continue in directed credit".
- \* "In order to have the advantages of production credit, more attention must be given to the members, continual educational programs for them, and more governmental technical assistance".
- \* "We were only a savings and loan cooperative, then FECONAC sold the idea of directed credit which was well accepted. The cooperative needs machinery (a tractor, a plow) in order to provide better services to the members since we have an average of 3 to 7 cuadras per family and there are a total of more than 1,000 cuadras. The present price for plowing one cuadra is 400 sucres (US\$16)".
- \* "I haven't received any training in directed credit; all I know is what I have learned by myself, by reading the manual and listening to some lectures".
- \* "We thought about entering the DAPC program but we didn't have technical assistance. We thought about obtaining loans from the Cooperative Bank for the program, but we didn't do it because of lack of technical help. We only give normal and ordinary loans in the cooperative, we do not have anybody to help us".
- \* "Directed credit is not used here because we don't know about it and because we are not sure it will help improve production".
- \* "Because of the efforts of the promoter of directed credit, it was decided to begin with this program in order to rehabilitate the cooperative. I entered the program in March of 1970 with 120 'bad' members and 130,000 sucres (US\$5,200) in capital. We started on some cooperative orientation campaigns in order to improve the cooperative".
- \* "The lack of promotion of the DAPC is one of the reasons we don't have more members. We haven't received any education".
- \* "The members don't help much because they have very little education in cooperativism. They received only one course in cooperativism at the basic level given in one week by representatives of FECONAC. We need fertilizers".

2. Directed Credit: Requirements, Credit Committee, Credit Policy and Control

Requirements to obtain directed credit

We didn't find a common criteria among the 16 cooperatives concerning the necessary requirements to obtain directed credit in spite of the desirability of having the same requirements for all cooperatives in this program. The requirements vary from one cooperative to the other, depending on the interpretations of directed credit given by the managers or the boards of the cooperatives.

Some answers given by the managers illustrate these different interpretations of directed credit:

- \* "Our requirements are savings and education in the use of capital and chemical products for a minimum of two hours before applying for the loan. Also submit a work plan. Education continues during the field inspection and on the demonstration field the cooperative has just bought for the members. Moral character and economic reliability. Provision of insurance on loans. Retention of 10% of the amount of the loan".
- \* "Receive eight hours of training in cooperativism, directed credit and regulations. In 1965 they received weekly training - practical training for the members in each of the communities on a rotating basis. Consumer, commercial and agricultural credit have the same requirements".
- \* "The members prefer ordinary credit to directed credit in order to avoid the 10% capitalization".
- \* "To be an 'active' member of the cooperative. To prepare a work plan together with the manager. Following the plan and the technical assistance of the veterinarian when the loan is for poultry. We have no technical assistance in agriculture".
- \* "Fill out an application. Be an active member. Submit to technical assistance from the Extension Service. Prepare a work plan with an open line of credit".
- \* "Good moral character. Knowledge of cooperativism. Guarantor. To be a member at least two months. Proof of actually being a farmer. To have land resources and ability to farming".

"We have given some courses on cooperativism but the members did not attend because they were tired, lived too far away and especially because they were not very interested in theory. Generally they also belong to two or more agricultural cooperatives. I think they are confused since everybody is talking about cooperativism. There ought to be coordination between institutions. The credit is given according with the economic capacity of the member beginning with a work plan, but when one gets to know a member he doesn't have to meet any requirements".

Credit Committee

In all of the cooperatives, the credit committee is the organ that grants or denies credit. This decision is based on the manager's report and in some cooperatives a report by a field inspector is also required.

- \* "Credit is granted by the credit committee based on the manager's report, after the visit by the field inspector".
- \* "The credit committee study all the applications prior to granting loans".
- \* "The credit committee grant loans based on reports by the field inspector and the manager".

Credit Policy

In all the cooperatives there have been a readjustment of the directed credit policy. After experiencing many problems caused by large loans granted which in some cases were up to 20 times the amount of savings of the borrower, the credit policy was realistically established in accord with the economic capacity of the cooperative. The principal problem faced by the managers, besides decapitalization of the cooperatives in benefit of few members, was loan delinquency.

Credit is given sometimes by lump sum, sometimes in installments. In some cooperatives it is given in agricultural products, in others in both products and money, or only in products. The payment period varies with the internal regulations of each cooperative.

- \* "The cooperative gives the member a check which he takes to the fertilizers warehouse and buys what he needs".
- \* "In directed credit we give up to three times the amount of savings with the maximum payment period of 10 months. We have been in the program since 1953 but only really began in 1970 with the arrival of the agronomist".
- \* "We give ordinary credit at three times savings of the member. Directed credit is based on the internal regulations of the cooperative according to the following table:

<u>Savings</u>	<u>Loans</u>	<u>Maximum</u>
5,000 sucres	Up to five times	25,000 sucres
5,000 to 7,000 sucres	Up to four times	28,000 sucres
7,000 to 10,000 sucres	Up to 3,5 times	25,000 sucres
15,000 sucres and up	10% of savings	7,500 sucres up

- \* "The farmer receives the loan in agricultural products according to the plan. When he raises animals, he receives all the loan in money".
- \* "We have a regulation for directed credit that says the member ought to receive a loan up to five times his savings. This would decapitalize the cooperative. Normal loans are three times the savings of the member".
- \* "For egg production the loan is given in installments and for raising chickens the loan is given in a lump sum".
- \* "Before, directed credit loans were given up to ten times the savings of the member, now they are given at three times savings, that is like an ordinary loan. They are given in installments because of lack of money. The obligations of the cooperative to the bank (Cooperative Bank) have preference".

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"Directed credit is given only in agricultural products, it's not given in money".

"Credit is given in partly in money and partly in fertilizers and seeds".

\* "For production credit, we give a maximum of 10,000 sucres with 500 sucres of savings, but always depending on the type of member. For ordinary loans we give three times savings with a payment period of six months. For production loans the payment period is ten months. Some receive the loan on fertilizers, seeds, insecticides, only some ask for the loan in money. I visit them to see the land".

\* "Loans are given in installments, this is complicated for the manager. Credit was given up to ten times savings, now the regulations provide up to five times savings".

\* "Credit is given in installments which is a lot of work for the manager. The loans are not supervised because we don't have a field inspector. Some members are indians who are illiterates. We need to increase our economic resources in order to serve the members".

"The cooperative gives credit in chemical products and established its own store which also served non members".

"Credit is given by steps in accord with the plan, also it is given in fertilizers, agricultural products, etc. Maximum financing is for three or four cuadras".

\* "Credit has been closed since the month of August until the end of October due to the lack of money for loans".

#### Control of Credit

There are no general norms among the cooperatives for the control of credit. The control policy of the cooperative is established by the manager depending somewhat on the economic resources of the cooperative.

Some cooperatives pay a field inspector to check on the proper use of loans; in other cooperatives which do not have sufficient money to pay a field inspector, the manager assumes the responsibility for control and in other cooperatives there is no control whatsoever.

"Control of loans cannot be made more than once or twice a year due to lack of personnel, but for specific programs (education projects for groups of members) complete control is exercised".

\* "Loans are controlled by a field inspector who makes periodic visits with the agronomist to check progress based on the work plan, to give help to the members, etc."

\* "I control loans personally since there is no field inspector".

\* "I visit the members once in a while to see how they are using the loans".

\* "The field inspector makes visits to control the credit; however, these visits are requested by the members".

"We do not control the credit because we don't have a field inspector".

- \* "I visit the members to see if they are spending the money according with the plan".
- \* "I visit the members each month, but there is no technical control".
- \* "There are problems in controlling loans for lack of personnel. We need a large quantity of fertilizers".
- \* "There is a high rate of loan delinquency among the members due to low incomes. Before we gave credit in fertilizers and certified seeds but we had many problems. Now we have a store in the cooperative center. Loans are now given in money".
- \* "The problem of loan delinquency is often given to the lawyer for collection, other times the problem is handled by mutual agreement with the member".

### 3. Technical Assistance

In some cooperatives technical assistance is given by a professional from the Agricultural Extension Service assigned to FEEOAC. This assistance is coordinated by the manager and the chief of personnel of the delegation of the Ministry of Production of the zone. To use the time and the knowledge of these agricultural professionals in the most effective way and to reach more people, some managers have opted for the system of group learning, working with the professionals in groups rather than individually. Nevertheless, many members that need individual help may obtain it.

In other cooperatives, technical assistance from the Agricultural Extension Service is very irregular, sometimes being no more than one contact by the agronomist and the member. Some cooperatives receive regular technical assistance from the agronomist who work for agricultural companies. Finally, there are some cooperatives with absolutely no technical assistance.

- \* "We provide theoretical and practical technical assistance to groups from 17 communities with the help of the Agricultural Extension Service. We try to work with the youth of the 4 F Clubs because they accept change more easily than adults. Adults are very difficult to change. Technical help is given to the cooperative by personnel of the Agricultural Extension Service and the agronomist of FEEOAC. Generally they teach the members how to use fertilizers based on soil analysis. The member brings a sample of his soil here and we send it to FERTISA for analysis".
- \* "We meet periodically with the agronomist or on special occasions when the members request it to increase the technical knowledge. In Fátima a group of members have rented some land and work together under the direction of the agronomist from FEEOAC. This professional is available to give help to the members".
- \* "We receive technical assistance from the Agricultural Extension Service, some from agricultural products companies and some from our own members since some of them are professionals and others study in the Agricultural College. With directed credit, the field inspector takes the products personally to the members and teaches them how to use them. The Agricultural Extension Service gives technical assistance each week in the use of fertilizers to all the members of

the cooperative. There is a work plan that is prepared by the professionals of the Agricultural Extension Service which they discuss with the members".

- \* "We have the technical assistance of the Agricultural Extension Service of the National Wheat Commission; the members have great confidence in them. We would like to have our own personnel to improve technical assistance and to provide supervision".
- \* "We began directed credit with the help of the Agricultural Extension Service and agricultural products companies. I attended courses in directed credit and give help to the members".
- \* "We had a two hour meeting a year ago with the agronomist in charge of the program. They spoke about many things such as chickens, pigs, etc. but they only talked, they didn't return to do anything. They made soil analysis and prepared a demonstration plot for fertilizers for corn, but they didn't return. It was a fiasco. We have no technical help. They only give us words".
- \* "We had the technical assistance of a veterinarian from the Extension Service who helped with poultry. We also received technical assistance from an agronomist of an agricultural products company but now we have nothing. It's been a long time since they were here".
- \* "We had hoped that the extensionists would come here to help us, but they don't visit us regularly because they lack transportation. The director of the program gave a lecture about directed credit and never returned. This was more than a year ago. The agronomist from the Extension Service didn't help us. We wanted to enter the directed credit program for poultry but they didn't loan us 20,000 sucres for it because we lacked technical assistance. In the lecture about directed credit, they told us that the member must have the help of an agronomist".
- \* "The cooperative doesn't have technical assistance and would like to have a permanent agronomist but finances don't permit this. The demonstration plots of FERTISA produced good results and so did the field days (meetings on the farm with the farmers and the agronomists to demonstrate practical farming techniques). There was very little interest in fertilization before this".
- \* "Because of lack of knowledge about the use of fertilizers that FEEOAC gave us, we had to sell them to another cooperative".
- \* "Not even the field inspector received technical assistance".
- \* "We lack technical assistance and help in agriculture. This is the reason why much land has been sold".

#### 4. Work Plan

The majority of the managers interviewed indicated that the members have generally accepted the work plan, however, some resistance to the work plan exists among many members because they believe it is an excessive requirement to receive credit. The managers believe that the work plan has helped the members understand the economic value of their investment and has given them an understanding of whether they are making or losing money.

Generally, the work plan is prepared by the manager and the member together. In one cooperative a work plan is required for all loans. In other cooperatives whether or not a work plan is required, depends on the discretion of the manager or the board.

- \* "For all types of loans, it is necessary to prepare a work plan so that the manager knows how the loan is going to be used. Some members prepare the plan themselves and discuss necessary changes with the manager. Others prepare the plan with the manager at the cooperative. The members accept the work plan because they recognize its utility".
- \* "The members accept the work plan very well. All of a sudden they realized they were losing money and began to understand the economic value of their work. Of special value to the member is the inclusion in the work plan of each step required for the production of his crop".
- \* "Some members accepted the plan, but others resist it".
- \* "The reasons for the loan are stated in the application, for example, all the requirements for the harvest of wheat are included by the farmer".
- \* "The member doesn't have a written plan. He gives his ideas to the manager who writes it down. The farmer asks for the loan and it is given to him. In practice we have found that the farmer never lies".
- \* "The work plan hasn't created many problems for me. I believe it is necessary. In the plan are included all phases of the process but in practice the loan only is enough for the preparation of the land including insecticides but not for the harvest and other requirements".
- \* "We require the work plans from the members prior to September 30th in order to prepare a budget for the following year and seek financing for it. The manager discusses the work plan with the member".

## B. General Aspects of Cooperative Operations

### 1. Attendance at cooperative meetings

In all the cooperatives the largest attendance occurs in the January annual meeting. When there are meetings in June, attendance is notably low. The managers of the cooperatives have adopted different methods to motivate the members to attend the annual meeting such as raffles, buffets, etc.

- \* "About 75% of the members attend the meetings. We have secret ballots for the election of the cooperative board".
- \* "Eighty per cent of the members attend the January meeting, less than half attend the June meeting".
- \* "We stimulate the members to come to the meetings with raffles and other things, then the member becomes interested in knowing how the cooperative is doing. Attendance is almost 100%".
- \* "About 40% of the members attend the June meeting. In January about 75% because we give them a banquet".

- \* "We have two meetings a year with an attendance of 50% because we don't have good roads".
- \* "There is a decline in attendance at the meetings. We didn't have a quorum in the annual meeting and in June the meeting was cancelled".
- \* "The members have little interest in attending the meetings including the members of the board. Quite often we have not even had the required quorum. Last June, we had some attendance because I told them if they did not come, they would not receive credit".
- \* "There is poor attendance by the members and the board of directors at the meetings because they are only interested in receiving benefits".

## 2. Training of the Managers

Most of the managers have had at least one course in cooperative management. Some have had three or more including courses in directed credit and laboratory training. Three managers have received no courses at all either because they had not been invited or because the course was cancelled without notice or because they just recently became managers.

- \* "I have attended various management courses including laboratory training".
- \* "I attended some management courses, the last one was in Coyambe about directed credit".
- \* "I attended a course in directed credit, after a basic management course. Fifteen days ago I was at a course in Guayaquil with the managers of the largest cooperatives in Ecuador".
- \* "I have attended three courses in cooperativism, at intermediate and advanced levels in Quito, Ambato and Guayaquil.
- \* "I have attended various management courses at all levels and have visited various cooperatives to observe their operation".
- \* "I went to a course in Quito, but it was cancelled".

## 3. Relations with the Cooperative Bank

All the cooperatives that have had loans from the Cooperative Bank indicated that they benefited from them but that the Bank demands many requirements that are difficult for the cooperative to fulfill. In some cases, the cooperative has not been able to meet its obligations with the Bank because of the loan delinquency of the members and the line of credit has been suspended until these obligations are fulfilled.

In general the relationship between the cooperatives and the Bank have been beneficial and effective.

- \* "The relations with the Cooperative Bank are beneficial. The Bank has given us much services and has given us an average annual credit of 450,000 sucres (US\$18,000) from 1966 through 1971. Our credit was better in 1969 and 1970".

- \* "We would like to have a loan from the Bank but they demand many requirements we cannot fulfill, besides there are many delays in receiving the loan".
- \* "We have problems with the Bank in the payment of interest because loan delinquency of the members was 12%, now it is down to 7%".
- \* "We have problems with the Bank due to the cooperative's lack of capital. We consolidated our debt but they have now closed our line of credit until 1973".
- \* "We are late in paying our obligations to the Bank because the members buy land and animals instead of paying their loans with the income from their products. We don't have enough savings coming in to build up a capital. It's necessary to improve the production of potatoes with better seeds. We need longer terms for fruit production loans".

#### 4. Marketing

Most of the managers indicated that the marketing of the products of the farmers are done by the members themselves, but they think that the idea of having the cooperative market their products is a good possibility. Some cooperatives experienced with the marketing of products of their members with good results. However, they have not continued with their marketing efforts because they lack transportation facilities, they lack the money to pay a person to run a marketing program, and the manager doesn't have the time to supervise these activities. In other cooperatives the marketing experience was not successful.

- \* "The members themselves handle their own marketing, they go to Ibarra, to Quito, and other towns on Sundays which are the market day in most places. They rent trucks and look for markets for their products. Also many members ask the cooperative to sell their products for them".
- \* "We are very interested in marketing our fruits, specially apples, and have experimented with the preservation of our fruit on the cool slopes of the mountain Chimborazo in order to keep them in good condition for sale".
- \* "The cooperative tried marketing in the first year of our production loan program, but we had many problems such as obtaining sacks and finding patios to dry the wheat. We stopped doing it since then".
- \* "The cooperative has to do everything for the member including the marketing of their products. We tried to do it but we had poor results. Nevertheless, we receive as payment for loans all their products which we sell to the mill".

#### V. RESULTS OF THE DAPC PROGRAM

The results of the DAPC program are measured in terms of production increases or decreases, income increases, and degree of participation in cooperative affairs. On both an absolute and a comparative basis there are positive results for DAPC participants in production increases and income increases. Participation in cooperative affairs by DAPC members does not show significant differences compared to cooperative members not in the DAPC program.

Production Increase

The sample of DAPC members was classified into three production groups as follows:

1) Increased Production Group

Composed of those DAPC members with at least one agricultural product with increase of 20% or more since the last harvest or an increase over the prior year in cattle or horses by two, an increase in pigs or sheep by four, an increase in chickens, rabbits, or guinea pigs by 11. Members of this group either had no decrease in production in either agricultural products or animals according to the same criteria used for indicating increases or had more increases than decreases.

2) Decreased Production Group

Composed of those members with decreases in some agricultural product by 20% or more or in animals in the same criteria used for increased or those who had more decreases than increases in their products.

3) Stable Production Group

Composed of those members who either had no increases or decreases or who had the same number of increases as they had decreases according to the criteria of 20% for increases or decreases in agricultural products and two for cattle and horses, four for pigs and sheep, and eleven for chickens, rabbits, and guinea pigs.

The non-DAPC members were classified in the same way. In Table Six we see the distributions of these groups of the DAPC members compared to non members.

T A B L E S I X

COMPARISON OF PRODUCTION BETWEEN DAPC MEMBERS AND NON-MEMBERS

Production Groups	DAPC MEMBERS (284)	NON-MEMBERS (78)
	%	%
Increased production	43	37
Decreased production	24	30
Difference	19	7
Stable production	33	33

The important figures in this table are the differences between the percentages of increased and decreased production. There is a 19% difference between increases and decreases with DAPC members compared to a 7% difference between the increases and decreases of non members. The program appears to be both reducing the losses in production and stimulating increases in production.

These results are more dramatic when we look more closely at specific products. Increased production has occurred with potatoes, wheat, barley, and with cattle. Rice, pigs, chickens and miscellaneous animals (horses, sheep, rabbits and guinea pigs) had virtually the same percentages of increases as decreases. No product, either agricultural or animal, showed marked decreases over increases. Table Seven summarizes this data by showing the differences in percent of increases over decreases compared with the control group for each product.

TABLE SEVEN

## COMPARISON OF PRODUCTION INCREASES BETWEEN DAPC MEMBERS AND NON MEMBERS BY PRODUCT

Product	DAPC MEMBERS (1,117)				NON-MEMBERS (78) ***			
	Increase %	Decrease %	Difference %	Sample Size	Increase %	Decrease %	Difference %	Sample Size
Potatoes	43	22	+ 21	521	29	38	- 9	45
Barley	50	25	+ 25	199	50	0	+ 50	14
Wheat	41	29	+ 12	329	41	44	- 3	27
Other Agricultural Products *	38	29	+ 9	425	32	5	+ 27	19
Cattle	32	29	+ 9	670	15	30	- 12	50
Rice	25	27	- 2	223	47	7	+ 40	15
Pigs	12	18	- 6	414	21	14	+ 7	14
Chickens	27	31	- 4	418	13	50	- 37	16
Other Animals **	34	34	0	193	40	20	+ 20	15

NOTES: \* Other Agricultural Products - corn, beans, coffee, cacao, lentils, fruits.

\*\* Other Animals - horses, rabbits, sheep, guinea pigs.

\*\*\* When the sample size drops below 20 the percentages become unreliable.

### Income Increase

The sample of DAPC members was also classified into three income groups as follows:

1) Very Probable Increased Income Group

Composed of members who indicated an increase in income in at least two of the following ways:

- a) Stated that they had earned more money this year than last.
- b) Bought a personal object such as a radio, watch, television, bicycle, or sewing machine this year (1971).
- c) Spent money in at least two of the following ways:
  - i home improvements this year (1971)
  - ii farm improvements this year (1971)
  - iii bought more land this year (1971)
  - iv sent children to school in the town.

2) Probably Increased Income Group

Composed of those who indicated an increase in income in only one of the three ways set forth above.

3) Unlikely Increased Income Group

Composed of those who did not indicate an increase in income by any of the three ways set forth above.

Measuring income changes is very difficult and uncertain when the respondents do not keep accurate records of their annual transactions and are not themselves sure of how they are doing financially. The labels of each group reflect this uncertainty. However, based on the assumption that reasonable inferences about income can be made on the basis of expenditures and on the direct question about whether an increase had occurred, the following results are presented.

In Table Eight income increases of the sample are compared with the non-member control group. Slightly over half of the sample indicate an increase in income compared to 36% of the control group. Therefore, in absolute terms, and compared with the control group, the members of the DAPC program are experiencing increases in income.

In Table Eight we present a cautious overview of the income increase picture of the sample of DAPC members. We are confident that at least 20% of the sample has experienced an increased income and that probably an additional 34% has also improved their income situation in 1971. To add some depth to this rough picture the results of each indicator are set forth below based not on the sample, but on estimated values for the entire DAPC population. Each indicator shows the same pattern, more DAPC members have increased their income than non-members.

TABLE EIGHT  
INCOME INCREASES OF DAPC MEMBERS COMPARED WITH NON-MEMBERS

Income Groups	DAPC MEMBERS (284) %	NON-MEMBERS (78) %
Very Probable Increased Income	20	13
Probable Increased Income	34	23
Unlikely Increased Income	46	64

TABLE NINE  
EXPENDITURES FOR IMPROVEMENTS \*

	DAPC MEMBERS (1,171) %	NON-MEMBERS (78) %
Two or more expenditures	17.3	11.6
One expenditure	37.3	32.0
No expenditures	45.4	56.4
<b>TOTAL</b>	<b>100.0</b>	<b>100.0</b>

\* NOTE: Four questions concerning expenditures for improvements were asked:

- a) Have you made improvements on your home this year?
- b) Have you made improvements on your farm this year?
- c) Have you purchased more land this year?
- d) Do you send your children to primary or secondary school in town?

The common assumption is that each one of these improvements requires an expenditure of money which would not be made if the farmer had not earned money the past year. We do not know, of course, whether these expenditures are paid for out of savings or from earnings which may have been less than in previous years.

TABLE TEN  
PURCHASE OF PERSONAL OBJECTS

	DAPC MEMBERS (1,171) %	NON-MEMBERS (78) %
Purchased some objects	21.5	12.8
Not purchased some objects	78.0	87.2
No answer	0.5	..
TOTAL	100.0	100.0

\* NOTE: The question was: "In this year have you bought objects such as a radio, watch, television, bicycle, or sewing machine?"

TABLE ELEVEN  
EARNED MORE MONEY THIS YEAR

	DAPC MEMBERS (1,117) %	NON-MEMBERS (78) %
Earned more	38.6	24.4
Not earned more	60.1	75.6
No answer	1.4	..
TOTAL	100.1	100.0

\* NOTE: The question was: "In this year have you earned more money than last year?"

TABLE TWELVE

IF MORE MONEY EARNED, HOW MUCH MORE? \*

Additional Earned (Sucre)	DAPC MEMBERS (452) %	NON-MEMBERS (19)** %
0000 - 1000	27.5	10.4
1001 - 3000	27.6	31.6
3001 - 6000	22.0	5.3
6001	22.7	47.4
No answer	..	5.3
TOTAL	100.0	100.0

\* NOTE: This question "How much?" was only asked of those who said they had earned more money this year (1971).

\*\* The small size of this subsample renders the percentages very unreliable.

TABLE THIRTEEN

REASON FOR INCOME FLUCTUATION

	DAPC MEMBERS (1,117) %	NON-MEMBERS (78) %
Harvest (Quantity)	42.1	51.3
Price for product	15.4	18.0
Quality of Product	3.8	2.5
Non-Agricultural Activities	13.1	2.6
Other reasons	24.6	21.8
No answer	4.1	3.8
TOTAL	100.1	100.1

\* NOTE: Other reasons were death or theft of animals, plant diseases, and insects.

Notice that according to the replies in Table Thirteen, income fluctuations, both increases and decreases, are thought by the respondents to be due to the outcome of the harvest in quantity terms. Prices are the second most important factors. The data, however, show that production increases are not related to income increases.

In Table Fourteen, production increases and income increases are compared with the combined sample of DAPC members (284) and non-members (78).

TABLE FOURTEEN  
COMPARISON OF PRODUCTION WITH INCOME

Production Groups	INCOME GROUPS		
	Unlikely Increased Income %	Probable Increased Income %	Very Probable Increased Income %
Increased production	40	42	44
Stable production	39	28	27
Decreased production	21	29	29
TOTALS	100	100	100
Number	120	95	56

The percentages of those with increased production are virtually the same in all income groups. If production were related to income there would be significantly larger percentages in the Very Probable Increased Income Group. The same would be true of the Decreased Production group; a larger percentage would be in the Unlikely Increased Income Group. These results are at first glance startling because it is easy to assume that increased production is directly transformed into increased income. It appears that this assumption is naive. In the next section, Analysis of the DAPC Program, some factors which influence production and some factors which relate to income increase are analyzed. We find the same discontinuity running through the analysis. Factors which related to production generally do not relate to income and vice-versa. The missing and necessary link appears to be marketing, which, up to this point, has been absent from the DAPC program.

### Participation of Members

The effect of the DAPC program on participation in cooperative activities of members has been nil. In Table Fifteen four separate measures of cooperative participation are tabulated and compared with a small control group of farmers who are members of credit cooperatives but who have not received technical assistance. Also included for comparison are two other control groups, members of agricultural cooperatives in the mountains of Ecuador and members of rice cooperatives on the coast.

The Table is divided into two parts. The upper half lists the individual indicators and shows the percentages of those who say that they regularly attend cooperative meeting, present their ideas in the meetings, have been a member of the board of directors, or who have attended at least one course given by the cooperative. In the lower half of the Table a Participation Index is presented which combines these four indicators. In all cases the members of the DAPC program participate either at the same level as control group members or participate less in cooperative activities.

Two factors deserve emphasis. In terms of overall participation the members of the DAPC program are not those who are most active or who are involved with the cooperative. Although this is not a positive indicator of the success of the cooperative goal to sell the idea of mutual self help, it may be interpreted as an indicator of fairness in the giving of loans. In other words, it appears that loans are given on an even-handed basis without favoring the leaders of the cooperative. The fact that high participants in cooperative activities are not those who receive the loans is corroborated by other studies which show that the motivation to be a leader in the cooperative is not closely related to motivation to improve production or technology.\*

The other factor deserving note is that only about half of the DAPC members have attended a cooperative course. This percentage agrees with most of the other control groups. DAPC members, however, are supposed to have experienced at least one course in cooperativism as a prerequisite for obtaining a DAPC loan. This deficiency should be remedied as much as possible.

\* Economic Growth in Rural Santo Domingo,  
Mike Crampton and R. Hayes Keeler

TABLE FIFTEEN  
PARTICIPATION IN COOPERATIVE

<u>Activity</u>	<u>DAPC Members (284)</u>	<u>Control Group (28)</u>	<u>Agricultural Cooperatives</u>		<u>Rice Cooperatives (265)</u>
	<u>%</u>	<u>%</u>	<u>(234)</u>	<u>%</u>	<u>%</u>
Attend meetings regularly	40	64		86	88
Present ideas in meetings	20	50		.. *	.. *
Member of Board of Directors	15	39		39	37
Attended at least One Course	40	46		50	27
<b>Participation Index</b>					
High	20	22		40	62
Medium	21	32		27	19
Low	23	25		24	16
No Participation	36	22		9	3
<b>TOTALS</b>	<b>100</b>	<b>101</b>		<b>100</b>	<b>100</b>

\* Note: Information not available

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## VI. ANALYSIS OF THE DAPC PROGRAM

The success of the DAPC program depends primarily on five factors - Credit, Technical Assistance, Cooperative Manager, Understanding of the Members, and Marketing. Each of these factors is analyzed in relation to whether they influence production or income. In more technical terms, these five factors are the independent variables and production and income are the dependent variables. The DAPC program presently attempts to influence all but the marketing factor. Other factors such as weather, product demand, and competition from other countries also have an impact on the agricultural scene but are well beyond the direct influence of the DAPC program.

Throughout the analysis of various factors in this program we find repeated evidence that production and income are virtually independent of each other. In other words, factors that influence one have little influence on the other. This was noted above in Table Fourteen when production and income were compared showing virtually no systematic relation between the two variables. Our best explanation for this phenomenon is that production increases for the small farmer are not transferred into increased income because of marketing difficulties. For the larger farmer with nine or more hectares marketing may be more efficient or, as is usually the case, the larger farmer has income sources besides his agricultural activities. The larger farmer may have enough resources to engage in buying and selling products and animals from which he gains substantial part of his income. For instance, it is very probable that some loans which are ostensibly for the raising of cattle are, in fact, used to buy cattle and immediately sell them for a profit. The data do not directly illuminate this problem of the economic viability of the small farmer but many incongruities make little sense without taking this problem into consideration.

The data relating to each factor is presented in concise form in tables. The production variable has been dichotomized to increase clarity. Stable production and decreased production have been combined into one category for comparison with the category of increased production. Very probable and probable increase in income have been combined for comparison with the no-increase-in-income group.

### Credit

Two questions are pertinent to the analysis of the credit factor in the DAPC program. Does credit influence production and income? Does the amount of credit (size of loans), or the experience of the borrower with loans (number of loans), or whether or not a Work Plan has been prepared influence production and income?

In Table Sixteen the sample of DAPC members is compared to the control group of individuals who have received technical assistance but have not used credit. The evidence clearly shows that credit influences both production increases and income increases.

TABLE SIXTEEN

DAPC MEMBERS COMPARED TO CONTROL GROUP WITHOUT CREDIT IN TERMS OF PRODUCTION AND CREDIT

	DAPC Members (284) %	Non-Members Without Credit (50) %
<b>Production</b>		
Increase	43	32
Stable	33	36
Decrease	24	32
Total	100	100
<b>Income</b>		
Very Probable increase	20	12
Probable increase	34	20
No increase	46	68
Total	100	100

In Table Seventeen the three factors that could make a difference in production and income are presented. Number of Loans, Amount of Largest Loan, and Work Plan. Number of Loans and quantity of loans do not appear to be related to production increases. This may indicate that small loans are used by the farmer as effectively as large loans in relation to production and that more experience with loans (greater numbers of loans) does not significantly increase the farmer's skill in using credit. On the other hand the number of loans and the quantity of loans are related to income increases. Our explanation of this relationship is that some farmers, especially those who have the economic resources (savings) to obtain larger loans use part of the loan for commercial purposes thereby increasing their incomes. In other words the relationship between production and income is not as we would expect because other activities of the farmer outside of production enter the picture. We do not have any data on outside income sources and cannot therefore test this hypothesis.

The Work Plan does have a relation to both production and income but this relationship is not pronounced. Notice that only 48% of the sample completed a Work Plan (134 out of 282). But 87% of the sample stated that a Work Plan would be helpful, especially to know how such the various elements of the production process are costing. Since only 37% of the sample said that they kept any accounts, it would seem that there is a need for the Work Plan and a receptivity for it. However, the quality of the Work Plan should improve. All Work Plans include the objective of the loan and 56% of them include both objectives and steps or schedule of production phases. Only 36% of the Work Plans which were done included estimates or costs or profits.

TABLE SEVENTEEN

CREDIT FACTORS RELATED TO PRODUCTION AND INCOME

	Number of Loans (%)			Quantity of Largest Loan (sucres) (%)				Have a Work Plan (%)	
	1	2 or 3	4 or more	0 - 1000	1001 - 4000	4001 - 9000	9001 or more	Yes	No
<b>Production</b>									
Increase	45	43	39	48	42	38	43	47	33
No increase	55	57	61	52	58	62	56	53	61
<b>Total</b>	100	100	100	100	100	100	99	100	100
<b>Income</b>									
Increase	49	52	60	32	45	65	72	58	51
No increase	51	47	39	68	55	35	28	42	49
<b>Total</b>	100	100	99	100	100	100	100	100	100
<b>Number</b>	65	136	81	40	126	60	53	134	148

Technical Assistance

Two basic questions arise in the analysis of technical assistance of the DAPC program. Is technical assistance in the form it is given effective? Do modern agricultural methods influence production and income?

In Table Eighteen factors concerning the method of giving technical assistance (in groups or individually and the number of visits) and whether technical assistance has been received at all are related to production and income. It is apparent that technical assistance in the form given has no significant relationship to production. Notice that only 55% (156 out of 284) of the sample has received technical assistance and that 75% of this technical assistance has been given to groups. Eighty five percent of this assistance has been given by government agronomists. We can infer from this data that there is a serious problem in the effectiveness of the methods of giving technical assistance to farmers.

In regard to income increase we find that whether or not a farmer has received technical assistance makes no apparent difference either. Farmers in the increased income group, however, have received slightly more individual attention than those in the no increase group, but they tend to receive less frequent visits.

But even though the effectiveness of technical assistance is negligible in terms of our production and income measures there has been a diffusion and some adoption of modern agricultural methods among the farmers of the DAPC program.

TABLE EIGHTEEN

TECHNICAL ASSISTANCE FACTORS RELATED TO PRODUCTION AND INCOME

150

	Received Technical Assistance		In Groups or Individually		How Many Times?		
	Yes	No	Individually	Groups	1	2-3	4 or more
<b>Production</b>							
Increase	40	46	38	42	47	33	44
No increase	60	54	62	58	53	67	56
Totals	100	100	100	100	100	100	100
<b>Income</b>							
Increase	55	53	64	52	68	55	51
No increase	45	47	35	48	32	44	49
Totals	100	100	99	100	100	100	100
Numbers	156	128	37	112	19	64	73

In Table Nineteen we compare adoption rates between the total sample of DAPC members (284) and a sub group of DAPC members (156) who stated that they had received technical assistance.

TABLE NINETEEN

## ADOPTION PERCENTAGES OF MODERN METHODS BY DAPC MEMBERS RECEIVING TECHNICAL ASSISTANCE

Method	Members Receiving Assistance (156) %	All DAPC Members (284) %	Difference
Fertilizer	73.2	64.1	+ 9.1
Soil analysis	21.3	17.9	+ 3.7
Insecticides	70.9	55.2	+ 13.7
Weed killer	43.0	34.0	+ 8.2
Improved seeds	52.1	37.4	+ 14.7
Irrigation	38.7	31.0	+ 7.7
Machinery	50.0	39.3	+ 10.7
Rotation	72.5	64.1	+ 8.4
Worm killer	50.1	33.0	+ 16.3
Animal vaccination	64.1	51.3	+ 12.8
Balanced feed	37.3	23.9	+ 13.4
Pens, stables	32.4	27.1	+ 5.3

On the basis of this evidence that the DAPC members who say they have received technical assistance have higher adoption rates for all methods listed we can infer that the agronomists must be having some impact. Yet this impact in terms of increased production is very limited.

In Table Twenty agricultural techniques (adopted or not) are related to production and income. We find that only four of the agricultural methods are positively related to increased production. They are the use of chemical fertilizers, insecticides, crop rotation, and using chemicals to kill worms in the soil. Two of the three animal practices are related to increased production - animal vaccination and balanced feed. Note, however, that in none of these cases is the relationship marked (percentage differences horizontally are 13% or less except with the case of killing soil worms which is 20%). Also note that in only four cases (fertilizer, insecticides, rotation and animal vaccination) are there more than 50% of the sample who use the technique. Therefore, despite adoption of modern techniques there still seems to be a problem in using these techniques properly to increase production.

But when we look at the use of modern agricultural practices in relation to income increases we find more relationships than in the case of production. Six of the nine agricultural techniques show a relation to increased income and all three animal raising practices are related to increased income. These relationships are more striking than in the case with production with percentage differences (along the rows) above 15% in most cases. We would infer from this data and from our understanding of the agricultural picture in Ecuador that the adoption of modern agricultural techniques tends to follow rather than lead income.

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TABLE TWENTY

AGRICULTURAL TECHNIQUES RELATED TO PRODUCTION AND INCOME

	Fertilizer		Insecticides		Crop Rotation		Soil Worms *		Soil Analysis		Machinery		Weed Killer	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Production														
Increase	46	36	47	34	46	37	56	36	39	43	43	42	40	44
No increase	54	64	53	65	54	63	44	64	61	57	57	58	59	56
Totals	100	100	100	99	100	100	100	100	100	100	100	100	99	100
Income														
Increase	54	55	57	49	60	43	65	48	64	52	63	48	60	50
No increase	46	45	43	50	40	57	35	51	35	48	37	52	39	50
Totals	100	100	100	99	100	100	100	99	99	100	100	100	99	100
Number	182	102	185	99	182	102	96	188	51	233	113	171	99	185

\* Note: Soil worms category is - Yes, chemical worm killer is used.

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AGRICULTURAL TECHNIQUES RELATED TO PRODUCTION AND INCOME

	Improved Seeds		Irrigation		Vaccinate Animals		Balanced Feed		Pens or Stables for Animals	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Production										
Increase	44	42	42	43	46	39	50	40	40	44
No increase	56	58	58	58	54	61	50	60	60	57
Totals	100	100	100	101	100	100	100	100	100	101
Income										
Increase	53	50	54	55	62	46	72	48	72	48
No increase	38	50	46	45	38	55	28	52	29	52
Totals	101	100	100	100	100	101	100	100	101	100
Number	106	178	88	196	149	135	68	216	77	207

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### Marketing

Our data concerning the marketing problem is limited. Only 35% of the sample reported that they had marketing problems with 71% of this group identifying low prices as the main difficulty. Transportation was reported next by 17% of the problem-conscious group. Nonetheless since the data of this study shows a consistent lack of relation between improved production and increased income and since poor farmers tend to have difficulty in articulating their problems, especially in response to direct questions, we believe that marketing is a major difficulty.

Perhaps if the DAPC members were to work out some way of selling their products together instead of individually as they now do (96% of the sample sell their products individually) they might gain a little leverage over prices. Sixty three percent of the sample reported that they would be interested in selling their products in a group. There thus seems to be a readiness to try group selling among a substantial number of farmers.

From the limited data we have we are unable to precisely delineate the dimensions of the marketing problem. However, based on the observations and experience of the research team, some factors which should be studied further are listed in the next section.

### Managers of Cooperatives

Analysis of the orientations and knowledge of the managers of the DAPC cooperatives was reported above in the section on the operation of the DAPC program. In sum we found that the concept of directed credit was generally accepted but that many managers were reluctant to assume the responsibilities and additional work required to make it work well. Since the primary responsibility for the program rests in their hands it is imperative that they be given the support they need in terms of loans and connections with agronomists. FEACOAC must play a larger role in providing this support.

### Members of Cooperatives

In Table Twenty-one we have five characteristics of cooperative members related to production and income. None of them relate to production in a significant way but there is a slight tendency for those in the production increase category to be less active participants --attend meetings less and participate in other activities less. On the other hand all the indicators-- years in the cooperative, attendance at meetings, attendance at courses, participation index, and knowledge of the directed credit concept--are related to increased income. Once again we find evidence of the separation between production and income. This conforms to the observations of the research team that finds the larger, more economically successful farmers playing a more active role in the cooperative.

Note that only 14% (40 out of 277) were aware of the concept of directed credit. Since only 47% of the sample had attended any course given by the cooperative part of the lack of knowledge of directed credit is explicable. Other reasons may be that the concept was not discussed in the courses or that, if discussed, was not understood. The conclusion from this data is that cooperative education is both lacking and not very effective. Perhaps, as suggested in the next section, other educational methods ought to be tried in addition to the traditional lecture approach.

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TABLE TWENTY - ONE

CHARACTERISTICS OF MEMBERS RELATED TO PRODUCTION AND INCOME

	Years in Cooperative			Attendance at Meetings		Attendance at Courses		Participation Index		Knowledge of Directed Credit	
	1	2-3	4 or more	Regularly	Once in a while	Yes	No	High	Low	Yes	No
<b>Production</b>											
Increase	47	38	45	40	47	41	44	39	46	40	42
No increase	52	62	55	60	54	59	56	61	54	60	58
<b>Totals</b>	<b>99</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>101</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Income</b>											
Increase	46	58	54	63	46	64	45	65	46	75	51
No increase	54	42	46	37	54	36	54	35	54	25	49
<b>Totals</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>99</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Numbers</b>	<b>55</b>	<b>111</b>	<b>118</b>	<b>145</b>	<b>133</b>	<b>133</b>	<b>151</b>	<b>126</b>	<b>158</b>	<b>40</b>	<b>237</b>

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## VII. PROBLEMS AND RECOMMENDATIONS

The results of the DAPC program are clearly positive although not spectacular. There is no doubt that credit combined with technical assistance is a workable concept. But in the analysis of the program we found some elements of the program that were deficient. The most critical deficiencies of the program are:

1. Lack of adequate credit
2. Lack of effective technical assistance
3. Marketing problems

In this final section these deficiencies are summarized by problem area followed by recommendations for improvement. The five problem areas are: Credit, Technical Assistance, Marketing, Managers, and Members.

### A. Credit

#### Problem

The major problem in the credit area is inadequate supply of funds to fulfill the minimum credit needs of the DAPC program. As we have seen some cooperatives have been forced to curtail their credit activities due to lack of credit and most have not been able to give preferential credit ratios (3 times savings instead of five or ten times savings) to DAPC applicants. One of the reasons for this lack of sufficient funds is that many individual cooperatives have not established or maintained credit relationships with available credit institutions from which they could obtain additional funds.

#### Recommendations

Our recommendations to FECOAC for increasing the financial strength of the DMC cooperatives are:

1. Select cooperatives for the DAPC program which are in reasonably sound financial condition and which are likely to be interested in the DAPC program. We suggest three minimum requisites that should be fulfilled:
  - a. The cooperative should have experienced systematic increases in savings over the past year.
  - b. The cooperative should be financially able to pay for the services of a field inspector and the manager.
  - c. The cooperative should have a majority of its members who are farmers.

The criterion of a systematic increase in savings provides a rough indicator of financial growth and stability of the cooperative. Other criteria could be used if needed. The requirement of ability to pay for a field inspector and the manager is absolutely necessary because the DAPC program in each cooperative cannot function effectively without both a motivated manager and a field inspector. The close guidance of a field inspector and the supervision and control he would exercise are indispensable. The requisite of having a majority of members who are in agriculture is one way of assuring that the manager and the board of directors would be interested in directed credit for agriculture.

2. Assist the cooperative manager to establish and maintain continuing relationships with outside sources of credit.

Possible outside credit sources include the Cooperative Bank, the Development Bank (Banco de Fomento), CARITAS, cooperatives in other countries, local sources such as churches, and commercial banks. FECCOAC should help each cooperative find credit sources and should help the manager learn how to comply with the necessary requirements to obtain a steady line of credit. If possible, FECCOAC should also try to encourage credit institutions, especially the Cooperative Bank, to simplify their requirements for rural cooperatives and to provide credit terms which are appropriate for the needs of each cooperative.

3. Establish a credit fund under the direct supervision and control of FECCOAC which would be used for financing the DAPC program with the cooperatives.

This fund might be obtained from national or international credit institutions.

#### Problem:

The other problem in the credit area is that the DAPC program has not been organized as a distinct, separate entity within the cooperatives. There are no exact guidelines for inclusion of cooperatives or individuals within the program. No separate accounts are kept. Work plans are not standardized. Minimum requirements for DAPC loans have not been established. Controls on the use of credit do not exist. No evaluation criteria or methods have been set up. Responsibility for obtaining technical assistance or for obtaining lines of credit have not been established. The following recommendations are designed to help FECCOAC in the formation of a clearly defined DAPC program.

#### Recommendations

- a. A field inspector should work for each cooperative in the DAPC program.

A part-time or full-time paid field inspector should, under the direction of the manager, assume the responsibility to:

- 1) Work with the member to prepare a Work Plan.
- 2) Provide some technical assistance to the member in both agriculture and in managing accounts.
- 3) Obtain the technical assistance of agronomists for groups of members who have similar problems.
- 4) Periodically visit each DAPC member to provide help and to verify (control) that the loan is being used as planned and that adjustments in the Work Plan are made as necessary.
- 5) Close out the Work Plan with the member upon repayment of the loan and obtain necessary information for measurement of production results.

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b. Separate accounts should be kept in the cooperative records for DAPC loans.

Besides these separate accounts a separate file of DAPC members with their Work Plan would be useful for control and evaluation.

c. Minimum criteria for DAPC loans should be established and disseminated to all cooperatives, such as an operational manual.

We recommend the following criteria:

- 1) Minimum savings of \$/ 400 which would allow a minimum loan of \$/ 2,000 at five times savings.
- 2) Systematic savings by the member for a minimum of three months prior to the loan.
- 3) DAPC loan limits should be from five times savings to eight times savings.
- 4) The loan period should be appropriate for the product (for example, 4 years for raising cattle, 5 years for growing cacao).
- 5) The loan amount should be adequate to completely finance the product taking into consideration the resources of the borrower and his requirements for daily living (for example for one hectare of wheat - \$/ 1,400, for one hectare of potatoes - \$/ 8,000, for one cuadra of rice - \$/ 1,000).
- 6) DAPC loans should be given as lines of credit which are drawn against by the member in accordance with the Work Plan.
- 7) Capitalization or savings by the member on the DAPC loan should be 5% instead of 10% which we believe is excessive for most members.
- 8) Loan recipients who do not use their DAPC line of credit in accord with their Work Plan should, after a report by the field inspector, lose their right to the line of credit and be temporarily suspended from the DAPC program.

d. A Work Plan should be prepared for each loan.

The Work Plan should be a learning experience for the member; he should understand each step as he prepares it with the field inspector. The Work Plan should include estimates of all costs, including the cost of his labor and the labor of his family, a time schedule, production estimates, price estimates, and, finally, estimates of profit. These estimates should be compared with actual costs as accurately as possible when the loan is paid by the member.

e. Systematic evaluation methods should be incorporated into the DAPC program.

Three aspects of the DAPC program require evaluation:

1) Effectiveness of technical assistance

Informal continuing evaluation which is based on reports written by the FECOAC director of the DAPC program or a member of his staff after field visits



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should be done. The cooperative manager, the field inspector, agronomists, and members of the cooperative should be informally interviewed on these field trips.

2) Loans, members, and savings

Annual reports of numbers and increases or decreases in DAPC members; number of loans, total amount of loans, and increases or decreases in savings of the DAPC members. Information for these indicators is based on the records of the DAPC cooperatives.

3) Production results

Annual summary of reports prepared by field inspectors of each cooperative based on Work Plan information. The information would be obtained when the member pays his loan.

B. Technical Assistance

Problem:

All cooperatives lack adequate technical assistance for the members in the DAPC program. In some cases up to 75% of the DAPC members received technical assistance; in other cases only 25% received technical assistance. Since the concept of directed credit requires technical inputs with loans it is imperative that major emphasis be placed on increasing the availability of technical assistance.

Recommendations

1. The field inspector, with the help and support of the cooperative manager, board of directors, and FEACOAC, should establish and maintain continuous relationships with technical assistance resources in order to assure the availability of technical assistance for cooperative members.
  - a. Governmental organizations (e.g. Agricultural Extension Service of the Ministry of Production, Andean Mission, Institute for Research in Agriculture and Animals (INIAP), National Wheat Commission, National Rice Commission, etc.).
  - b. Commercial Agricultural Product Companies (e.g. FERTISA, El Campo, Krüger, etc.).
  - c. FEACOAC (Agronomists who have been "loaned" to FEACOAC to work with the DAPC program.
  - d. Agronomists on the faculties of Agricultural Schools.
  - e. Agronomists hired by individual cooperatives or groups of cooperatives to work with their members.
  - f. Individual cooperative members who have acquired special knowledge through experience or from courses. This is a valuable resources that is often overlooked.

Problem

Technical assistance, when available, appears to have a limited effect on the improvement of production. In other words, the quality of technical assistance appears to be notably deficient.

This deficiency in information transfer and adoption of improved agricultural methods by the farmer is not due to lack of knowledge by the agronomist. Rather, the problem lies in the inadequacy of the teaching methods and in the ineffectiveness of the communications between the agronomist and the farmer. The problem is one of improving the process of information and skill transfer.

#### Recommendations

##### 1. Agronomists should improve their educational methods

This is the key factor for improving the quality of technical assistance. It is not the knowledge but how (the process) the knowledge is passed on that is the critical problem for the DAPC program. Improvements in the education process requires that the agronomist receive information (feedback) about his own effectiveness. He should be exposed to various teaching techniques and he should learn more about communication problems and skills. Three possible ways of improving the agronomist's teaching skills are:

- a. Periodic meetings should be held among agronomists of an area (governmental, commercial, private, etc.) with field inspectors, managers, farmers, and representatives of FECONC. The principal objective of these meetings would be to provide the agronomists and field inspectors with information (feedback) concerning their effectiveness with farmers. Common problems and ideas would be shared.
- b. Visits by other agronomists and communication specialists to illustrate educational techniques and to discuss communication concepts and problems. These visits should emphasize the educational process but could also include presentation of new agricultural methods.
- c. Laboratory training in human relations for agronomists, field inspectors, and managers.

##### 2. Agronomists should work with small groups of members

Work with individual members should not be encouraged except in unusual circumstances. Group learning appears to be as effective as individual learning, especially with poorly educated farmers who are sometimes reluctant to ask questions. These farmers would learn from each other as well as from the agronomist. Also, group learning is more efficient in that more farmers are exposed to the agronomist than would be possible on a one-to-one basis.

##### 3. Demonstration plots or experimental projects with animals should be established for principal products or potential products of each cooperative area

This classical agricultural extension method should be used with the DAPC members, placing emphasis on costs. In addition, attempts should be made to introduce other crops to the area if conditions permit.

#### C. Marketing

The data and analysis has shown that there is virtually no systematic relationship between increased production and increased income. Furthermore, the observations of the research team confirm the existence of a serious marketing problem for the members of the DAPC program. If the DAPC program is to fulfill its objectives to both increase production and income, serious attention must be given to the marketing problem.



### Problem

The major aspects of the marketing problem, based on our limited observations during this study are:

1. Individualism of members

Most members believe that it is economically advantageous for them to sell their products on an individual basis. This belief is strongly reinforced by the marketing customs of the country. In addition, members tend to distrust other members in economic matters.

2. Lack of operating capital

Members generally do not have sufficient capital to transport their products to the best markets. The cooperatives suffer from the same debility.

3. Lack of knowledge of the best use of land for production

Most products are produced for traditional reasons handed down from generation to generation. Land areas have not been analyzed according to which products are best suited to the particular conditions of each area. The technical criteria for deciding best land use in terms of climate, quality of the soil, terrain, and plant and animal diseases has been lacking. Thus, in many cases products are raised under marginal circumstances.

4. Lack of knowledge of economic factors

Knowledge of demand, local and international competition, and marketing conditions is not available. Market gluts, such as occurred with potatoes, is a good example of lack of planning and awareness of these economic factors.

5. Lack of adequate storage facilities

In some areas products are harvested and marketed within a very short time period causing excessive supply over demand and subsequent price drops. Few if any warehouses are available to permit storage until reasonable market prices are obtained. Even if available, credit has been lacking to finance the storage of products.

6. Price instability

As a consequence of the three factors just mentioned-- marginal production, excessive supply over demand, and lack of storage facilities-- prices fluctuate widely. The inevitable result is low prices which must be accepted by the farmer which often do not even cover his costs. Thus the efforts of the DAPC program to increase production sometimes lead to losses rather than gains for the farmer.

7. Problems with municipal authorities

Municipal authorities who regulate the local markets often create difficulties which have negative effects on the profits of the farmer selling his products. For example, authorities sometimes are able to force the farmer to sell to a designated buyer at a fixed price; they can impose fines on the farmer for infractions of rules; and can designate the place where buying and selling takes place.



Recommendation

1. FECOAC should obtain a study in depth of the marketing problems of the principal products in the areas where there are DAPC cooperatives

This study should be conducted in close coordination with other organizations who are interested in the marketing problem, especially governmental institutions and should consider the following factors:

- a. The economic feasibility of selling the products of cooperative members as a group.
- b. How to overcome the long standing barriers of tradition and custom to sell on an individual basis.
- c. The analysis and dissemination of information about the technical factors which influence land use.
- d. The analysis and dissemination of information about the economic factors related to marketing.
- e. The feasibility of a coordinated program of storage and minimum price supports involving governmental and private institutions.
- f. The feasibility of establishing a special fund for the short term financing of the marketing process of DAPC members.

D. Managers

Problem

Some managers have very little interest in promoting the DAPC program. This lack of interest appears to be caused, at least in part, by the reluctance of some managers to assume the extra work and to spend the additional time necessary for the program.

Recommendations

1. A field inspector, under the direction of the manager, should assume a large part of the daily responsibility for the DAPC program

His duties should include the preparation of the Work Plan with the member, field visits, and the arrangement of technical assistance by agronomists.

2. An economic incentive should be paid to the managers of the DAPC cooperatives

For example, increase the interest rate by 0.5% on DAPC loans for "Administrative Costs" of the DAPC program.

Problem

Some managers have a poor understanding of the concept of directed credit and of methods of administration of the DAPC program in their cooperatives. This lack of understanding is due to the lack of clearly defined guidelines and to inadequate training for the DAPC program.

Recommendations

1. An operational manual for the DAPC program should be distributed to managers, field inspectors, agronomists, and members.

This operational manual is currently being prepared by FEEOAC.

2. Training courses should be given to managers of prospective DAPC cooperatives as a condition for entry into the program.

Field inspectors should also be trained.

3. A FEEOAC staff member should periodically visit each DAPC cooperative to discuss problems with the staff of the cooperative, especially the manager and the field inspector.

Problem

Most managers have not established continuous relationships with individuals or institutions which could provide essential help to cooperatives, both in technical assistance and in credit. This lack appears to be due to lack of knowledge of available resources and/or lack of motivation on the part of the manager.

Recommendations

1. FEEOAC should annually prepare a directory of institutions which provide technical assistance or credit to farmers.

This information should be sent to all cooperatives.

2. Each manager should be directly assisted by FEEOAC to establish the necessary contacts for the provision of technical assistance and credit for his cooperative.

E. Members

Problem

Most of the members of the DAPC program lack even a minimum knowledge of the program. Over 80% of the members have little or no understanding of the concept of directed credit. Only half of the DAPC members have attended a course given by the cooperative.

Recommendations

1. Develop graphic materials which explain and promote the concept of directed credit

For example, slides, motion pictures (colored), games, comic books, posters, and pamphlets. The cost for the development of these materials should be paid by organizations such as USAID, Confederation of Cooperatives of Latin America (COLAC) or other international organizations.

2. Arrangement of exchange visits among members of cooperatives to discuss problems and ideas related to directed production credit.

FEEOAC is presently promoting such visits.

3. Provide courses which treat the subject of directed credit and cooperativism.



A N N E X A

GERENTES

- Qué opinión tiene del Crédito Dirigido?
- Nombres de los socios que están en el Programa de Crédito Dirigido, número de préstamos, cantidad y objetivo:

NOMBRES	No. PRESTAMOS	CANTIDAD	OBJETIVO
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

- Qué requisitos necesita un socio para recibir crédito?
- Hay algún control que tiene la cooperativa para los créditos?
- En qué forma se entrega el dinero en el Programa de Crédito Dirigido?
- En qué grado tiene el socio un plan escrito para poder utilizar el préstamo?
- Está bien que se pida el plan de inversión?
- Qué factores o cosas son incluidas en ese plan?
- Quién o quiénes deciden el que se otorgue el préstamo?
- El crédito que da la cooperativa es también en fertilizantes, semillas calificadas, etc.?
- Qué ayuda técnica es disponible para el socio?
- Quién proporciona esa ayuda técnica?
- Cómo se está dando esa ayuda?
- Cuántas veces al año tienen reunión de Asamblea General los socios de la cooperativa?

- .. Cuántos socios asisten?
- .. Número de socios actuales?
- .. Número de agricultores?
- .. Si tienen reuniones qué indican o enseñan al socio?
- .. Sobre comercialización.
- .. Sobre Banco de Cooperativas y sus créditos.

A N N E X B

	<u>Cód.</u>	<u>Col.</u>
Nombre del Encuestador		1
Cooperativa	Número	2 3
Control		4
Desde cuándo es socio de la Cooperativa?		5
<b>CREDITO?</b>		
Cuántos préstamos ha recibido de la Cooperativa?		6
Cuál es la cantidad más grande que ha prestado?		7
La cooperativa le da algunas indicaciones (sugerencia, recomendaciones) para el uso del préstamo?		8
Sí _____ No _____		
Cuáles?		9
<b>PLAN DE INVERSION:</b>		
Hace Ud. un Plan de Inversión (trabajo)?		
Sí _____ No _____		10
Hace solo o con alguien? (Quién)		11
Qué cosas (actividades) puso en el Plan de Inversión?		12
Cree que es conveniente el Plan de Inversión?		
Sí _____ No _____		13

	<u>Cod.</u>	<u>Col</u>
Lleva anotaciones (cuentas, notas, apuntes) de los gastos que hace)		
Sí _____ No _____		14
<b>TECNOLOGIA</b>		
<b>(Para Agricultores)</b>		
Usa Ud. abono químico para sus cultivos?		15
Sí _____ No. _____		
Desde cuándo? _____		16
Ha hecho análisis del suelo?		
Sí _____ No _____		
↓		
Desde cuándo? _____		18
Usa Usted insecticidas, fungicidas o posticidas (remedios) para sus cultivos?		19
Sí _____ No _____		
↓		
Desde cuándo? _____		20
Usa Ud. matamelezas para sus cultivos?		21
Sí _____ No _____		
↓		
Desde cuándo? _____		22
Usa Ud. semillas calificadas (mejoradas) para sus cultivos?		23
Sí _____ No _____		
↓		
Desde cuándo? _____		24

	Col.	Col.
Usa Ud. riego para sus cultivos?		
Sí ..... No .....		25
↓		
Desde cuándo? .....		26
-----		
Usa Ud. maquinaria agrícola para sus cultivos?		
Sí ..... No .....		27
↓		
Desde cuándo? .....		28
-----		
¿Hace Usted rotación (cambios) de cultivos?		
Sí ..... No .....		29
↓		
Desde cuándo? .....		30
-----		
Si tiene usted gusanos en el terreno que hace usted?		31
-----		
(Para Criadores de Animales o Aves)		
Vacuna sus animales y/o aves?		32
Sí ..... No .....		
↓		
Desde cuándo? .....		33
-----		
Les da alimento balanceado (sobre alimentación)		34
Sí ..... No .....		
↓		
Desde cuándo? .....		35
-----		

	Cod.	Col.
Tiene establos, chancheras, gallineros para sus animales o aves? Sí _____ No _____ ↓		36
Desde cuándo? _____		37
Quién le enseñó a usar estas técnicas (PROFUNDIZAR) _____ _____ _____		38
<b>ASISTENCIA TECNICA</b>		
Recibe asesoramiento en técnicas agropecuarias? Sí _____ No _____		39
Quién le da este asesoramiento? (PROFUNDIZAR) _____ _____		40
El asesoramiento lo recibe en grupo o individualmente?		41
Cuántas veces ha recibido este asesoramiento, desde que ingresó a la Cooperativa?		42

PRODUCCION

Qué cultiva usted?

PRO- DUCTO	La última cosecha			La cosecha anterior			La otra antes de la anterior		
	No. de qq.	qq. semi. terreno	Area terreno	No. de qq.	qq. semi. terreno	Area terreno	No. de qq.	qq. semi. terreno	Area terreno

Terreno total \_\_\_\_\_

Por qué hay la diferencia? (Si hay diferencia entre cosechas)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Qué animales y aves tiene?

Animales o aves	No. en 1971	No. en 1970	No. en 1969

Por qué hay la diferencia? (Si hay diferencia entre años)

\_\_\_\_\_

\_\_\_\_\_

VARIABLES DE PRODUCCION	CODIGO	Cod. Col.	
Terreno total:	Menos de una hectárea	(1)	
	1 - 3 hectáreas	(2)	
	4 - 8 hectáreas	(3)	
	9 o más hectáreas	(4)	43
Arroz	Lo mismo $\pm$ 19%	(1)	
	menos 20%	(2)	
	más 20%	(3)	44
Papas	Lo mismo $\pm$ 19%	(1)	
	menos 20%	(2)	
	más 20%	(3)	45
Trigo	Lo mismo $\pm$ 19%	(1)	
	menos 20%	(2)	
	más 20%	(3)	46
Cebada	Lo mismo $\pm$ 19%	(1)	
	menos 20%	(2)	
	más 20%	(3)	47
Frutales	Lo mismo $\pm$ 19%	(1)	
	menos 20%	(2)	
	más 20%	(3)	48
Otros cultivos	Lo mismo $\pm$ 19%	(1)	
	menos 20%	(2)	
	más 20%	(3)	49
Ganado	Lo mismo $\pm$ 1	(1)	
	menos 2	(2)	
	más 2	(3)	50
Chanchos	Lo mismo $\pm$ 3	(1)	
	menos 4	(2)	
	más 4	(3)	51
Aves	Lo mismo $\pm$ 10	(1)	
	menos 11	(2)	
	más 11	(3)	52
Otros animales	Lo mismo	(1)	
	menos	(2)	
	más	(3)	53

INGRESO		Cod.	Col.
Ha hecho mejoras en la casa este año?			
Sí _____	No _____		
Ha hecho mejoras en la finca este año?			
Sí _____	No _____		
Ha comprado más terreno en este año?			54
Sí _____	No _____		
Manda a sus hijos a la escuela o colegio al pueblo?			
Sí _____	No _____		
En este año ha comprado objetos como radio, reloj, televisión, bicicleta, máquina de coser?			55
Sí _____	No _____		
En este año ha ganado más dinero que el año pasado?			56
Sí _____	No _____		
Cuánto? _____			57
Por qué? _____			58
COMERCIALIZACION			
Dónde vende Ud. los productos o los animales?			59
Vende Ud. solo o en grupo?			60

	Cod.	Col.
Tiene algún problema para vender sus productos o animales? Sí _____ No _____		61
Cuáles?		62
Cómo le gustaría vender sus productos, usted mismo o en grupo con otros agricultores?		63
<b>PARTICIPACION</b>		
Asiste usted a las reuniones de su cooperativa regularmente o sólo de vez en cuando? Regularmente _____ De vez en cuando _____		64
En las reuniones de la Cooperativa presenta sus ideas (sugerencias) a los demás? Sí _____ No _____		65
Ha sido Ud. un miembro de la directiva de su cooperativa? Sí _____ No _____		66
Ha asistido Ud. a los cursos (ciclos de conferencia) dados por su cooperativa? Sí _____ No _____		67
Índice de participación		68
Pertenece Ud. a alguna otra organización? Sí _____ No _____		69
Cuál es su opinión del CREDITO DIRIGIDO? (Si no sabe, una breve explicación)		70

## USAID/E COMMENTS ON THE DAPC EVALUATION

The Directed Agricultural Production Credit (DAPC) program of CUNA/AID was started in Ecuador in 1965. Since that time Ecuador has been cited as the example of what a successful DAPC program can accomplish.

This evaluation was developed when it became apparent to USAID/E and the Federación Nacional de Cooperativas de Ahorro y Crédito (FECOAC) that the program was not progressing as well as planned. The primary purpose of the evaluation was to identify problems and make recommendations for corrective action to FECOAC and USAID/E. In addition, the Mission hoped that the evaluation would yield sufficient information to answer a more fundamental question: Was the program not functioning well because of inherent problems in the concept of DAPC, or because of the way it had been developed and administered in Ecuador?

As a result of this evaluation, and other existing reports on the DAPC program in Ecuador (see footnote, p. 2 ), USAID/E would like to make available to AID/W and interested USAID Missions some of its observations, conclusions and recommendations regarding the development and feasibility of the DAPC program.

### Scope and Accomplishments

In spite of the limitations on specific conclusions (see Mission-added comments on the methodology), the data permit general observations and conclusions about the DAPC program in Ecuador. First of all, in spite of six years of DAPC promotion in Ecuador, the program has remained small, and has affected only a limited number of people. The current evaluation shows that only 17 credit unions are considered to be active in the DAPC program, and the activity of some of those is questionable. <sup>1/</sup> At the most, the program currently reaches some 1,200 farmers directly, though

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<sup>1/</sup> John S. Davis came to the conclusion that out of a claimed 26 cooperatives active in the DAPC program in 1969, only 8 had a functioning program of DAPC. A Study of a Pilot Project in Directed Agricultural Production Credit in Ecuador, (November, 1969): p. 31 . In the section of this evaluation entitled "Description of DAPC Program", it will become apparent that the situation has not changed substantially in the intervening two years.

more have received at least some instruction in DAPC concepts. These figures fall woefully short of even the first four-year projection of the project as shown below: 2/

<u>Year</u>	<u>No. of coops</u>	<u>No. of members</u>
1965-66	7	3,500
1966-67	17	8,500
1967-68	27	13,500
1968-69	37	18,500

Moreover, since most of the participants were incorporated into the program in its early years, it appears that the program is tapering off rather than expanding, in spite of the fact that approximately 20 per cent of FE-COAC's annual operating budget over the past few years has gone to support the DAPC program.

Second, the DAPC program has been relatively unsuccessful in mobilizing technical assistance for participants in the program. At the time of this evaluation, only two Ministry of Production extensionists were assigned to work full time with the DAPC program, and the maximum number that had ever participated in the program was four. This has been inadequate to provide agricultural technical assistance to participant farmers. For the most part, technical assistance has been obtained haphazardly by the local cooperative or individual member, and even that has not been too frequent. Only 55 per cent of the respondents to this survey reported that they had received any technical assistance at all during the past year, and of those, 12 per cent had received assistance only once and 53 per cent not more than three times. This means that only 26 per cent of the DAPC participants had received four or more visits from an extensionist or had attended four or more group courses. It is not surprising, then, to find (Table 18) that technical assistance has apparently had little impact on increasing production. The fact that technical assistance correlates with use of agricultural techniques (Table 19), but not with production, further suggests that technical assistance has either been insufficient or inappropriate to bring about the correct use of these techniques.

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2/ Ibid., p. 4 . Even if a different base has been used in computing DAPC membership, the program in all respects has fallen far short of its intended objectives.

Third, the DAPC program has been equally unsuccessful in mobilizing adequate credit to meet the demands of participant farmers. Lending for agricultural purposes requires considerable working capital. The local credit unions have been unable to meet this demand from internal savings, and loans from outside sources have not been effectively sought. Faced with liquidity crises the local credit unions have reduced their ratio of loans to savings for DAPC purposes.

Finally, there is no conclusive evidence that the DAPC program has contributed either to increasing the production or income of its participant farmers. Production and income increases have been moderate or negligible, and not necessarily attributable to the DAPC program. Production differences in Table 6 are statistically insignificant, and could be due to random or external factors. It may be, therefore, that the measuring instrument was not capable of detecting changes in production, that the past year was not a representative year, or that there is a time lag in production increases which has not been taken into account. Nevertheless, there is evidence that technical assistance has led to adoption of new agricultural techniques <sup>3/</sup> (Table 19) and new attitudes toward production, which has been one of the crucial aims of the program.

#### Reasons for Poor Performance of the DAPC Program

The problem for FECOAC and USAID/E is pressing and immediate: what can be done, or can anything be done, to strengthen the DAPC program in Ecuador? For AID/W and other USAIDs that might be interested in establishing DAPC programs, the questions raised by this and previous studies of the DAPC program in Ecuador are more conceptual. Is DAPC a workable concept? What inputs are necessary to make the program successful? What pitfalls must be avoided for the program to operate successfully? The answer to these questions can only come from careful analysis of the reasons for the relatively poor performance of the program to date. The evaluation goes into the problems encountered by the DAPC program in considerable detail. In this foreword we will attempt only to summarize these findings and draw some conclusions.

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<sup>3/</sup> Although it may be that those farmers who are so advanced as to use new techniques are those who are seeking technical assistance.

### Credit

The first problem encountered by the DAPC program has been a lack of sufficient credit, or capital, to meet the needs of participating farmers. Agricultural credit for production requires large amounts of credit custom-tailored to the needs of the individual farmer. The amount of credit needed has been beyond the internal capacity of the local credit unions. FECOAC has not established a central credit union, so it has been unable to make credit available to participating DAPC credit unions. The Banco de Cooperativas, even though most of its loans have gone to credit unions, has not made available sufficient lendable capital to finance DAPC needs, partly because no coordinated effort has been made with FECOAC to plan for and set aside the needed credit, and partly because the Bank has shied away from relatively risky agricultural loans. Finally, other potential sources of credit, such as the Banco de Fomento, have not been sufficiently utilized in the program, because the local cooperatives have been either unaware of or unwilling to take advantage of them. Given these constraints on lending capital, the program was structurally limited in its potential coverage from the beginning. A concerted effort is required in order to make the necessary advanced arrangements to assure the availability of needed credit.

### Technical Assistance

The second major problem identified in the evaluation has been the lack of effective and sufficient agricultural technical assistance. Too few agricultural extensionists have been assigned directly to the project and too little attempt has been made to utilize other potential sources of technical assistance for these to have had a substantial impact on the appropriate use of credit in agriculture by a significant number of people. This is corroborated by the fact that nearly half of the sample had received no agricultural technical assistance at all, and by the lack of relationship between the use of agricultural technology and increased production. The evaluation report also suggests that the methods of administering technical assistance used by the extensionists may be inadequate.

### Managers

To some extent the evaluation points out that the lack of credit and adequate technical assistance may be due to the lack of initiative of local cooperative managers. Quite frequently available sources of credit and technical assistance are not exploited because of a lack of knowledge or interest on the part of the

local credit union manager. This may be the greatest weakness of the DAPC concept as it is now being developed. The DAPC program places great emphasis on the dedicated initiative of the local managers. They are to help develop work plans, arrange technical assistance, arrange credit, provide field supervision, etc. But few of the managers had adequate training, some were not sufficiently interested to perform the job well, and some were too busy to carry out these functions.

At least part of the problem with the managers may be due to the rural-urban split of the DAPC credit unions. Managers from predominantly, or even marginally, urban credit unions tend to come from the urban sector. Their interest and concern with agricultural production and DAPC are notably reduced.

#### Marketing

The report points out that little has been done in the DAPC program to provide for the marketing of farm products. In several instances (not detailed in the report) this has resulted in prices dropping when farmers increase production in excess of market demand. The few attempts to market cooperatively have been unsuccessful and short-lived because of lack of know-how and organization.

#### Federation Backstopping

Finally, the DAPC program has suffered from the lack of sufficient backstopping by the National Credit Union Federation, FECOAC. Insufficient time and energy have been spent in training managers, standardizing procedures, monitoring credit, providing assistance in developing work plans, locating and facilitating credit and technical assistance, and providing motivation and education.

#### Conclusions and Recommendations

What this evaluation has shown is that DAPC is, as the evaluators observed, "deceptively simple". However, the Mission believes that the DAPC program is an effective means of reaching the small farmer with credit and technical assistance. In fact, it appears that a program similar to that envisioned

in the DAPC concept may be the only effective or potentially effect means of reaching this population. The problems encountered with the program seem to be related more to the particular manner in which the program has been developed and administered in Ecuador rather than to basic conceptual problems inherent in DAPC itself. However, based on the experience in Ecuador, the Mission believes that there are difficulties in establishing and operating a successful DAPC program which need to be recognized by AID/W, the USAID Mission, and CUNA. With this in mind, USAID/E would like to make the following recommendations to Missions contemplating or currently initiating a DAPC program.

1. Financing - Any program that attempts to establish DAPC credit unions should provide adequate, timely and dependable financing for DAPC credit needs. This could be in the form of a direct loan to the credit union federation, a loan of adequate amount to a cooperative bank with a portion clearly earmarked for DAPC, a loan to a national development bank with an adequate portion earmarked for DAPC, the establishment of a central credit union within the federation with centralized funds and accounting (COFAC) so that savings of urban credit unions could be utilized in the DAPC program, or an arrangement for adequate credit resources between the federation and local credit institutions. Any DAPC program that does not include adequate financing is probably a waste of time and effort.
2. Managers of local DAPC credit unions need to be thoroughly trained and periodically retrained in the program, and kept abreast of and in contact with available sources of external credit and technical assistance. If the manager himself is incapable of meeting the demands of a successful program, another credit union employee should be charged with full-time responsibility for overseeing and promoting the program at the local level. The danger in this, of course, is that it might build up a bureaucracy that cannot be sustained internally.
3. The federation must be convinced of the need for, and must be able to provide continued, competent monitoring and backstopping of the DAPC program.
4. Adequate agricultural technical assistance must be provided and must be coordinated closely with the program by the federation and local cooperative managers.

5. Although it may be preferable to avoid directly involving the DAPC credit unions in marketing, some provision must be made to establish cooperative storage and marketing facilities for the member farmers, in order to protect them and their loans from the vicissitudes of the marketing system. Where an agricultural cooperative infrastructure exists, it is probably best to channel marketing through that system. If, however, no such infrastructure exists or is likely to be developed in the near future, it may be necessary to either create some type of central marketing cooperative, or to completely transform the DAPC credit unions into what they are already becoming -- multi-purpose cooperatives.

One potential model for resolving this problem is being experimented with in the province of Carchi in northern Ecuador. Existing rural credit unions and agricultural cooperatives have joined together in a central association. At the present time this association is only involved in farm supply operations, but it is planned that it will take on marketing functions as well. USAID/E will conduct an evaluation of the success and merits of this approach during FY 1973.

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## USAID/E COMMENTS ON THE METHODOLOGY OF THE DAPC EVALUATION

As a result of discussions within the Mission, we would like to add some qualifications on the methodology employed in this evaluation and the limitations it imposes on interpreting the results of the study and its specific conclusions. Before doing so, however, we would like to stress the importance of the evaluation, in the way it was conducted, and our concurrence in the general conclusions reached.

It is our belief that the most important result of this evaluation derives from the way it was conducted. In 1969 USAID/E financed a study of the DAPC program by Jon S. Davis. This study amassed a considerable amount of data concerning the program and arrived at rather significant conclusions, many of which have been supported by this study. However, because it was conducted from the USAID office, with scant participation by FECOAC, the study was never given serious consideration by the federation. It became, in essence, another study that sat on the shelves. The present study was conducted differently. It was designed in close cooperation with FECOAC. The USAID-funded contractor worked out of the FECOAC office. FECOAC assigned personnel to all stages of the evaluation-- design, structure, pre-testing, data collection, analysis, report writing, and post-evaluative discussions of the conclusions. It even funded the data collectors (through USAID Pro/Ag funds) and considered itself responsible for them. The result has been that FECOAC considers the evaluation to be its study, identifies fully with it and its conclusions, and is taking positive steps to implement the recommendations. This has been the greatest value of the evaluation.

Second, the Mission generally agrees with the conclusions and recommendations of the study, although we want to point out (and this is the reason for this appendix) that many of the conclusions derive not from the data collected through the survey, but from personal impressions and observations by the evaluation team, FECOAC extensionists and Ministry of Production personnel. In short, the survey data have a number of rather severe limitations that do not allow the conclusions to be made on the basis of the data alone. While this is a clear shortcoming of the evaluation, the Mission feels that the conclusions and recommendations of the study are basically sound and the objectives of the evaluation have been successfully realized. The magnitude and achievements of the DAPC program in Ecuador have been fairly well described and the major shortcomings of the program have been identified. We will, however, add some observations on the methodological limitation of the study for the benefit of AID/W and other Missions considering similar endeavors.

### Methodological Problems

1. **Credit--**The study was to assess the effect of credit on production and income. It presents the number of loans a farmer received during the past year and the size of his largest loan. It does not, however, give the amount of credit the respondents received. Therefore, it is not possible to compare amount of credit received with technical assistance received, size of land holdings, production or income. It is also impossible to verify or refute the evaluator's statement that larger farmers received more credit. Furthermore, it is impossible to establish a meaningful correlation between credit, production and income.
2. **Production--**Production data is extremely weak, especially in regard to animals. A small farmer (with 1-4 hectares) often does not attempt to increase the number of animals he maintains as a base stock. Instead, he buys, fattens and sells animals. The research did not take this into account. The questionnaire was worded in such a way that if a farmer had just sold his animals it might well be recorded as a production decrease even though he had sold more this year than last, had had fewer animals die, or sold fatter animals, all of which might have represented production and/or income increases. With these weaknesses in the data on production it is virtually impossible to conclude whether or not credit and/or technical assistance had any impact on production.
3. **Use of Technology and Increased Production--**It was surprising to find that the use of technical inputs was not strongly related to production. It is the contention of the mission that this was due primarily to inadequate production data, the peculiar nature of grouping data employed by the evaluation and the lack of a conceptual link between techniques employed and measures of production increase. The "increased production" category in Table 20 was based on the farmer's total production--grouping both animals and crops. But the use of fertilizers would have no effect on increasing the number of animals and the use of pens and stables or vaccination would not increase yields in potatoes or rice. Equally important, the techniques that could be adopted in regard to animals had little or nothing to do with increasing the number of animals. They were more related to having healthier, fatter animals for sale. It is not at all surprising, then, to find that techniques did not relate to increases in production, which was measured only in terms of number of animals. In fact, any relationship that existed would have been spurious.

4. Marketing--There are no data contained in the survey results to substantiate the evaluator's repeated emphasis on marketing problems as accounting for the lack of a relationship between production and income. He asserts (page 43) that Table 13 indicates a marketing problem. But, price for product was insignificant when compared with quantity as a factor effecting income change, and both farmers who increased their income and farmers who decreased their income equally mentioned price as one of the causes. The lack of relationship could be due to (a) unreliable production data, (b) unreliable income data, (c) both, or (d) extrinsic factors such as marketing problems. The report ignores the most obvious conclusions (a, b, c) and explains the lack of a correlation solely in terms of marketing. That marketing has affected the success of the DAPC program is widely accepted in Ecuador, but conclusions of what effect in the study derive from this common knowledge and not from data collected in the study.
5. Large farms versus small farms--At several points in the report the evaluator asserts that large farmers are more viable and progressive than small farmers. He argues that large farmers were those who had increased income, but there was no data to support this. He stated that large farmers had increased income due to outside earnings, but few farmers reported outside income as cause of income fluctuation and no data was presented to support the argument that large farmers were those who had the outside income.

With the above qualifications on the data presented in the study, and the understanding that many of the conclusions are based on other considerations, the Mission feels that the evaluation has accomplished its three main objectives:

- 1) Describe the scope and accomplishments of the DAPC program in Ecuador;
- 2) Underscore the difficulty and complexity of implementing a successful DAPC program; and
- 3) Alert the credit union federation to the need to undertake immediate, positive steps to improve the program.

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REMARKS ON THE EVALUATION OF THE FECOAC

DIRECTED CREDIT PROGRAM

All programmed activities must necessarily undergo evaluation, and FECOAC has therefore had an evaluation made of the directed credit program, which it has been running as a service to the affiliated rural savings and loan cooperatives.

The evaluation was made by CEMA, and its report indicates that, in general terms, "the results of the directed credit program are positive, although not spectacular."

It is considered that, in order to achieve the socio-economic betterment of the small farmer, it is necessary to improve production through the joint action of credit and technical assistance, and that was the tenor of the evaluation.

It is believed that, generally speaking, the directed credit program has had an effect on rural dwellers, and that therefore, whereas seven cooperatives initiated the program in 1965, by the end of 1971 there were 17 cooperatives included under directed credit, and an even greater number (23) in which the program was being initiated or perfected. Savings balances, which in 1965 amounted to 1,750,000 sucres, rose to 20,846,630 sucres in 1971; however, owing to failure to itemize entries it was not possible to deduce the degree of influence of the farming members on the growth rate.

The results of the evaluation show that there are three factors limiting the program's development, which are being studied in order to find a way to obtain better results in the future for the members, their cooperatives, and their communities.

According to the evaluating committee, the program's most critical inadequacies are:

- (a) Lack of sufficient credit;
- (b) Lack of effective technical assistance; and
- (c) Marketing problems.

Several problems are listed under each of those headings, and at the same time certain recommendations are made. FECOAC's proposed solutions to these problems follow:

A. Credit

1. Problem: Lack of funds to satisfy the program's credit needs.

Recommendation: FECOAC should seek to financially strengthen the cooperatives in the directed credit program.

Action taken: (a) Rigorous selection of cooperatives, introducing into the program those cooperatives which have adequate financial resources of their own.

(b) FECOAC has begun channeling credit provided by the National Development Bank, and this is already well underway. Currently there is an offering of a line of 3 million sucres annually, which would increase the capital of cooperatives throughout the Federation.

2. Problem: The directed credit program was not organized as a separate and special section within each cooperative. There is no separate bookkeeping for the program. Investment plans are not standardized. Minimum requirements for loans have not been established. Evaluative methods have not been set up.

Recommendation: (a) Designation of a field inspector. (b) Each cooperative should have separate bookkeeping for directed credit loans. (c) Special rules and regulations for directed credit. (d) Systematic evaluation.

Action taken: In order to solve these problems, FECOAC held a seminar for managers and field inspectors in which a series of means for implementing the recommendations were put up for consideration. They were approved by the seminar members and are being put into use. Another seminar is being prepared for cooperative managers and field inspectors who did not attend the first one.

B. Technical Assistance

1. Problems: The cooperatives are unable to offer adequate technical assistance to members in the directed credit program.

Technical assistance appears to have a limited effect on improvement of production.

2. Action taken: In order to solve the above problems, FECOAC has obtained the assignment from the Ministry of Production (Extension Department) of a larger number of professionals to work with cooperative members; this cooperation between Agricultural Extension and FECOAC will further improve in the future since it is now the policy of the Extension Department to work exclusively with cooperatives or associations.

In regard to the second problem, it is hoped that it will be possible, through planning by the Extension Department and FECOAC, to develop a new teaching methodology on the basis of complete management of demonstration farms.

C. Marketing

1. Problems: Individualism. Lack of operating capital. Lack of storage facilities. Price fluctuation.
2. Action taken: In order to solve the complex problems of marketing, the aid of provincial and municipal authorities has been enlisted for the purpose of establishing marketing centers where the cooperatives may deliver their products and at the same time purchase those they need. This project has been well received and it is expected that its organization will follow. Furthermore, members are being encouraged to deliver their products to the cooperative (a vehicle has been loaned for this purpose), and the cooperative sells them at the most appropriate market.

In this instance, the cooperative charges the members served a small fee for administration costs and avoids the middleman.

To conclude, these are the points brought up by the evaluation and the action we are taking to solve the program's inadequacies.

I should make it clear that in the meetings held prior to the beginning of the evaluation, the Federation emphasized that the weak points of the program, or, if you wish, its faults, should be analyzed in as much depth as possible. It is for this reason that the positive aspects do not form the major part of the evaluation.

A change of attitude in rural dwellers, their willingness to work together, to use new agricultural techniques, to save, to train, to administer their own organizations, deliberating on the problems they face and gaining awareness of the conformism in which they have been living, are achievements that will require time, dedication, tact, and money. It is difficult to measure the factors in exact terms, and only those who have had direct contact with them can have full consciousness of them.

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