

PN-AAA-126

ISN 2527

A.I.D. SPRING REVIEW OF SMALL FARMER CREDIT  
Volume V, February 1973  
No. SR 105

COUNTRY PAPERS

# SMALL FARMER CREDIT IN COLOMBIA



AGENCY FOR INTERNATIONAL DEVELOPMENT  
DEPARTMENT OF STATE  
WASHINGTON, D.C. 20523

TABLE OF CONTENTS FOR VOLUME V

The Incora Supervised Credit Program

by James Schwinden and Gerald Feaster  
U.S. Department of Agriculture

The Use of Incora Supervised Credit in Colombia in 1969

by Dana G. Dalrymple  
AID/PPC/PDA

Small Farmer Credit Activities of the Colombian Agricultural Bank

by Ronald L. Tinnermeier  
Colorado State University

COUNTRY PROGRAM

---

THE INCORA SUPERVISED CREDIT PROGRAM

---

by:  
James Schwinden, USDA<sup>1/</sup>  
and  
Gerald Feaster, USDA/ERS<sup>2/</sup>

Washington, D.C.  
February, 1973

<sup>1/</sup> Agrarian Reform and Credit Specialist Assigned to USAID/ Colombia  
1968-1972

<sup>2/</sup> University of Nebraska Mission in Colombia 1968-1970

## CONTENTS

	<u>Page</u>
Glossary of Terms.....	111
SUMMARY.....	iv
INTRODUCTION.....	1
PROGRAM CHARACTERISTICS.....	4
Background.....	4
The Credit Program In the Context of Agrarian Reform....	4
Phase I: Establishment.....	7
Phase II: Rapid Expansion.....	9
Phase III: Reorientation.....	11
Other Relationships to the National Credit System and Preexisting Institutions.....	15
Agricultural Patterns and Potential.....	16
Objectives and Organization of the Credit Program.....	19
General Objectives.....	19
Announced.....	19
Apparent Objectives.....	21
Terms of Credit.....	21
Organization.....	22
General Structure.....	22
Local Structure.....	25
Beneficiaries.....	26
Selection Criteria.....	26
Graduation Policy.....	28
Number and Types of Borrowers.....	29
Other Sources of Credit.....	29
Profiles of Farm Community.....	31
Lending Policies and Procedures.....	33
Portfolio.....	33
Interest Rates.....	35
Collateral and Subsidy.....	36
Appraisal Techniques.....	37
Collection.....	37
Repayment Record.....	37
Collection Methods.....	38
Special Enforcement Procedures and Rescheduling.....	39
Costs and Finance.....	39
Portfolio Profits and Losses.....	39
Complementary Factors.....	44
Technology.....	44
Supplies and Sales.....	46

	<u>Page</u>
EVALUATION.....	50
Performance.....	50
Program Evaluation Procedures.....	50
Apparent Uses of Credit.....	51
Apparent Production Impact.....	56
Effects on Savings, Farmer Organization, Farmer Attitudes, General Image, and Possible Changes.....	64
Problems.....	67
Conclusions About Small Farmer Credit.....	68
Improvements to the Program.....	69
ROLE OF TECHNICAL ASSISTANCE.....	71
AID Inputs.....	71
Other Donor Inputs.....	72
Effects of Technical Assistance.....	73
Recommendations.....	73

#### ANNEXES

I. Sources and Uses of Financial Resources of the INCORA Supervised Credit Program.....	75
II. Infrastructural Development Model I.....	77
III. Definitions of Evaluation Concepts and Background.....	78
IV. Inflation and Exchange Rates.....	95
 BIBLIOGRAPHY.....	 97

## Glossary of Terms

- Banco Ganadero - Cattlemen's bank.
- Caja Agraria - Agricultural bank; a bank which extends credit to farmers with medium and small farms.
- CECORA - Cooperative association of INCORA co-ops.
- COFIAGRO - An agricultural export agency.
- DLF - Development Loan Fund.
- FFA - Fondo Financiero Agrario (agricultural financial fund); a credit source from the Colombian Agricultural Ministry.
- Hectare - A land measurement equal to 2.47 acres.
- IBRD - The International Bank for Reconstruction and Development (World Bank), an international development bank.
- ICA - Instituto Colombiano Agropecuario; the Colombian Agricultural Institute; activities include research, teaching, and extension.
- IDA - International Development Association, the "soft loan" window of the World Bank.
- IDB - Inter-American Development Bank.
- IDEMA - Colombian marketing agency for agricultural products.
- IFI - Institute Financiero Industrial, Industrial Finance bank, provides credits for imports.
- INCORA - Instituto Colombiano de la Reforma Agraria; Colombian Agrarian Reform Institute; activities include land distribution, supervised credit, colonization, and irrigation projects.
- NAF - National Agrarian Fund.
- Peso - The monetary unit of Colombia; in 1964 the exchange rate was 9.00 pesos to the dollar; in 1971 the rate was 21.00 pesos to the dollar.
- SENA - Colombian Vocational Training Agency.
- STACA - Agricultural service.

## SUMMARY

The INCORA credit program is a complementary part of a major agrarian reform program initiated in 1961 in Colombia. The credit program began in 1964 when the U.S. Agency for International Development (AID) took the lead in supporting the program with a loan of \$10 million U.S. In 1966, a second AID loan of \$8.5 million U.S. was granted.

The purpose of the credit program was to offer to the target group of small farmers a plan for development of the farm and family unit, sufficient credit to attain plan goals, technical assistance related to production practices, and supervision of lending to protect INCORA. The supervised credit program passed through two distinct phases--initiation (1964-65) and rapid expansion (1965-69). The current or third phase is best described as reorientation.

In 1969, total value of loans made was \$20 million U.S. and the portfolio outstanding was double the value of loans made in that year. By 1972, about 50,000 families benefitted from the credit program. The families reached by INCORA, however, represent only a portion of the small farmers in the country. Evaluation of borrower progress through successive plans shows substantial increases in gross product value, increased input purchases, increased net worth and average farm size, and improvement in the farmer level of living. Program costs per family were relatively high initially; however, unit costs declined as more families were reached.

A lesson learned is that extending credit to small farmers for farm and family development cannot follow the traditional pattern of bank lending designed to serve larger commercial-type farmers. To mix them and permit the banking institutions to dominate small farmer provisioning under the guise of efficiency or specialization erodes the rate of small farmer development.

## I. INTRODUCTION

The Colombian agricultural credit system consists of several entities. The major private and public agencies and their credit activities in 1970 are shown in Table 1.

Table 1.--Major sources of agricultural credit in Colombia, 1970.

Institution	Number of loans	Percent	Value of new loans (000,000 Ps)	Percent	Portfolio end of year (000,000 Ps)	Percent
Private banks.....	57,818	13	1,865 (\$ 97.3) <sup>1/</sup>	30	1,819 (\$ 94.9)	22.5
Caja Agraria Bank.....	348,134	80	3,398 (\$177.3)	56	4,542 (\$236.9)	57
Livestock Bank.....	5,755	1.3	447 (\$ 23.3)	7	998 (\$ 52.1)	13
INCORA.....	25,000	5.7	188 (\$ 9.8)	3	497 (\$ 25.9)	6
COFIAGRO.....	187	--	210 (\$11.0)	4	125 (\$ 6.5)	1.5
TOTALS.....	436,894	100	6,107 (\$318.6)	100	7,982 (\$416.4)	100

<sup>1/</sup> Millions of dollars, 1970 exchange rate (19.17).

Private banks are required by Law #26 and subsequent decrees to maintain credit funding for agriculture in an amount not less than 15 percent of their demand deposits. Agricultural credit is extended through branch banks.

Caja Agraria is a mixed agency with funding from both government and private sources. Caja has some 650 credit agencies and 450 stores for provisioning agriculture. It has a dominant position in the agricultural sector.

Livestock Bank is, likewise, a mixed agency with funding from the government, external donors, and private capital.

INCORA is a governmental agency authorized to provide credit to farmers included in agrarian reform activities. Caja Agraria and Livestock Bank perform necessary banking services at a cost to INCORA. The sources from which INCORA acquires its loan capital are: USAID loans, borrowing of AID loan counterpart funds, discount or rediscount of agrarian bonds, and matching funds from Livestock Bank and multilateral agency project lending.

COFIAGRO is part of the Agricultural Ministry and is funded from governmental sources. Its principal functions are to provide credit and financing for agricultural processing, marketing, and exports.

FFA (the Agricultural Financial Fund) is a credit source of the Agricultural Ministry. Through this fund, programs of directed or supervised credit are carried out by other institutions. FFA financing is derived from reserves of regular reserve requirements in the Bank of the Republic bonds and the proceeds from sale of those bonds accrue to the Fund.

Development of rural cooperatives has been limited to the INCORA effort and a few CUNA promoted savings and loan associations. INCORA has established 19 co-ops with 20,000 members and subscribed capital of 20 million pesos (\$1.2 million dollars).<sup>1/</sup>

Table 1 shows that almost 437,000 loans were made in 1970. There have been increases in the number of loans in 1971 and 1972. In Colombia there are an estimated 600,000 small farmers with about 45,000 new family units added each year. There are 1.2 million farm units of which 757,000 have less than 5 hectares (12.5 acres) and 453,000 of over 5 hectares. Thus, dividing the number of loans by the number of farm units shows that 35 percent of farm units could have received credit. In 1970, Caja Agraria made 60 percent of its loans to small farmers (farmers with gross assets of 50,000 pesos--\$2,600)<sup>2/</sup> and the portfolio share from them was 20 percent of the total. INCORA credit was reaching 45,000 small farm families in 1970--one-fifth as many small farmer borrowers as Caja Agraria.

Officials who determine agriculture credit policy put strong emphasis on small farmer lending. Yet, over the past decade, total credit to the agricultural sector has increased, but its distribution continues to favor larger commercial enterprises. To the small farmer, with a modest or marginal base of productive resources, credit must complement his needs and it is most effective when accompanied by technical assistance.

The World Bank/IDA 1970 Report No. WH 200a concludes that "only about 25 percent of bank credits are advanced as a result of a detailed appraisal of requests. Credit worthiness of the applicant, not the expected return of the proposed investment, is the only consideration in much bank lending in Colombia. Greater emphasis on credit coupled with technical services would help introduce modern production practices into much of Colombian agriculture where lack of technical know-how is the greatest factor limiting rapid expansion of output."<sup>3/</sup>

There are farmers who have "credit worthiness," who have adequate or surplus productive resources, who can transfer credits and investments between the agricultural and urban sectors, and

---

<sup>1/</sup> Dollars, 1968 exchange rate (16.95).

<sup>2/</sup> Dollars, 1970 exchange rate (19.17).

<sup>3/</sup> Ministry of Agriculture, Aspects of Institutional Agrarian Credit in Colombia, Bogota, January 1968.

who can attract technical assistance from public or private sources. On the other hand, there are many more small farmers who have no recognized "credit worthiness," who have a marginal or deficient resource base, who cannot transfer credit and investment between the agricultural and urban sectors, and who are bypassed by technical assistance. It appears that given the different needs of the two groups of farmers, policy makers charged with establishing credit availabilities should differentiate between the two groups and target availabilities and delivery to match the needs of each group.

## II. PROGRAM CHARACTERISTICS

### A. Background

#### 1. The Credit Program in the Context of Agrarian Reform

The supervised credit program is one of several agricultural development programs which have been integrated by INCORA to accomplish comprehensive agrarian reform in Colombia. Therefore, the credit program must be studied in the context of this overall agrarian reform program.

The first Colombian Agricultural Census, completed in 1960, brought into focus the magnitude of Colombia's land tenure problem and deficiencies in servicing small farmers' needs. It centered attention on the amounts and kinds of services available to small farmers and the means by which corrective action could be achieved. Subsequently, Law 135 was enacted which created INCORA, not as a competitor to existing agencies, but as an effort to reach a broad segment of the rural population lacking adequate resources and generally unattended.

Prior to enactment of Law 135 of December 1961, there was neither government policies nor programs directed to the needs of small farmers. These farmers had insecure tenure, inadequate credit, no technical competence for production, nominal rural infrastructure, and no means to assure equal protection of the laws. Law 135 created, on the one hand, a body of law and administrative authority to rectify the existing situation and, on the other, it created INCORA to implement that authority.

Objectives of Law 135 in abbreviated form are:

- (a) to stimulate utilization of idle or underutilized lands;
- (b) to increase agricultural and livestock production, to increase productivity, and to utilize lands in production best suited to their location and capabilities;
- (c) to provide renters and sharecroppers better guarantees to tenure and offer them as well as rural workers better access to land ownership;

- (d) to reform the agrarian structure, eliminate inequitable concentration of rural property, prevent undue fragmentation of farms, reconstruct adequate family farm units, 4/ and provide lands to rural landless;
- (e) to raise the standard of living by land reform and by coordination and development of services through technical assistance, agricultural credit, marketing, housing, health, security, and development of cooperatives; and
- (f) to assure conservation, security, improvement, and utilization of natural resources.

To accomplish those objectives INCORA was created as an entity with administrative autonomy and its own dedicated fund and property for indefinite duration. INCORA functions are to:

- (a) administer public domain lands;
- (b) administer the National Agrarian Fund;
- (c) clarify the extent of state lands;
- (d) construct rural infrastructure;
- (e) acquire and distribute or redistribute lands; and
- (f) create the Office of Agrarian Attorneys as delegates of the Attorney General.

The law created a Social Agrarian Council which meets semiannually to examine and recommend orientation of agrarian reform. The INCORA manager is named by the

---

4/ A family farm unit as defined in Law 135 is an area of land sufficient when exploited with reasonable efficiency to provide a normal family with adequate income for maintenance, for paying off debts incurred, and for progressive improvement. Reasonable efficiency means that the land area does not require more labor than is available from the family, except for peak seasons or mutual help from neighbors.

In practice, the size of a family farm unit in a particular area is determined by adding together 8,800 pesos plus annual costs for acquiring the land, and dividing that sum by the average annual net operating income per hectare of the most prevalent crop in the locality.

President and must have a different political affiliation from the manager of the Agrarian Credit Bank (Caja Agraria). INCORA is authorized to provide loans to develop family farm units generated by the agrarian reform.

The law also provides for the financing of INCORA through a National Agrarian Fund. Initially 100 million pesos (\$7 million U.S. 1961 rate) were to be included in the National Budget for INCORA each year. Later the amount was increased to 300 million pesos. Also INCORA or the government may borrow from domestic or foreign lenders with a guarantee from the government. Validity of such loans need only the approval of the Council of Ministers and the President.

In addition to national appropriations and borrowings, land tax surcharges, donations, proceeds from sale of properties, and payments received for services accrue to the fund. Agrarian bonds, Class A, are issued each year in the amount of 200 million pesos and Class B bonds issued up to 200 million pesos. Those bonds are deposited by the government in the Bank of the Republic to the order of INCORA and become INCORA assets.

Law 135 listed an objective of raising the standard of living by coordination and development of services to provide technical assistance, credit, and other services. The Law also established the National Agrarian Fund to finance INCORA and the Law authorized INCORA to place funds under Caja Agraria administration to finance credit. However, the law did not provide financing for a credit program from the Agrarian Fund but it authorized INCORA to use Caja Agraria as a bank for developing a program of credit, technical assistance and other services. As a consequence, when INCORA developed the service programs, only the administrative costs of the programs were financed from the Agrarian Fund. Thus, funds for capitalization for a loan portfolio and related fiduciary or service costs had to be sought from sources other than the fund.

When INCORA began operations in 1962, the term of the first National Front President (Liberal) was ending and a Conservative would be elected and inaugurated in that year. The long travail of "La Violencia" was drawing to a close with public order and personal security emerging. There were three irrigation projects under construction, one in Tolima, one in Boyaca, the other in Valle financed by Regional Corporations. A fourth, and older, project of the United Fruit Company in Magdalena was steadily deteriorating. Agricultural research and extension services were weak.

Caja Agraria provided some credit to farmers (short-term subsistence type loans for small farmers and conventional bank credit to medium and large farms); it administered Development Loan Fund monies for colonization and resettlement; and had undertaken the purchase, subdivision, and resale of several properties.

## 2. Phase 1: Establishment

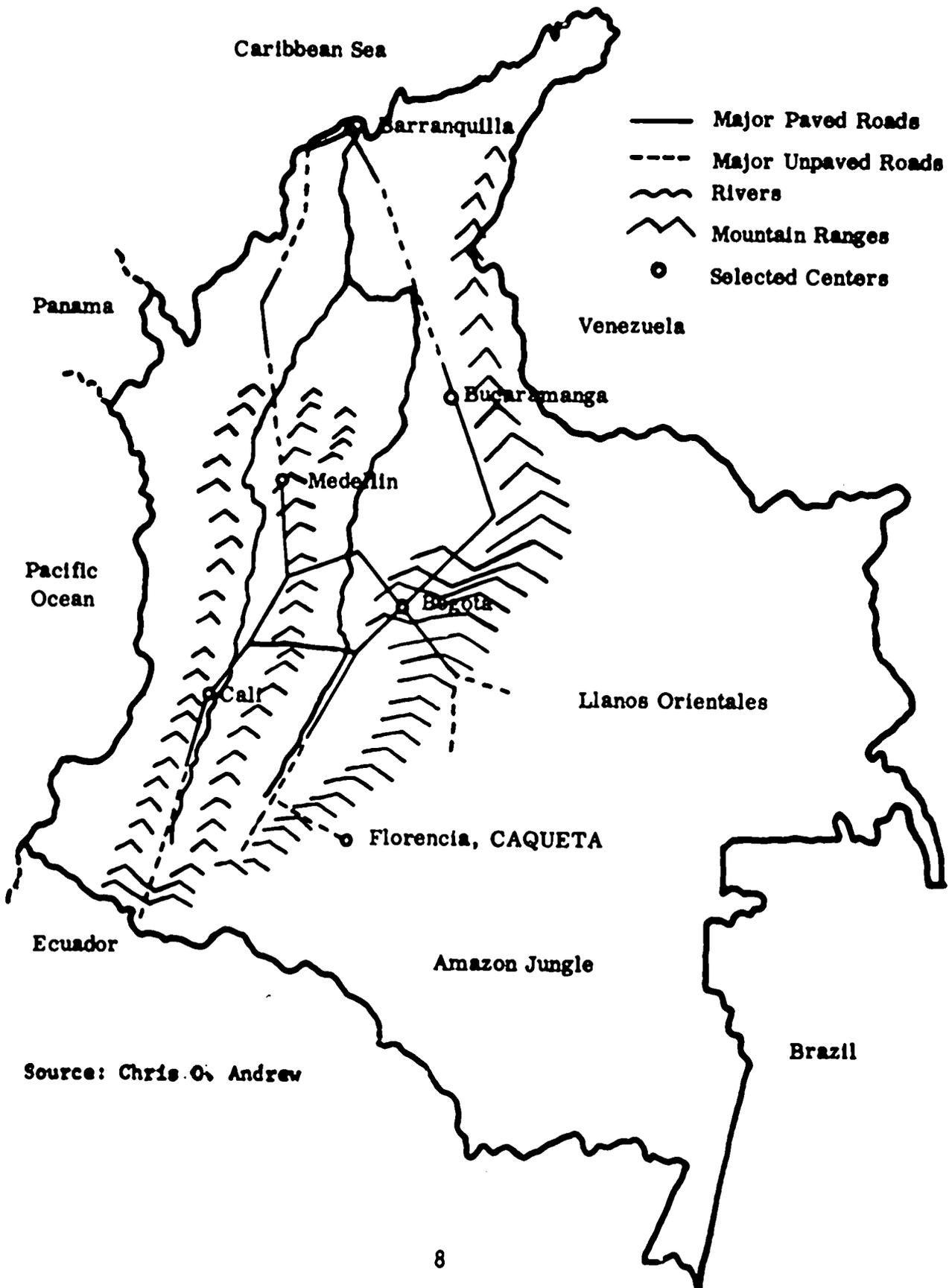
The first phase of INCORA development as an agency covered the period 1962 through 1965. During 1962, the Bogota central office was established and began the process of inventorying public lands to be administered and identifying lands with faulty titles or of excessive size. Studies of land use capabilities quickly showed that, despite large acreages of lands to be administered by INCORA, a relatively small amount was readily adaptable to settlement. The lack of access or penetration roads, diversity of the soils, topography, existence of widely differing micro climates, and lack of definition of property boundaries made necessary the creation of a division of engineering works (see Figure 1). The land titling process began but primarily affected squatters or claimants of ownership of land acquired through adverse possession (occupancy, use, and possessing land without formal title or other legal documentation).

As programs spread more broadly, considerable emphasis was given to developing projects to irrigate, drain, improve access to, or otherwise prepare the lands for production. Feasibility studies and project designs were undertaken leading to external financing from IDB and IBRD.

Also, a growing awareness of the need for farmer credit was evident and the USAID Mission collaborated with INCORA's newly formed division of rural development to prepare a loan request. Consequently, USAID loaned \$10 million U.S. to INCORA to fund a supervised credit program in 1964. With that money, INCORA opened a fund in Caja Agraria to finance farm plans approved by INCORA. Repayments are made to Caja Agraria and credited to the INCORA account. During 1964, about 2,550 loans were made valued at \$2.67 million U.S.

The period 1962-65 established the Institute and its major program activities, making them operational in projects throughout the accessible areas of Colombia. The Bogota central office had four divisions. One was administrative and the other three supporting programs:

Figure 1.--GENERALIZED TOPOGRAPHY AND ROAD SYSTEM IN COLOMBIA



(1) land distribution and redistribution (legal); (2) project works and investments in irrigation, drainage, access, land clearing, and other property improvements (engineering); and (3) supervised credit, cooperatives, community leadership, housing, and social benefit activities (rural development) (Figure 2). Each is headed by a sub-manager with staff and technicians.

For programs to operate in the field the INCORA manager designated projects (development areas) and selected project directors for them with authority to bring together the mix of programs appropriate for the project. Executive authority was decentralized with project directors reporting directly to the manager. Project areas were not precisely defined so, in essence, the programs could reach to small farmers anywhere within a reasonable distance from the project site. Within the project areas were rural farm laborers, small farmers, medium farmers, large farmers, and lands owned by people living outside and within the projects who used or did not use their lands. Others used lands which they did not own. Some had credit, others were without; some had technical help, others none. In that setting, the project director had to maintain a balance between local proponents and opponents of agrarian reform and had to set priorities for services to be provided from the available programs in an effort to satisfy the needs of the clientele.

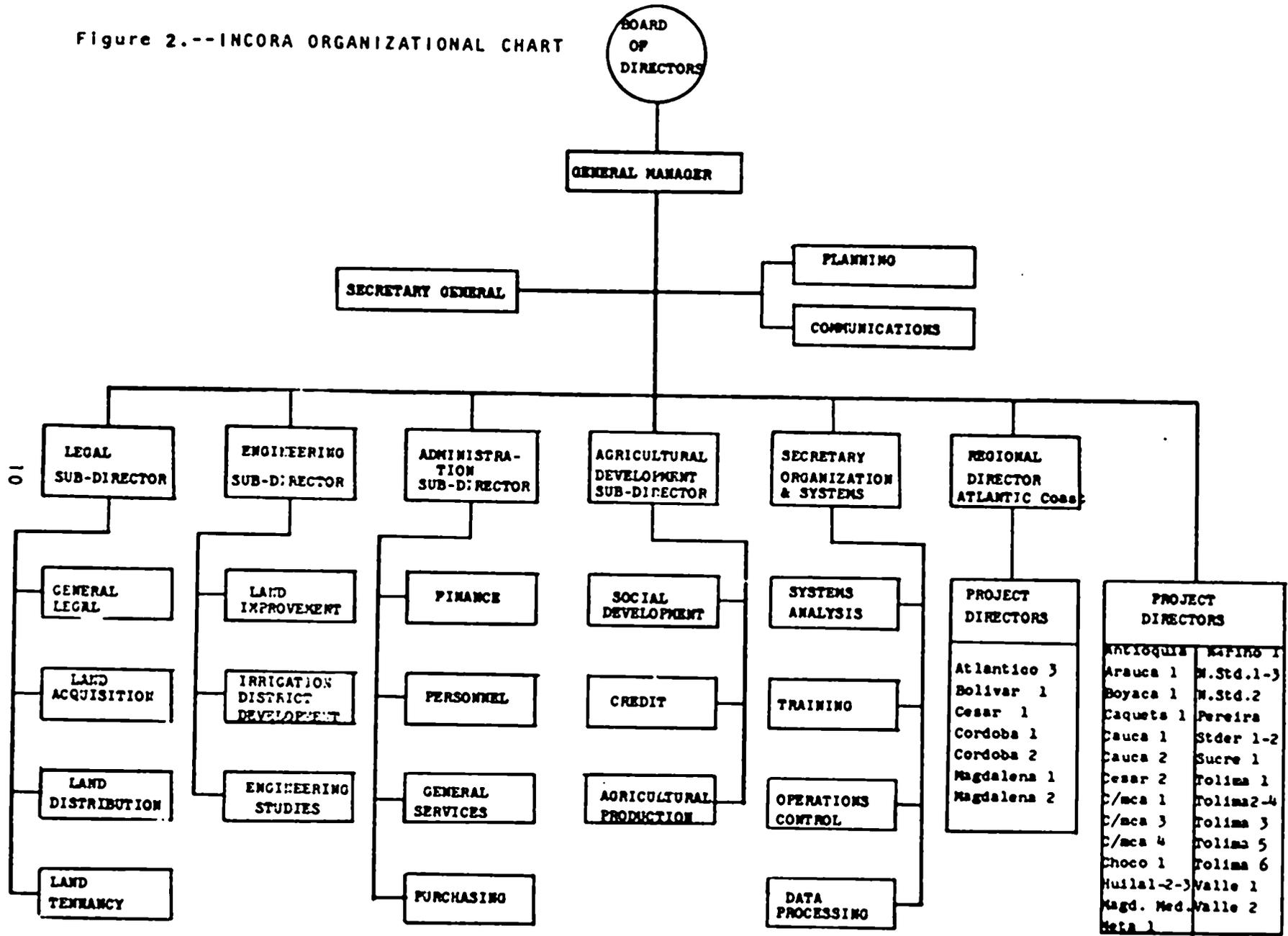
Program management and administration was controlled by the program managers from Bogota. Program personnel assigned to the projects were usually trained by the central office. From the earliest stages, INCORA provided specialized and general training for personnel to implement the programs. INCORA was dedicated to a continuous upgrading of skills and improving capabilities from the executive level to the low grade positions.

The central management, the decentralized authority of project directors, the personnel staffing program, and the established training effort were geared up for expansion. Funding of programs during this phase was generous. Each year INCORA carried forward a cash surplus. Project managers and technicians had gained enough field experience to deal with operational problems.

### 3. Phase II: Rapid Expansion

The second phase of INCORA from 1965 to 1969 was an expansion phase. New projects were opened and program

Figure 2.--INCORA ORGANIZATIONAL CHART



coverage extended broadly. Some 19 cooperatives were formed with 20,000 members. The number of credit clients grew from 2,550 in 1964 to 34,865 in 1969 with a portfolio outstanding of 689 million pesos from an accumulated total of loan value of 1.128 billion pesos. As of the end of 1969, some 100,000 adjudications of land titles covering 13.4 million acres had been given. The Engineering Division had invested 307 million pesos in land improvement and 87 million pesos in road building.

During the expansion phase, there were a few adjustments to the programs. Funding needs grew rapidly but availabilities grew also, although a bit less generously than in the first phase. At the end of 1969, INCORA showed its first yet very small cash flow deficit. In relation to the previous year's accumulations, the deficit was insignificant except for the fact that it was a first occurrence.

#### 4. Phase III: Reorientation

The third phase of INCORA from 1969 to the present or recent past is difficult to define because INCORA was caught up in a curious mixture of cross currents from both outside and inside the agency. Some of the cross currents were generating in 1968, others in 1969, and still others in 1970 and 1971.

The manager of INCORA for its first 7 years became Minister of Agriculture in 1968. He was replaced by the director of a major INCORA project. Both of those managers grew up with the INCORA and were completely absorbed in the mystique of the agency and its mission.

The Agricultural Ministry advanced a general reorganization plan for the sector in 1968 and put into effect decrees of 1968 and 1969 which realigned the Ministry's decentralized agencies. The Ministry retained the policy making function and made efforts to strengthen a sectoral planning and evaluation office. INCORA was almost unaffected by the reorganization. However, some 20 other decentralized agencies were grouped within the three new branches of the Ministry, i.e., Marketing (IDEMA), Research and Extension (ICA), and Natural Resources (INDERENA). As a consequence--INCORA, through its rather spectacular growth--was the largest budget recipient in the sector and soon found an increasing competition for budget funding by the new and enlarged agencies who were generally not very enthusiastic about agrarian reform.

Law #1 was also enacted in 1968 but its effects were not felt immediately. Law #1 extended to renters and sharecroppers the privilege of requesting INCORA to review their qualifications as small farmers (but with weak or nonexistent tenure) and, INCORA extended them credit and technical assistance if they qualified. Also INCORA obligated itself to acquire the lands necessary to provide them enough land for family units. Lands occupied by renters or sharecroppers were considered adequately used, so to acquire lands, INCORA had to rely upon the relatively slow progress of voluntary acquisition (negotiated purchase) or the slow process of involuntary expropriation from the owners.

Of some 76,000 renters or sharecropper families seeking INCORA services during 1968-69 under Law #1, about 46,000 were found qualified. However, the amount of land occupied by the qualified renters and sharecroppers was less than half enough to provide them the requisite amount for family farm units. The acquisition process was slow and generally there were no other lands available to settle the surplus of qualified claimants. Consequently, INCORA faced the choice of providing group credit and technical assistance to farmers farming the original property in common or subdividing the original property into inadequate farm units with credit going to each farmer individually. Opting for group credit and production cooperatives further advanced the trend toward that organizational form on the common lands.

At about the same time, a prominent Senator charged malfeasance in land acquisition against the Minister of Agriculture (the former manager of INCORA). This brought about a serious confrontation and much publicity. The Minister was exonerated but factions opposed to agrarian reform concentrated efforts to weaken the programs.

In previous years INCORA had received considerable media publicity; some favorable, some critical. The confrontation, as distinct from the charge, focused attention on the land reform issue. The rate of land title issuance did not increase much year by year and the proportion of redistributive titles to distributive titles changed very little through time.<sup>5/</sup> Awarding distributive titles in essence formalized an existing tenural relationship. Some commentators suggested that

---

<sup>5/</sup> Redistributive: public acquisition of private land for distribution to others. Distributive: Land distributed from public domain.

INCORA was taking the easy way out on land reform. Others of an opposite persuasion argued the virtue of distributive titling.

In the settled areas where redistributive titles were promised, the long and slow legal processing of acquisition tested the patience of those awaiting titles. Some 3,500 INCORA project personnel, most of whom were in direct contact with the small farmers, had the optimistic view that things would be better. At this stage the workings of the renter and sharecropper Law #1 of 1968 began to show effects. The small farmers combined with the renters and sharecroppers swelled the small farmer constituency and increasingly frightened the land holders.

In mid-1970, INCORA invoked for the first time its authority to establish a concentration of parcels at Jamundi in the Cauca Valley. The good quality bottom lands in the area were held by 56 owners occupying some 28,300 hectares. The surrounding hilly lands had 900 small farmers occupying 1,100 hectares. INCORA initiated expropriation proceedings against several of the larger owners even though their land was previously designated as adequately used. (Lands established as adequately used can be acquired by INCORA through voluntary sale but expropriation rules are very stringent).

The INCORA justification for such action rested on four points: that the bottom lands could be drained and productivity of crops other than livestock could be substantially increased; that the food demands of Cali were increasing and required the production of the valley lands; that acquisition of the bottom lands was necessary to rectify the tenure structure of the small farmers; and that there was no other land area available that would provide them a basis for farming.

In addition to being a classic confrontation in the workings of agrarian reform, this action occurred at a time when the credit program was coming under attack in the Congress. The issue was the alleged high cost of credit supervision. Annual supervision costs were rising while new funds available for lending were decreasing, hence supervision costs per peso loaned increased. Consequently, INCORA began shifting lending from individual farmers to farmer groups who worked common land.

In 1971, the second manager of INCORA resigned and was replaced by a new manager from outside of INCORA, bringing about a rather traumatic blow to the morale of the Institute. Numerous top level employees

resigned immediately. Some carried on a few weeks or months until replacements were named. Later, in the same year, the third manager was replaced by a business executive from outside INCORA. His job was made doubly difficult because of the previous loss of top people and his lack of familiarity with the nature of the agrarian reform programs. Also, four top INCORA executives died in a December 1972 plane crash.

INCORA had lost some of its glamour and strong forces in government grew increasingly critical of the Institute's programs. Two major conferences were held to discuss in-depth what changes might be made in Law 135. A conference was held in Boyaca in 1970 by a presidential commission to evaluate agrarian reform efforts. A second conference, held in Tolima in 1971, brought together seven legislative leaders and six executive branch officials who joined unanimously in a "Declaration of Chicoral" which proposed legislation to change significantly the course of agrarian reform. The unanimity indicated a show of strength of the National Front (coalition of the two major political parties). The proposed changes were:

- a. Combine social with economic criteria in establishing classification of rural holdings which may be subject to public acquisition and increase the statutory down payments for adequately utilized lands.
- b. A scale for establishing "presumed rent or return" on rural properties as a minimum base against which applicable taxes will be levied.
- c. The creation of two funds, one for payment for lands publicly purchased or expropriated and the other for supporting community welfare activities in rural areas. Fund resources will come from a surtax on real assets and inheritance, a portion of the tax on presumed rent and other sources.
- d. Directed a subcommission to consider several issues raised in the proposed modifications of the agrarian reform law previously submitted to the Third Commission of the Legislature but not covered at the Chicoral meeting.

Newspaper accounts indicated that the Third Commission of the Colombian Senate approved in substance the proposed changes in Law 135. The full Senate has not yet acted upon the Commission report and the House of Representatives Commission has not completed work on the proposals. On balance, the proposed changes will probably strengthen the INCORA land reform effort and

Increase programs directed to provide community infrastructure. With regard to the credit program, there are indications that a significant amount of the INCORA credit portfolio will be shifted to Caja Agraria for experimental credit programs. That then is the setting within which the INCORA credit program operates.

5. Other Relationships to the National Credit System and Preexisting Institutions

INCORA in the management of the National Agrarian Fund (NAF) has direct linkages with the Bank of the Republic (BOR), the Monetary Board, Caja Agraria, the Livestock Bank, the Fondo Financiero Agrario (FFA), and bilateral and multilateral lending agencies. Budget appropriations come to the NAF through orders to pay (ordenes de pago) approved by the Minister of Agriculture and a delegate of the Treasury Ministry for disbursement to INCORA. The INCORA credit program does not receive funds from NAF for financing the credit portfolio nor for the fiduciary costs of servicing the portfolio. However, the costs of administering the credit program are provided by NAF monies.

The INCORA programs do compete with other institutions to a very modest degree. In the case of land reform, Law 200 of 1935 provided that public domain lands and other lands for which ownership claims were faulty could be titled to occupants using and possessing them through civil procedures. Legal services were required to accomplish titling but when INCORA came into operation its Legal Division took over most of those activities at little or no cost to the possessors. With regard to engineering works, INCORA provided legal and technical services for land improvement activities. To some degree this replaced similar services formerly provided by regional corporations.

Credit and rural development programs could be considered as competitive to Caja Agraria because INCORA interest rates on small farmer loans were less than those of Caja. Also, provision of credit supervision and technical assistance by INCORA to borrowers represented an element of subsidy. However, given the very large and rapidly growing number of rural families of limited means and resources, with probably less than half of them receiving public services in a meaningful sense, the small farmer clients must compete for services. Likewise, existing agencies compete for funds to provide services which they can render.

The agrarian reform law requires that INCORA accomplish agrarian reform. The agency did not grow out of a

reorganization of functions performed by other agencies. The objectives of the agency were imposed upon the preexisting structure. Principal officers were drawn from local agencies and were dedicated to accomplishing agrarian reform by Colombians.

## 6. Agricultural Patterns and Potential

The setting in which agrarian reform and credit programs operate is widely diverse. The mountains of the major ranges are settled mainly by small farmers. Usually the better quality lands in high valleys are in large holdings. Altitude limits crops to barley, corn, potatoes, wheat, and livestock pasture. Recently vegetables, berries, and cut flowers have spread. Coffee production is generally a small farmer crop but neither agrarian reform nor INCORA credit is available to them except where diversification out of coffee is in progress.

The foothills of the mountain ranges and the bottom lands along the two major rivers are semi-tropical to tropical. Principal crops are cotton, rice, sugar, soybeans, corn, sorghum, bananas, platanos, and other fruits, plus livestock and poultry. Small farmers tend to populate the foothills; larger operators farm or pasture the valleys.

The rest of the nation consists of the Pacific slope, tropical with very heavy rainfall but mostly inaccessible, and the Eastern Llanos which is semi-tropical with large areas of both rolling grasslands and moderate to heavy jungle. Because of their inaccessibility, these areas generally have low population densities (Figure 3). Soils in the rest of the nation area range from excellent to the badly leached soils of the grasslands. Livestock production predominates but some starts have been made in rice, corn, cocoa, and rubber. Land clearing, restoration of leached soil areas, and penetration roads are the prerequisites to settlement. To cover those diverse areas and cropping patterns, INCORA had to adapt its programs to serve in developing family farm units.

The pattern of farm tenancy for the more settled areas, the mountains, mountain valleys, foothills, and river bottoms, is shown in Table 2 (based on the 1960 census). Subfamily farms are those too small to satisfy minimum needs or to fully utilize family labor. In the areas of better soils and climate, units up to 5 hectares and, in the more arid regions with poorer soil units,

Figure 3.--POLITICAL DIVISIONS AND POPULATION DENSITIES  
IN COLOMBIA

G. HANLY

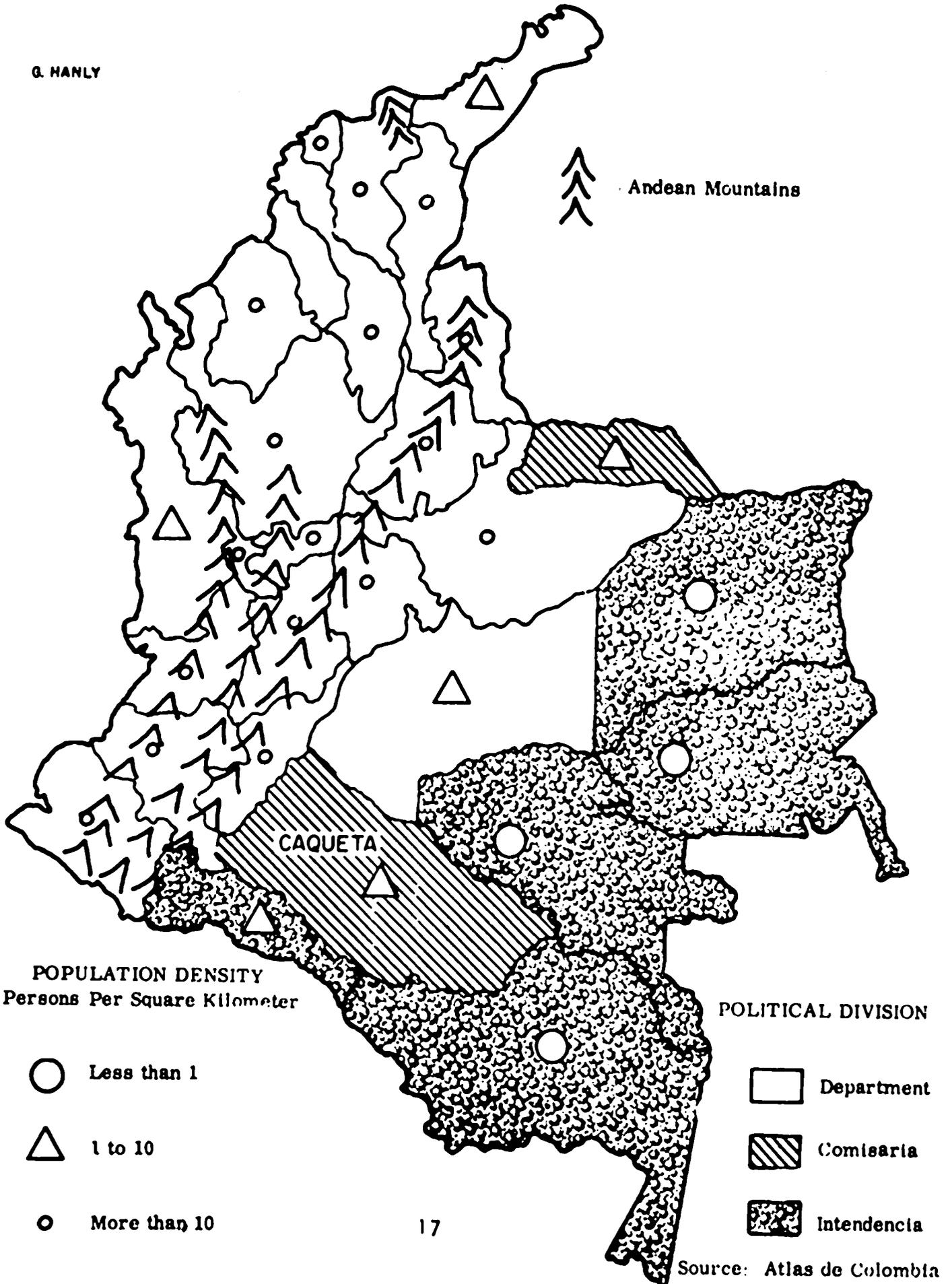


Table 2.--Distribution of farms by size, Colombia 1960

	Number farms		Farm area	
		Percent	(000 Hectares)	Percent
Subfamily.....	785,000	64	1,350	6
Family.....	361,000	30	6,000	24
Multifamily.....	54,000	5	6,160	25
Multifamily large...	15,000	1	11,040	45
TOTAL.....	1,215,000	100	24,550	100

up to 10 hectares are considered subfamily. Family farms are large enough to maintain a family at an acceptable level of living utilizing the family labor and using modest technology. The size range for family farms is from 5 to 50 hectares in better areas and from 10 to 100 hectares in the poorer.

Multifamily farms require more hired labor than is provided by the family but do not have an organized hierarchy of employees under an administrator. The size range for them is from 50 to 200 hectares in better areas and from 100 to 500 hectares in the poorer. Multifamily large farms have a permanent work force greater in number than the family and the unit requires a division of labor and an organizational hierarchy. Farm size is greater than 200 hectares or 500 hectares, depending upon location.

While the census definitions are useful in a general sense, there are subfamily units capable of being improved to the point of supporting a family, and even profitable. Within the family farm group, there are some who can augment resources and move upward to hiring labor. Making another comparison, 75 percent of the acreage and 63 percent of the farm units are privately-operated while 25 percent of the acreage and 37 percent of the farm units are rented, sharecropped, or simply occupied. INCORA programs work to provide credit primarily within the subfamily and family sized groups. Tenure reform for renters and sharecroppers, when accomplished, qualified them for credit. INCORA extinguishes ownership claims to the land then titles it to them. After titling, credit can be provided.

Over the rest of the nation area, the above classifications do not apply. Around some villages one finds a number of relatively small farms. In other areas

large haciendas become almost a village complete with an airstrip. Between those extremes the occupant of a land area stakes out his claim when he finds the area he wants. Full utilization of family labor is a must whether the unit is small or large. Also, even though he has funds to hire outside labor, it is only available from incoming migrants to the area. However, their goal is to claim a land unit themselves.

After the settler has a clearing and a shelter he can request that INCORA formally establish his land unit. If he has adequate land cleared and lives on the place for 2 years, he can sign a contract with INCORA leading to titling 3 years hence. With the contract he can avail himself of credit and technical assistance services.

## B. Objectives and Organization of the Credit Program

### 1. General Objectives

#### (a) Announced

The supervised credit program of INCORA is defined as "a system of integrated financing for small farmers with limited resources and those receiving lands under agrarian reform through the combining of planned farm operations with technical and social assistance with supervision of the credit extended." The objectives as stated by INCORA are:

- (1) to raise the level of living of the farmer-borrower as a consequence of increasing his income, capital, and farming capabilities through the extension of credit combined with applied technical assistance to increase the production and productivity of his farm;
- (2) to prepare the farmer-borrower to attain access to ordinary credit sources through a process of "graduation" of the borrowers; and
- (3) to support the formation of systems associated with the full utilization of the land.

Those objectives were stated in terms of advancing the creation of family farm units generally. However, there are significant differences in the

weighting of credit given for different purposes. For example, credit to irrigation areas is oriented toward plans with a high agronomic and technological requirement. At the other end of the spectrum, i.e., in colonization zones, credit is oriented toward the economic, social, and infrastructural aspects of developing family farm units. Between those extremes are many small farmers in the highlands and foothills; some are owners of land and others are sharecroppers and renters who receive credit to advance economic, technological, and social objectives.

Some shifting of objectives of the credit program has occurred through time. The obvious reason for such shifts is that prior to the INCORA credit program there was no experience to serve as a guide for a small farmer credit program. Hence, after credit supervisors and zone chiefs began credit operations in the field they were better able to identify credit priorities in terms of need and use.

The evolution of the credit program was highly adaptive. Cooperatives were formed and financed with credit in part. Credit for livestock purchases became more available over time. Groups of farmers jointly borrowed to build access roads and other community facilities. The complementary role of providing supervised credit to top-off the FFA funding (see page 2) is another example.

National policy priorities also have implications for credit program objectives. Briefly paraphrased the priorities are:

- (1) to increase production for internal demand and exports.
- (2) to continue agrarian reform emphasizing specialization in land distribution with more participation of other agencies, and revision of basic agrarian reform law.
- (3) to allocate agricultural credit emphasizing credit to small farmers.
- (4) to improve agricultural research and diffusion of technical information through extension and a pilot area development program.
- (5) to promote farmer associations.

From the current national policy priorities one notes that emphasis is placed on land distribution (possibly as opposed to "redistribution") and that specialization (in land distribution) by INCORA will deemphasize the credit program gradually limiting INCORA programs to those initiated prior to 1964 (legal and land reform plus land improvement). Thus, it appears that changes in national policy priorities will reorient INCORA programs.

(b) Apparent Objectives

Experience shows that credit program operations generally conformed to the primary announced objectives. Credit went to small farmers to augment their limited resources. Farm plans, credit supervision, and technical assistance increased income, capital, and farming capabilities. While "graduation" to other credit systems was an objective, it did not materialize in a formal sense as contemplated. However, farmers who were well advanced, i.e., in the early stages of commercial farming, are probably getting credit from other sources. Credit was seldom, if ever, used to pacify the discontented. Land invasions in recent years occurred but in no instances were credit offices affected.

2. Terms of Credit

Credit supervision consisted of preparing a farm plan which specified amounts of credit to be provided for specific uses to attain specific goals for production, capitalization, or other improvements. Farm plans have variable credit terms. Disbursements are generated in the form of promissory notes cosigned by the borrower and INCORA. Those notes are accepted by Caja Agraria offices and the face value amount disbursed to the farmer and charged against the INCORA account. For each promissory note INCORA schedules repayment quotas due from the farmer.

Credit terms for a given plan are difficult to establish because crop credit (short term up to 3 years), livestock or physical improvements credit (medium term up to 7 years), and permanent crops and other improvements (long term up to 15 years), may be included for financing in the same plan. In 1971, 50 percent of the credit funds were loaned for short term, crops; 27 percent for livestock, medium term; and 23 percent for other loans. The latter probably includes only a small amount of long term credit.

The farm plan was the basis for providing credit. The plan took into account all components of the borrowers' situations. From that base, credit was to provide a planned improvement in development of the small farmer. This included capital growth in addition to increases in production and income. Improved practices and technology were a part of the plan as applicable to crops, livestock, or other uses.

## C. Organization

### 1. General Structure

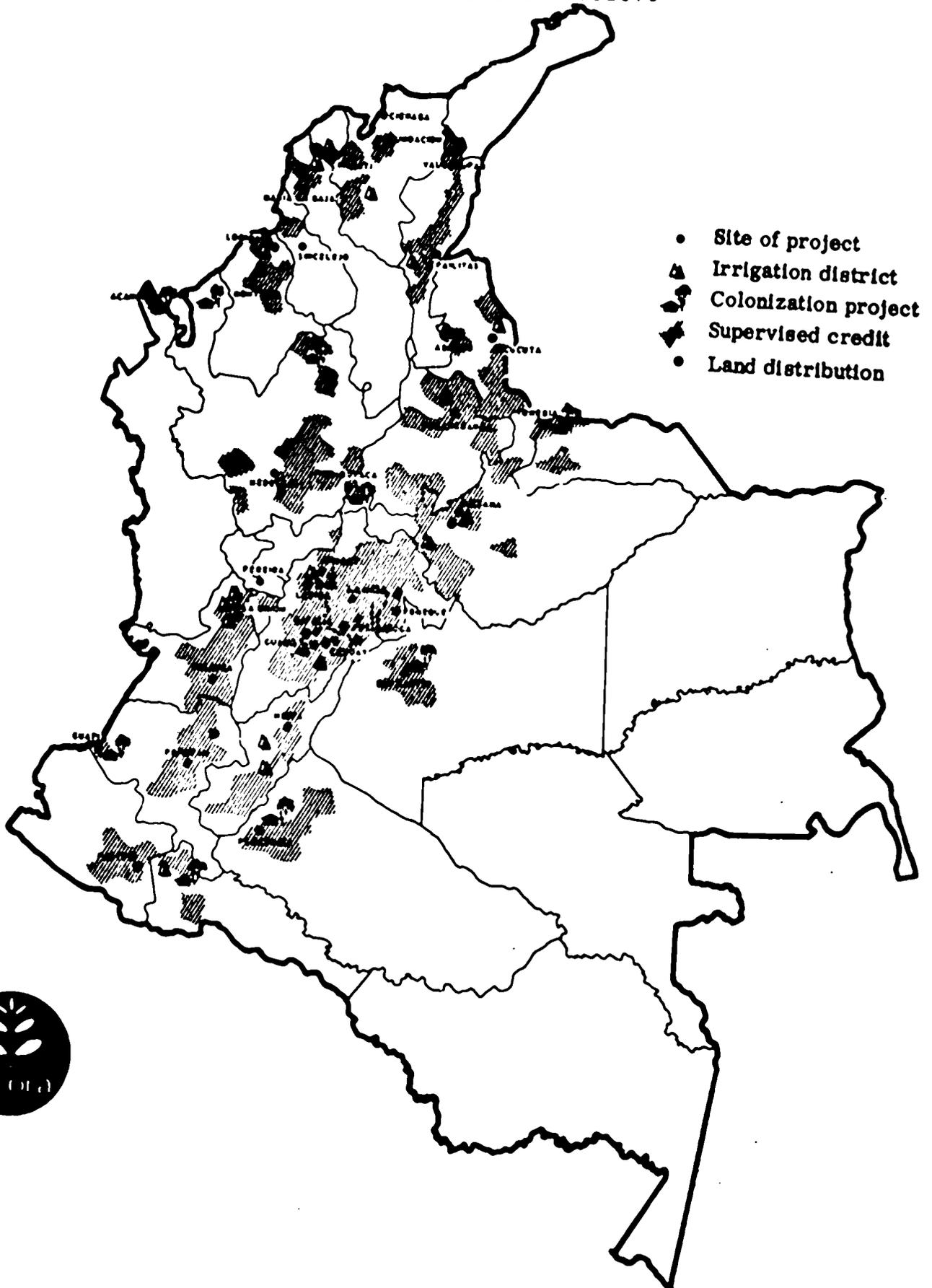
The loan paper providing AID funding in 1964 guided the design of the credit program and the way it was to be organized. In anticipation of the loan, INCORA arranged with SENA (the Colombian Vocational Training Agency) for development of a training program for credit supervisors. Training covered the preparation of farm plans, estimation of funding needed, anticipation of repayments, plus some technical training related to selection of appropriate crops, fertilizer requirements, and marketing. Those were the essentials provided for the supervisors who were to be the direct contact with the farmer-borrowers.

Credit zones were established and headed by a zone chief who usually had four or five field supervisors. The zone chief approved, disapproved, or suggested modification of each farmer's plan prior to credit disbursement. Zone chiefs received training courses of a higher technical level and were selected with somewhat higher qualifications than supervisors. While there were wide variations among various zones, the average zone chief initially handled about 200 borrowers. Later, the number served increased.

Zone chiefs were responsible to two distinct administrators, the officials and inspectors from the INCORA Central Office in Bogota, and more directly to the INCORA project director. INCORA operates decentralized projects under strong control of the project director. Usually there is one, but in some instances there are two or more projects (each with a director) within a State or territory (Figure 4). A project may have from two to eight zone chiefs depending upon the number of farmer-borrowers and area of the project.

Project directors rarely deal with individual farm plans or the disbursement-repayment mechanism. However, as situations arise he can shift the emphasis of credit

Figure 4.--LOCATION OF THE COLOMBIAN AGRARIAN REFORM INSTITUTE'S PROJECTS



Source: INCORA

among zones, among crops, or between "old" borrowers and "new" borrowers. Central Office Inspectors periodically review loan docketts, files, reporting, and related audit functions.

The chief of the credit program is officed in Bogota within the Rural Development Division. His staff includes a group of field auditors and inspectors, an evaluation section, a budget and finance section, and some technical specialists on specific crops. The 35 INCORA projects have about 250 zones and about 125 zone chiefs. Below the zone chiefs are some 500 field supervisors. The field supervisors attend an average of about 70 families but this varies among areas.

The number of supervisor visits to the borrower's farm varies depending upon accessibility, but ranges from three to five per year. Colonization areas probably get fewer visits; parcelizations get more. Supervisors note the conditions of crops, technologies applied, and physical improvements made. They also appraise market output and advise borrowers of repayment dates. These notations are filed in the borrower's docket in the zone office.

After the farm plan credit is disbursed, frequently there is a time lapse before the borrower requests preparation of another farm plan. This is a two-step process. The supervisor and the borrower jointly determine the realizations or results from the credit provided for in the previous plan and note them on the original form requesting credit. The realizations from the prior plan are the basis for a subsequent plan for credit.

More detail regarding the farm operations is shown in the patron, which shows the costs and uses of inputs and the output and value received for each crop produced. Those data are assembled in the zone offices and then forwarded to Bogota. There, by zone or by region, average crop costs and returns are summarized evaluated, and returned to the zones to guide preparation of new farm plans. A weakness of this approach is that it is based on past experience and innovations e.g., potential new crops and advanced technology are not explicitly taken into account in the guidance process.

Farm plans for a farmer are chronologically arranged as plan A - B - C, etc., and each is a basic document of agreement between the farmer and INCORA regarding what is to be done and how much credit is required. A plan can include credit for one or more crops,

purchase of livestock, improvement of land or buildings, hiring labor or equipment, planting of long term crops, and household expenditures. The credit provided for in the plan can be disbursed from a Caja Agraria credit office honoring a promissory note cosigned by the farmer and the INCORA zone chief. A plan can have from one to four or five promissory notes to complete the disbursement.

Upon the first disbursement, the initial repayment date is set usually from 3 to 12 months after the first disbursement. Subsequent repayment dates are set for the other installments to repay the promissory note. With each subsequent disbursement, repayment installments are scheduled into the future, and similarly, for subsequent farm plans. The data are retained in the loan docket and copies forwarded to Bogota for computerized processing. Two or three times each year, INCORA Bogota prints out the portfolio book showing the status of all borrowers.

## 2. Local Structure

The basic local administrative unit for the credit program is the zone. Initially the zone office had a chief, field supervisors, a clerk, and a typist. The area served from the zone office depended upon the accessibility of small farmers, mobility of field supervisors, demands for credit, availability of provisions, and availability of Caja Agraria bank services. The supervisors prepared farm plans with the borrower, and the zone chief reviewed the plans. If approved, the disbursement process began along with the supervision.

Supervision required mobility of supervisors which, at times, was lacking. Jeeps, motorcycles, horses, mules, and walking were the original means for mobility. Through time, that service was improved but remains a problem in some areas. As the credit program developed in the zone some technical specialists were added (i.e. veterinarians, horticulturalists, agronomists, etc.) to serve in the zone area.

Supervisors handled all dockets of the borrowers noting frequency of farm visits, adoption of recommended practices, general crop conditions, etc., and related comments derived from farm visits. Those were always available to the zone chief and to other project or program officials. There were no local intermediaries between the supervisor and the borrower.

## D. Beneficiaries

### I. Selection Criteria

When its credit program began in 1964, INCORA had eight established projects. Within those projects, 16 credit zones were opened. About 100 field supervisors and 16 zone chiefs, previously trained, were sent to those zones to begin extending credit. Of the eight projects then established, six were in minifundio areas and two were colonization projects.

Credit extended was intended to develop family farm units. Small farmers already owning their farms and those in the process of receiving parcels from land reform were eligible for credit. Renters and sharecroppers without adequate tenure were not then qualified. In the two colonization projects, the family unit size was considerably larger than in the other projects, ranging from 20 hectares up to 80 hectares of partially cleared land. However, the first year's lending to 2,556 borrowers amounted to \$2.67 million U.S. averaging \$1,100 U.S. per plan for an average farm size of 10 hectares.

From among those farmers falling within the family farm unit guidelines, requests for supervised credit were generated. In some instances, farmers requested technical assistance from the supervisors and later became borrowers. Other farmers approached the supervisors directly requesting credit. In other instances, the supervisors contacted local farmers and offered credit services under supervision. Most borrowers came to accept and welcome the supervision and the credit; however, some drifted back to local non-institutional sources. Aside from the fact that the program had money to loan, many farmers felt themselves to be in a cooperative arrangement with INCORA through the cosigning guarantee.

The request and preparation of the initial farm plan provided a screening of the applicant. Later, as the supervisors became better familiarized with the small farmers of the locality, their perceptiveness sharpened with regard to applicants' credit worthiness. As the program grew and spread, the supervisors gained considerable experience and expertise in the technical and financial aspects of small farm operations.

So far as is known, there were no explicit or implicit presumptions regarding certain groups or viability of

farm sizes. With a recent trend to production cooperatives, it appears that larger production units are coming into vogue. It is not likely that much credit was wasted on borrowers who could not or would not use the credit for agreed purposes. Nor was it likely that a farmer with insurmountable deficiencies in terms of basic productive resources would receive credit. Field supervisors and zone chiefs, like anyone else, sometime make errors in judgment. However, review of repayment delinquencies and excessive numbers of unexplainable extensions by central office inspectors bring the problems to an airing and correction.

Another problem is how to get poor performers out of the program and, even more important, how to not let them in. It is relatively easy for central office inspectors to identify delinquencies and excessive extensions at the individual, zone, or project level through the reporting system. However, the reporting system has not been sufficiently developed to identify the causes of the delinquencies or extensions. Some areas, affected by adverse weather or other uncontrollable factors, are affected uniformly so one cannot tell a good performer from a poor one regarding credit use.

A modest number of borrowers voluntarily drop out of the credit program, some because they did not like supervision of their activities. A few others simply completed one or two plans, dropped out, sought credit elsewhere, or migrated. In most instances INCORA was able to recover the credit debt. However, it was difficult to find and collect from those few who migrated.

Probably the sharpest cutting out mechanism is determined by the availability of credit funds relative to the number of farmers seeking credit (and amount of credit needed). Discussions with numerous supervisors and zone chiefs indicate that for each farmer in the program there is another farmer with an approved plan in the zone office for which credit financing is not available. This condition raised an important lending policy issue. Should credit availabilities be channelled to finance plans of the best performers aimed toward graduation or should available funds be spread more broadly among more borrowers and achieve more complete coverage with fewer and smaller loans per farm? With sharp competition for funds, and with little likelihood that the availabilities will increase substantially, the policy direction is ultimately determined by the project

director in the interest of harmony within the project rather than by the credit zone chiefs and supervisors.

## 2. Graduation Policy

The graduation concept seemed simple and workable as the credit program gained experience with borrowers. A borrower's docket contained his plan performance, his repayment history, and his net worth. As viewed by INCORA, when the prospective graduate reached the stage where he had adequate savings or qualified for other institutional lending, he would stop borrowing from INCORA and continue repayments. From 1969 there were well over 1,000 "graduates" of the program. Caja Agraria was advised of those farmers. A working agreement between INCORA and Caja existed to implement the transfer. Few, if any, of those graduates were accepted by Caja. Being cut off from INCORA credit these farmers probably lost considerable development momentum.

Caja probably had several reasons for not wanting to accept the graduates. First, INCORA would list a sizable group of graduates in a project area at one time; sometimes as many as 400 were designated. Probably Caja credit offices just couldn't accommodate that influx. Secondly, most INCORA graduates had loan repayments scheduled for sometime into the future. Caja could provide them crop term credit with repayment at harvest. However, the borrower would have two different repayment schedules or else repayment schedules would require adjustment. A third reason may have been the tenure situation of the "graduate." Frequently a settlement contract gave the small farmer a tenure right recognized by INCORA but bankers would probably construe that as only a shadow of title. Lastly, INCORA credit costs the borrower less than Caja credit and INCORA accompanied the credit with supervision and technical assistance. These two conditions and the lending criteria applied by Caja may have motivated the graduate to seek non-institutional credit as a more desirable alternative.

In retrospect, the turnover of borrowers might have been accelerated if INCORA had set progressively higher interest rates for successive plans, thus avoiding an abrupt transition. Possibly a "graduate-credit window" should have been opened in INCORA.

At this stage, the shift of INCORA credit away from the family farm unit development concept and into production cooperatives may deemphasize small farmers development even though production increases may occur.

Land redistribution and colonization, if substantially accelerated, could help restore the validity of the family farm unit concept.

### 3. Number and Types of Borrowers

From 1964-1970, there was steady growth in the number of families benefitted, the number of acres benefitted, and the value of loans made as shown in Table 3. The credit program includes both crop and livestock credit. Crop credit is usually of shorter term and finances smaller farm units. Livestock credit finances longer term and is usually associated with larger farms. As can be seen from lines three and six in the table, the average acreage of borrowers increased steadily until 1970 and the percentage of total loan value to finance livestock also increased steadily. In other words, as livestock lending expanded, the average size of farm unit increased. This does not imply that livestock credit goes to large scale livestock operations. Where small farmers are borrowing for livestock, their land units are usually larger. This is the case in colonization areas.

On the other hand, livestock credit has a longer repayment term than crop credit and the turn over of the portfolio is slower. However, demands for livestock credit by the small farmers is strong. As of 1970, about 9,000 borrowers had livestock loan plans out of a total of 45,000 in the overall program, i.e., 20 percent of borrowers.

With reference to Table 1 regarding adequacy of tenancy, if the upper half of the subfamily units and the lower half of the family units were considered as qualified for and accessible to INCORA credit, that service reaches about 10 percent of them. However, that estimate does not take into account the colonization areas.

### 4. Other Sources of Credit

From a sample of INCORA borrowers, 20 percent showed mortgage debt in their liabilities account. Through successive farm plans, most were able to reduce that indebtedness. Debt owed to family or local lenders was shown by 37 percent of the borrowers and that debt also tended to diminish. Thus, there are other credit sources available to a fairly high percentage of INCORA borrowers.

Table 3.--INCORA credit activities; number of families served, and area served by year, 1964-1970

	1964	1965	1966	1967	1968	1969	1970
Cumulative number of families benefitted.....	2,556	7,621	11,570	17,849	26,428	34,865	45,000
Cumulative land area benefitted (000 hectares)...	21.2	147.8	254.6	481.7	860.0	1,100.0	1,200.0
Average hectares benefitted per family benefitted..	8	19	22	27	33	31	27
Annual value of loans (000,000 pesos) <sup>1/</sup>	27.5	82.7	146.0	247.2	279.1	345.6	318.5
Dollars (000,000) <sup>2/</sup>	(\$2.8)	(\$7.9)	(\$11.8)	(\$18.5)	(\$19.5)	(\$22.1)	(\$19.1)
Supervised credit incl. FFA & DLF (000,000 pesos)...	26.7	79.3	134.7	198.5	204.5	251.1	229.2
Dollars (000,000)...	(\$2.7)	(\$7.6)	(\$10.9)	(\$14.9)	(\$14.3)	(\$16.1)	(\$13.8)
Livestock credit (000,000 pesos) ..	0.8	3.4	11.3	48.7	74.6	94.5	88.9
Dollars (000,000)...	(\$.1)	(\$.3)	(\$.9)	(\$3.6)	(\$5.2)	(\$6.0)	(\$5.3)
Livestock credit as a percent of total credit <sup>3/</sup> ..	3	4	8	19	26	27	28
Number of projects:	8	23	23	27	31	36	36
No. of credit zone:	16	82	113	145	183	222	253
Number of <u>municipios</u> (counties) served :	35	102	170	230	355	400	455

SOURCE: Evaluacion Economica del Credito Supervisado del INCORA, INCORA, Bogota, 1970.

1/ Peso amounts are expressed in current pesos.

2/ In calculating dollar equivalents, current pesos were deflated to a 1964 base and then converted to dollars at the rate of 10 pesos per dollar, an approximation of the 1964 exchange rate. See discussion in Annex 4.

3/ Percentages were calculated on the basis of current pesos.

## 5. Profiles of Farm Community

There are regions where farm units are relatively homogeneous in terms of size. The Departments of Narino, Boyaca, and parts of Cundinamarca, Santander, Cauca, Valle, and Antioquia have large munifundio areas. The same is true in the foothills of Tolima and Huila above the Magdalena flood plain. All areas are interspersed with a number of large or very large farms.

Homogeneity is also quite prevalent in the colonization areas where land units are larger but less productive. Those areas include Caqueta, Meta, part of Boyaca, Arauca, and Choco. There are a number of large operations similarly interspersed. A rather large area of relatively low lands including part of Antioquia, Cordoba, Sucre, Bolivar, Magdalena and up into Cesar and Guajira are homogeneous but in very large sized operations. Brief profiles of four INCORA projects follow:

Project Antioquia covers a very large area extending from several miles south of Medellin to the Cauca area about 150 miles north. The road system around Medellin is adequate and the northern area of the project is served by a major but unpaved road with few access roads. There are few villages in the northern area where livestock is the principal production. In the more mountainous area around Medellin, farm size is smaller and production of crops more general. Outside the rather extensive coffee producing areas, potatoes, fique, rice, beans, and other crops predominate. Of the 44 borrowers in the sample, half had livestock production.

Project Valle #1 is basically an irrigation project located about 75 miles north of Cali. Roads and rural infrastructure serving the area are as well developed as anywhere in Colombia. About 2/3 of the project area is irrigated. Credit operations extend to farmers in the foothills where farm units are larger and livestock production along with some coffee production is common. In the irrigated area the major crops are soybeans, tomatoes, grapes, beans, rice, cotton, and corn. Only 6 of the 41 borrowers were mainly livestock producers.

Project Huila serves the upper (southern) reaches of the Magdalena River Valley. Rainfall there is less plentiful than in other areas of Colombia. Some areas of the river flood plain are irrigated and soils range from good to fair to poor. The sample of 43 borrowers

shows livestock as the principal production with small areas of coffee production on the mountainsides.

A few farmers grow sugarcane, sorghum, beans, and rice. Roads and rural infrastructure provide modest service. Nieva is the project headquarters.

North Santander is a combination of an irrigation district near Cucuta but extends northward some 75 miles to the Tibu area. In the irrigated area, the principal crops are rice, corn, beans, and sorghum on 10 hectare farms. Livestock with some rice growing predominate in the northern part of the project. Farm units in there have areas up to 100 hectares. Riverbottom soils mostly reclaimed from jungle are very good but the northern hilly land is mostly fair to poor. The area has a variety of micro-climates and is rather sparsely settled. The roads and rural infrastructure are poor except close in Cucuta.

Colonization areas are quite different from the more densely populated regions. In these regions the farms are fairly widely dispersed and transportation difficult. A survey in one of the colonization areas showed that about 40 percent of the farms were 50 hectares in area or less, 40 percent were between 51 and 100 hectares, and 20 percent had 100 or more hectares.<sup>6/</sup> In these zones the colonist begins with a land area which is mostly under forest. Each year the settler clears 4 to 10 hectares and plants rice and/or corn. Often improved pasture is planted after the harvest or the land is allowed to revert back to forest. The subsequent year the colonist clears another area and repeats the process. In this manner the farmers are able to subsist while establishing a cattle enterprise.

In the colonization areas INCORA has sought to accelerate the development process by providing credit for pasture establishment, cattle and other enterprises. Farmers being reached by INCORA in these areas appear to be generally representative of other farmers in the area, at least at the time of settlement. However, those in the INCORA program appear to be developing at a faster rate as shown in Table 4.<sup>7/</sup>

---

<sup>6/</sup> Edulfo Castellanos Camacho, Estado y Proceso del Colonizacion en el Caqueta (Bogota: Departamento de Economía Agrícola, Subgerencia Técnica, Instituto Colombiano Agropecuario, 1970).

<sup>7/</sup> Based on a representative sample of 68 INCORA settlers and 31 non-INCORA settlers in INCORA colonization zones in Caqueta. Jorge Ruiz Irlarte, El Impacto del Crédito Supervisado en la Ganadería en Zonas de Colonización, Tesis de Grado Magister Scientiae, Programa de Estudios para graduados en ciencias agrarias, Universidad Nacional de Colombia-Instituto Colombiano Agropecuario, Bogota, Colombia, 1972. pp. 23-33.

Table 4.--Comparison of INCORA colonists with non-INCORA colonists  
in Project Caqueta at time of settlement and 1969

	INCORA settlers		Other settlers	
	Initial	1969	Initial	1969
	- - - - - Hectares - - - - -			
Forest.....	55.1	23.6	53.0	30.8
Crops.....	.7	5.0	.7	4.2
Improved pasture...	2.0	18.8	2.7	15.4
Natural pasture....	.7	5.3	.8	3.6
Forest regrowth....	5.8	15.4	8.7	16.4
Total area.....	64.3	68.1	65.9	69.5
Years on farm....	(8.6)		(6.7)	

## E. Lending Policies and Procedures

### 1. Portfolio

Trends over time in terms of cumulative value of loans, annual loans, portfolio outstanding, and the relative significance of livestock lending are shown in Table 5. The number of loans is all but impossible to determine because credit for borrower plans is disbursed through one or more promissory notes, each of which is a loan. Loans under supervised credit in nearly all cases provide funds for crop production or livestock. Frequently credit is provided for capital improvements. In some cases credit is given to pay for contractual technical assistance or to buy shares in INCORA cooperatives. The purpose of each farm plan for which credit is extended is to finance the development and improvement of the farmer and farm unit through increasing productivity and expanding the resource base.

Some farmers request financing for a second plan though credit from a previous plan has not been fully disbursed. This could occur in instances where the farmer's production resources changed during the course of disbursement of the previous plan. Less than 10 percent of the borrowers in the program have had two overlapping plans. On the other hand, about 85 percent of the borrowers have scheduled repayments coming due on past plan disbursements and running through the term of a new plan. The average number of farm plans

Table 5.—INCORA credit activities by year in current pesos and dollar equivalents

	1964	1965	1966	1967	1968	1969	1970
1. LOANS MADE - ACCUMULATED (000,000's of pesos).....							
(a) Supervised Credit.....	26.7	106.0	240.6	439.1	643.6	894.7	1124.3 <sup>1/</sup>
(b) Livestock Credit.....	0.8	4.2	15.5	64.2	138.8	233.3	322.2
(c) Total.....	27.5	110.2	256.1	503.3	782.4	1128.0	1446.5
(Livestock as % of total).....	3%	4%	6%	11%	18%	21%	22%
2. ANNUAL LOANS (000,000's of pesos).....							
(a) Supervised.....	26.7	79.3	134.6	198.5	204.4	251.2	230.6
(b) Livestock.....	0.8	3.4	11.3	48.7	74.6	94.5	88.9
(c) Total.....	27.5	82.7	145.9	247.2	279.0	345.6	319.5
(Livestock as % of total).....	3%	4%	8%	20%	27%	27%	28%
3. PORTFOLIO END OF YEAR (000,000's of pesos).....							
(a) Supervised.....	25.1	85.8	173.7	289.4	385.5	484.8	558.5
(b) Livestock.....	0.8	4.2	15.0	61.0	131.2	204.6	269.2
(c) Total.....	25.9	90.0	188.7	350.4	516.7	689.4	827.7
(Livestock as % of total).....	3%	5%	8%	17%	25%	30%	33%
<u>DOLLAR VALUE OF DEFLATED PESOS <sup>2/</sup></u>							
	Dollar equivalents (000,000's)						
4. LOANS MADE - ACCUMULATED.....							
(a) Supervised Credit.....	\$2.7	\$10.3	\$21.2	\$36.1	\$50.4	\$66.5	\$80.3
(b) Livestock Credit.....	0.1	0.4	1.3	5.0	10.2	16.3	21.6
(c) Total.....	2.8	10.7	22.5	41.1	60.6	82.8	101.9
5. ANNUAL LOANS.....							
(a) Supervised.....	2.7	7.6	10.9	14.9	14.3	16.1	13.8
(b) Livestock.....	0.1	0.3	0.9	3.7	5.2	6.1	5.3
(c) Total.....	2.8	7.9	11.8	18.6	19.5	22.2	19.1
6. PORTFOLIO END OF YEAR.....							
(a) Supervised.....	2.5	8.2	14.1	21.7	27.0	31.0	33.5
(b) Livestock.....	0.1	0.4	1.2	4.6	9.2	13.1	16.2
(c) Total.....	2.6	8.6	15.3	26.3	36.2	44.1	49.7

<sup>1/</sup> Includes \$197.9 million pesos of loans from D. L. F. and FFA sources.

<sup>2/</sup> Peso deflation based on C. P. I. 1964-70 (1964 base = 100). Deflated pesos were converted to dollar values at the rate of 10 pesos = \$1 U. S. (approximate 1964 exchange rate). See Annex 4.

financed per borrower is approximately three. The number of borrowers with six completed plans is about equal to the number of borrowers who leave the program after a single plan is completed, about 6 percent. There is no restriction on the number of plans for a borrower; however, instances of seven plans are rare.

The value of loans made to a borrower initially had fixed limits set at 45,000 pesos for crops, 85,000 pesos for livestock, and 12,000 pesos for colonization projects or for capital improvements in conjunction with crops or livestock. In 1968, those limits were made flexible to adjust for inflation. In constant dollars the average credit per family ranged from \$1,000 to \$2,000 (Table 6).

Table 6.--Average credit per family by year, 1964-1970

Year	Current pesos	Constant pesos 1964 <sup>1/</sup>	Dollar equivalent 1964 <sup>2/</sup>
1964....	10,800	10,800	1,080
1965....	14,400	13,800	1,380
1966....	21,300	17,200	1,720
1967....	26,100	20,000	2,000
1968....	29,400	20,700	2,070
1969....	32,200	20,650	2,065
1970....	31,000	18,550	1,855

<sup>1/</sup> Current pesos were converted to 1964 pesos using the Consumer Price Index (1964 = 100).

<sup>2/</sup> The constant 1964 pesos were converted to dollar equivalent at the rate of 10 pesos per dollar (approximate 1964 exchange rate).

## 2. Interest Rates

Interest rates were originally established at 8 percent of the outstanding debt balance for each promissory note and payable with each repayment installment. In 1967, the 8 percent interest rate was retained but the interest charge was computed against the value of the repayment installment. More recently, the interest rate was increased to 10 percent but was still computed against the repayment installment. A 1 percent charge

for insurance is collected along with the interest charges. The insurance compensates in full the outstanding INCORA debt if the borrower dies. In this discussion the 1 percent insurance will not be considered as part of the interest rate even though it is part of the cost of money to the individual farmer.

The extent to which the nominal interest rate paid by the farmer represents the real or effective interest rate depends upon the internal rate of inflation. Presumably, if the inflation rate just equaled the nominal interest rate, then the effective interest rate would be zero and the creditor would be in effect using the money without charge. Assuming the internal rate of inflation averaged 8 percent over the last decade, then presumably the effective interest rate paid by INCORA borrowers in the beginning (8 percent interest) would be zero. During the period when INCORA rates were 10 percent, presumably the effective interest rate would be approximately 2 percent.

The effective interest rates were probably higher than indicated since the preceding argument is valid only if the inflation rates are uniform throughout the economy. It can be argued that the inflation rates are lower in the agricultural sectors than in the urbanized industrial sector. This would tend to be the case in the rural villages and areas where communications and commercialization are minimal. Also the effective interest would be 1 percent higher if the 1 percent insurance note was included as a cost of money, which it is to the farmer.

### 3. Collateral and Subsidy

Collateral, as such, is not required of the borrower since INCORA is cosigner of the promissory notes. This is consistent with the objective of assisting farmers with limited resources and means. Since the credit program relies on supervision and plan development, in contrast to bank credit which relies on collateral, a technical assistance subsidy is implicit in INCORA credit.

In 1964, the first year of program operations, the cost per family attended was 2,941 pesos (approximately 290 dollars). The cost per family was down to 1,430 pesos by 1970 (equivalent to 800 1964 pesos or about 80 dollars). With 2,556 families attended in 1964, the cost of credit supervision and technical assistance was 6.5 million pesos. In 1970, with 45,000 families attended, the cost was \$64.4 million pesos. That is,

a 17-fold increase in families attended with a 10-fold increase in costs (expressed in current pesos). Probably half the expenditures per family could be considered administrative costs of program operations; the remainder would then be a technical assistance subsidy. None of these expenditures include debt servicing to Caja Agraria or to external lending institutions in the cases where the credit program is externally financed.

#### 4. Appraisal Techniques

Appraisal techniques as applied to the loan application appear adequate. The process begins with a request for financing a farm plan. The request includes family characteristics (number of children by age, whether active or inactive, etc.), land resources by tenure status and use, asset values by type, liabilities by type, and net worth. From this information base, a net worth increment is targeted over the plan term. To reach the targeted increment, either physical factor components and/or operational components may be altered. The costs of each alteration away from the previous operational pattern are established and the amounts of credit needed for each alteration are determined. After disbursement of credit provided for in the plan, the actual operating statement (results) is reviewed and compared with the planned outcome. The actual operating results are transferred to the balance sheet accounts. Credit supervisor visits to the borrowers, usually from three to five per plan, afford sufficient overview as a check on credit use and product sale.

#### F. Collection

##### 1. Repayment Record

During the first 2 years, the billing and accounting were done in the zone and carried forward in the borrower docket. However, that system did not provide overall control and projection of receipts. After the first 2 years of the credit program operations, a computerized system of billing and accounting was installed. With the more sophisticated system, the total of all installments due during any given time period was available. A total of anticipated collections during a month, a quarter, and annually was forecast. Using annual data on repayments due, Table 7 shows collection results in percentage terms.

Table 7.--Credit repayments by year, accumulated, 1966-1970

	1966	1967	1968	1969	1970
	Percent				
Programmed collections...	100.0	100.0	100.0	100.0	100.0
Payments on time.....	80.7	83.1	82.4	81.2	81.1
Extensions.....	11.2	6.5	7.0	6.8	8.1
Payments past due but undefined.....	6.9	8.5	8.6	10.0	8.7
Collection through legal action.....	1.2	1.9	2.0	2.0	2.1

A small amount of repayments of installments due, about 6 percent, are included in "Payments on Time." An extension pushes the due date of an installment into the future. "Payments Past Due but Undefined" show an increasing trend that is not desirable. Even though the accounts are cumulative, the growth rate indicates a potential weakening of the collection process and a lack of decisiveness in making a proper disposition of them. Collections sought through legal action remain minor--possibly too much so.

## 2. Collection Methods

Repayment installments due are billed from the INCORA office by computer. Four copies of the bill are prepared, one for central INCORA, one for the borrower, one for Caja Agraria, and one for the Credit Zone Office. The bill shows the farmer's name, zone, identification number, designation of the promissory note for which the installment is due, the amount due, the interest due, and the insurance due. The farmer pays the amount due directly to the Caja Agraria Office for deposit to INCORA's account.

Most payments are made in cash; however, there are some exceptions. For example, in cotton areas, the farmers deliver cotton to a gin. After weighing and grading, they are given a receipt from the ginning company which can be turned over as cash to Caja. Products under support prices and produced through use of FFA credit frequently follow a similar system. In some cases, cacao and tobacco also follow the negotiable paper sequence. Where INCORA cooperatives are operating they exercise a marketing control which is tied in with the project and the Caja office. A

basic point is that INCORA neither physically disburses credit funds nor does INCORA physically collect installment payment monies.

### 3. Special Enforcement Procedures and Rescheduling

There are distinctions in the enforcement of installment repayments. First, there is timely payment by the borrower. Second, there are payments made up to 30 days past the due date. These are noted but no cost penalty attached. Third, there are payments due but the borrower requests a prorroga or extension of time for installment repayment. These extensions may be granted by the zone chief if adequate reason is given. If it is not granted by the zone chief the borrower becomes delinquent.

When the zone chief determines that a borrower is delinquent, the disposition can take one of three forms. First, it can be turned over to the legal division for collection. Second, a revised plan may be developed if circumstances merit such action. The revision may change the total plan disbursement sequence, the loan value of the plan, or the installment repayment schedule of all outstanding debt. The third alternative is refinancing under close supervision. In reality, the best collection performance derives from a close cooperative and partnership relationship between the farmer, supervisor, and zone chief.

Where group loans are made, the group is mutually liable for meeting the repayment schedule. Since groups tend to require larger loans in total, the loss of a crop financed via credit may put the group into delinquent situation even though some of the group could meet their share of the installment. Not enough experience with group lending has been developed to provide insights into that kind of question.

## G. Costs and Finance

### 1. Portfolio Profits and Losses

Portfolio outstanding was 827.7 million pesos at the end of 1970 (Table 5). The sum of all repayments was 619 million pesos and the aggregate value of all loans was 1,446 million pesos.

From the inception of the program in 1964 through 1971 a total of 2,104 billion pesos were used. Sources and uses of funds are shown in Tables 8 and 9 respectively. Of the 1,714 billion pesos

Table 8.—Source of funds for INCORA credit program

Source	Pesos	Percent
	---Millions---	
USAID support (loans and counterpart).....	445	21
Internal bond rediscounts.....	478	22
Internal fund transfers.....	269	13
Recovery of funds loaned.....	815	39
Collection of interest on loans.....	85	4
Borrower insurance premiums.....	13	1

Table 9.—Use of INCORA credit funds

Use	Pesos	Percent
	---Millions---	
Loans to farmers.....	1,714	81
Interest paid on USAID loans.....	15	1
Internal commissions and interest.....	82	4
Payments on insured borrowings.....	5	11
Technical assistance.....	287	14

loaned, about half have been repaid after benefitting over 45,000 farm families and providing credit to an aggregate of 1.2 million hectares. (For detail of annual cash flows see Annex 1).

USAID support plus modest repayments from farmers carried the program through its first 3 years. From 1967 through 1970 INCORA opened new funding sources via rediscounting agrarian bonds amounting to 475 million pesos, more than doubling the USAID support during the period. Borrower repayments during those years amounted to 551 million pesos, evidencing a growing capacity among the farmers to repay their loans.

The peak year of the credit program was 1969; total funds received reached 425 million pesos, and 421 million pesos were used.

Comparing 1969 operations with 1971 operations shows a 37 percent reduction in funding sources while reduction in funds used was held to 14 percent. Farmer loan repayments accounted for over 70 percent of fund sources in 1971.

The cost of administration and supervision on a per family basis is shown in Table 10 in terms of constant 1964 pesos and dollar equivalents. These estimates are exclusive of interest payments by INCORA to external lending agencies. The cost per family has declined over time from a high of \$290 per family in 1964 to \$80 in 1970. The reduced costs reflect both the rapid increase in number of families served and increased efficiency in credit delivery. The cost per family is still relatively high and further reductions would probably be necessary to make it economically feasible to reach a large segment of the small farmer population. However, in any case, the costs should be evaluated relative to benefits derived from the credit program.

Table 10.—Cost per family in supervised credit program <sup>1/</sup>

Year	Constant pesos (1964=100)	Approximate dollar equivalent (10 pesos per dollar)	Number of families
1964 ..:	2,941	290	2,556
1965 ..:	1,763	180	7,621
1966 ..:	1,628	160	11,570
1967 ..:	1,260	130	17,849
1968 ..:	1,296	130	26,428
1969 ..:	1,016	100	34,865
1970 ..:	800	80	45,000

<sup>1/</sup> This does not account for interest paid to INCORA by farmers or the interest paid by INCORA for funds loaned.

SOURCE: Evaluacion Economica del Credito Supervisado del INCORA, Bogota, 1970, p. 15.

Factors affecting solvency of the program as seen from 1972 are mixed (see Annex 1). The USAID loans of \$18.5 million U.S. provided 216.3 million pesos but to repay the dollar loans at current exchange rates will impose a serious drain on the peso availabilities. Counterpart funds generated from AID loans were borrowed by INCORA in peso terms, hence deflation of the peso relative to the dollar works to favor INCORA in repaying. Bond rediscounting provided pesos for portfolio growth at very low cost to INCORA since the bonds were low interest long-term bonds. Transfers have increased in recent years but are subject to availability in amount. The positive element in sustaining the lending program is the evident increase in farmer repayment capacity as they move through successive loans.

In all credit programs, questions arise concerning portfolio turn-over rates. Table 11 shows sequentially the details of credit activities from an Antioquia sample of 44 borrowers in terms of current pesos by year. As projected, the total value of loans would be 1,247,100 pesos (current) fully repaid during 1972/73. The annual change in portfolio shows increase for the first 4 years, then is negative during the remaining 5 years. The accumulated portfolio maximum is 318,800 pesos (current) which was reached in 1967/68. From that point on, repayments exceed the value of loans made. In other words, the 318,800 pesos supported loan financing of 1,247,100 pesos or a roll-over rate of 3.3 times over a 9-year period or about one time every 3 years.<sup>8/</sup>

Interest charges as collected and as projected amount to 137,500 pesos over the full period. So INCORA could borrow at a rate of 8 percent and break even. Timing of repayments lags the cost of portfolio maintenance by 13,200 pesos in the first 2 years, then the lag is gradually eliminated.

Table 11.—Loans, repayments, and change in portfolio in current pesos  
(Project Antioquia: Sample of 44 borrowers)

Year	Annual			Cumulative			Interest collected	Break even interest cost 8.25%
	Value of loans	Repayments	Change in portfolio	Value of loans	Value of repayments	Portfolio		
	Current Pesos (000)							
1964-65	73.3 (73.3) <sup>1/</sup>	22.5 (22.5)	50.8 (50.8)	73.3	22.5	50.8	—	4.2
1965-66	77.2 (74.9)	29.4 (28.5)	47.8	150.5	51.9	98.6	1.0	8.1
1966-67	344.1 (278.7)	202.8 (164.3)	141.3	494.6	254.7	239.9	27.2	19.8
1967-68	253.0 (187.2)	174.1 (128.8)	78.9	747.6	428.8	318.8	26.7	26.3
1968-69	192.4 (134.7)	214.7 (150.3)	-22.3	940.0	643.5	296.5	22.4	24.5
1969-70	167.1 (106.9)	182.3 (116.7)	-15.2	1,107.1	825.8	281.3	18.1	23.2
1970-71 <sup>2/</sup>	90.0 (54.0)	160.0 (96.0)	-70.0	1,197.1	985.8	211.3	16.0	17.4
1971-72 <sup>2/</sup>	50.0 (27.5)	150.0 (82.5)	-100.0	1,247.1	1,135.8	111.3	15.0	9.2
1972-73 <sup>2/</sup>	—	111.3 (55.8)	-111.3	—	1,247.1	—	11.1	4.8
	1,247.1 (937.2) <sup>1/</sup>	1,247.1 (845.2) <sup>2/</sup>	+318.8 -318.8	1,247.1	1,247.1	0	137.5	137.5

<sup>1/</sup> Constant pesos. 1964=100.

<sup>2/</sup> Projected for 3 years to termination.

<sup>3/</sup> Sum of loans in constant pesos.

<sup>4/</sup> Sum of repayments in constant pesos.

<sup>8/</sup> From Annex III, Table 6, the turn-over rate is 2.35 times in 10 years.

The foregoing reflects relationships based upon current pesos within a closed economic system of buying, selling, and money costs; in other words, a perfectly functioning set of internal markets. In contrast, Table 12 shows the peso amounts converted to U.S. dollar values for each year. The approximate conversion rate used is \$1 U.S. equalled 10 pesos in 1964/65, increasing by 2 pesos per dollar per year.

Table 12.—Loans, repayments, and change in portfolio in dollar equivalents  
(Project Antioquia: Sample of 46 borrowers)

Year	Ps. per \$1 U.S.	Annual			Cumulative			Interest collected
		Value of loans	Repay- ments	Change in portfolio	Value of loans	Value of repayments	Port- folio	
Dollars (000)								
1964-65	10	\$ 7.3	\$ 2.3	\$ 5.0	\$ 7.3	\$ 2.3	\$ 5.0	—
1965-66	12	6.4	2.3	3.9	13.7	4.8	8.9	0.1
1966-67	14	24.6	14.3	10.1	38.3	19.3	19.0	1.9
1967-68	16	15.8	10.9	4.9	54.1	30.2	23.9	1.7
1968-69	18	10.7	11.9	-1.2	64.8	42.1	22.7	1.2
1969-70	20	8.4	9.1	-0.7	73.2	51.2	22.0	0.9
1970-71 <sup>1/</sup>	22	4.1	10.0	-5.9	77.3	61.2	16.1	1.0
1971-72 <sup>1/</sup>	24	2.1	9.0	-6.9	79.4	70.2	9.2	0.9
1972-73 <sup>1/</sup>	26	—	6.0	-6.0	—	76.2	3.2	0.6

<sup>1/</sup> Projected for 3 years to termination.

A first point of difference is that in 1967/68 the accumulated peso portfolio outstanding was 318,800 pesos (Table 11) in contrast to \$23,900 U.S. (Table 12) on the then current equivalent of 382,400 pesos. Comparing portfolio amounts in the year 1969/70 shows 281,300 pesos (Table 11) as the face value of all loans outstanding. This would yield about \$14,000 U.S. in contrast to the \$22,000 U.S. portfolio value shown in Table 12.

A major improvement in providing credit to borrowers was the purchase of vehicles (Jeeps and motorcycles). This investment added considerable mobility to the supervisory staff so more borrowers could be reached. A second improvement was shifting some technical assistance from supervisors to contract technicians. A third cost saving is coming about through the financing of groups or production cooperatives since technical assistance would be provided to groups rather than to individuals.

Beneficiary savings do not accrue to INCORA although some savings are deposited in Caja offices. Up to 1971, interest paid to small savers was 4 percent. However, an upward pressure has recently developed. In INCORA projects where cooperatives are operating, usually 1,000 pesos were loaned to borrowers to buy stock equity in the coop-

erative. Little, if any, internal refinance of the program has appeared so far.

To address the question of the solvency of a government agency raises many complex issues. The issues go deep into the political processes of the nation. It is certainly true that INCORA has not accomplished a massive transformation of small farmers. It is likewise true that INCORA programs have cost considerable amounts of money.

Programs spread among the projects have not been completed, i.e., irrigation, drainage, roads, resettlement, settlement, and small farmer development per se. In those respects Colombia is as good as or better than other countries. Numerous small farmers have benefitted substantially from INCORA programs. For some, no doubt, the cost of benefitting them exceeds the benefit derived. However, on the other hand, the opposite is true for the majority who receive the services.

## H. Complementary Factors

### I. Technology

Credit is seldom provided in kind but the uses for which the credit is provided are usually honored. Since credit disbursements are made to the borrower from the Caja offices (of which there are about 650) and many of the 450 Caja provision and outlet stores are in close proximity to the credit offices, there is some tendency for borrowers to buy inputs provided by the financed plan from the Caja stores. The INCORA borrower is not required to purchase from Caja, however. Where Caja credit offices are not close to Caja stores, INCORA has developed cooperatives for provisioning and in some instances marketing. Through time the availability of inputs has improved.

With regard to livestock credit, INCORA has arranged with larger ranchers and Livestock Bank technicians to assist in purchasing cattle which have been tested and free from various diseases. There are usually two or three veterinarians assigned to credit zones where livestock raising is significant. Also, in some areas, for example Caqueta, there is a substantial effort to improve pastures through introduction of new grass varieties and eradication of pests (ticks primarily).

Supervisors average from three to five visits to the farmer during the year to check on credit and repayments, to provide technical assistance, and to check on adherence to plan financed practices or applications. Field days in conjunction with ICA extension techni-

clans are held once or twice a year in a number of INCORA projects.

In the state of Cundinamarca, credit supervisors have developed nurseries for mango, nispero, apple, peach, plum, and grape propagation stock. Flower growing and vegetables, including berry production, is developing. The thrust of those activities is to allow diversification out of coffee production in marginal producing altitudes while providing steady income and increasing exports in the case of cut flowers.

The shift in INCORA credit policy from developing family farm units to financing production cooperatives can be called an innovation because of increased specialization of technicians and reduction of supervisory cost. But, as discussed previously, the policy shift may turn out to be the Achilles heel of INCORA as an agrarian reform agency. Experience to date with production cooperative groups is too limited to evaluate whether or not the change in system is a useful innovation.

Normally contract technical assistance is paid for from credit advanced to the farmer. This works very well and in a real sense ties inputs and advice together. Cotton and tobacco producers utilize this system. For rice, soybeans, sesame, and bean production, there is also some utilization of contract technicians.

The extension service provided by ICA has grown vigorously through recent years. Advice from extension people has improved both in quantity and quality. Within the ICA structure, two-way communication between extension and research workers has improved significantly. Extension personnel identify farming problems and research functions to resolve them. Given the range of diversity in Colombian agriculture and the problem of accessibility to farmers, the needs for technical transfer are far from fully met.

The increased supply of trained extension workers is the result of a major effort by USAID to strengthen ICA through contract services of the University of Nebraska. ICA budget growth has correspondingly increased and extension services are more broadly spread. New working relationships between ICA extension workers and INCORA credit supervisors are developing.

Arrangements between ICA and Caja Agraria have led to selection of pilot areas with credit provided for "input packages" to be used with improved technologies. INCORA has only a minor role with respect to that program.

## 2. Supplies and Sales

Over the time that INCORA provided credit to operators of family farm units, farming supplies were usually purchased from a Caja outlet, local merchants, or from INCORA cooperatives. Delivery of supplies was ordinarily accomplished by the farmer himself. Credit supervisors rarely handled supplies although they did advise the farmers as to proper seed selection, fertilizer mix, appropriate pesticides, veterinary products, etc. Accompanying that advice, supervisors suggested improved cultural practices which were checked on through periodic visits.

Where INCORA farm service cooperatives operated, borrowers could buy through them. In the early stages of each cooperative's development, emphasis was to have adequate and appropriate inventory to sell to the farmers. Later in their development they balanced their services by purchasing the farmers' produce. CECORA, a branch of INCORA, was created to serve in wholesaling production inputs to the cooperatives and to render product marketing services. While CECORA and the INCORA farmers cooperatives do not have a major role in either the sale of farm provisions or the marketing of farmer produce, some success has been achieved by opening two-way channels. That, in itself, is beneficial.

In 1969, a Feed Grain Program was developed by INCORA-CECORA. P.L. 480 corn was combined with other ingredients available in the country to provide feed concentrates for chickens, hogs, and cattle. The program opened the way to secondary enterprises for the small farmers which augment income and reduce underemployment. The program was well received by the small farmers and is showing measures of success.

Rural infrastructure is underdeveloped in most areas of the country. The combination of mountainous terrain, numerous rivers, and frequent landslides seriously affect commerce. Feeder or farm to market roads are generally poor, partly because of poor design and deficiencies in maintenance. INCORA has provided some credit for groups of farmers mutually cosigning the loan to build or to have built access roads to serve their needs. Community action groups have assisted in those undertakings.

In colonization areas, both penetration roads and feeder roads are quite inadequate. The dispersed settlement pattern, usually with larger sized farm units, requires more miles of road to serve fewer farm families so cost per family is greater. A second

complication is the lack of bridges over rivers which sometimes swell from creeks to torrents. Neither the farmers nor the farming communities can provide the means for overcoming those problems.

Irrigation and/or drainage works are INCORA obligations. Feasibility, design, and construction costs are considered public investments (implying a slow rate of recovery through time). However, upon completion of the construction, additional on-farm investments such as ditch layout and ditching, water controls, pumps, sprinklers, terracing, and specialized production equipment are necessary. On the irrigation projects in Valle #1, Bolivar, North Santander, Tolima, and Coroba, credit has financed on-farm irrigation accommodations in addition to crop finance.

IDEMA is the G.O.C. agency which sets product support prices, provides storage facilities, and moves commodities produced to the consumer and into export channels. CECORA and the INCORA cooperatives may use those services or provide them by themselves. The product volume handled by INCORA is small in comparison to IDEMA.

Other infrastructure deficiencies exist in jungle areas of colonization. In these regions health posts are rare and living conditions are precarious. Education is improving steadily in these areas but the coverage expands slowly. Also risks to persons or property rise when public safety is not provided. Any or all of these deficiencies affect the efforts to improve agricultural productivity and production.

In a general sense, the INCORA credit program has accomplished more through developing farm plans, financing them with credit, supervising the loans, and rendering technical assistance than in its efforts to change or enhance the availabilities of supplies, services, or physical access to them. When most borrowers receive the funds lent, they shop for the closest possible approximation of the plan-determined supplies or services and make do with what they can find. After they complete the production cycle, they must move the product to market and recover their liquidity through sale. In many, perhaps most, instances the farmer comes fairly close to meeting his planned goals.

Guaranteed sales and price supports are not provided by INCORA. The Ministry of Agriculture sets price supports for various crops, mostly storables, and they are administered by IDEMA. Not all of the price-supported production moves through IDEMA, but the existence of price supports is known and has an effect on bargaining and pricing.

INCORA does provide services in terms of collecting, transporting, and selling the produce. Project directors, zone chiefs, and, in some cases, credit supervisors intercede for the farmers, e.g., getting ginning quotas for cotton; contracting for oil extraction from oil palm, peanuts, cottonseed, soybeans, and sesame; selling cattle; drying and milling rice, etc. Transportation can be arranged through the project offices via contract. However, if the small farmer borrowers are widely dispersed, produce a variety of different crops, and harvest in different seasons, there is small probability that the foregoing services will be available to them. These constraints apply similarly to acquiring inputs and provisions.

The coverage of services varies among projects. Atlantico, Bolival, Cordoba, Tolima (Armero and Espinal), Huila (Juncal), and Valle #1 are projects which provide provisioning and marketing services. Antioquia, Boyaca, Cauca Magdalena, Santander, and Valle #2 are serviced to a lesser extent because of heterogeneity and dispersal of farms. The other projects fall somewhere in between.

INCORA credit carries an additional 1 percent charge which insures the borrower and INCORA. In the event of death the outstanding INCORA debt is cancelled. So far as is known there is no insurance against crop damage or loss.

There are two aspects to general marketing conditions in Colombia. On the provisioning side, Caja Agraria certainly has a dominating position. It has been said that the Caja's overall provisioning inventory turns over twice a year. Further, if a farmer goes to a Caja provisioning store for an assortment of input items, he has a 30 percent chance of finding all of his needs there at any given time. With liquidation of excess or outdated inventory and a projected inventory turnover of 4 times per year, improvement in the Caja purchasing department, and better distribution of provisions among locations, Caja could improve substantially the provisioning market. Should those improvements occur, one could expect better service both from Caja and/or from local merchants due to competition.

On the produce marketing side, IDEMA, COFIAGRO, and INAGRARIO receive public funds for product marketing. The Coffee Federation, in addition to its primary role in coffee for export, provides some market services in coffee areas. Also there are a substantial number of mejoristas or intermediaries scattered through villages and hamlets across the countryside. Some are store

owners buying and selling locally, some have trucks and buy produce at the roadside from the farmers, and some are money lenders financing a crop and offering a market for it. Price supported products have much greater price stability than non-price supported products. The latter product group tends to be less capable of storage and of bulk movement.

The overall market system functions fairly well and improvements are being made. Probably about one-third of all small farmer producers have adequate access to the market. Another third has marginal market services available. The remaining third, including colonizers or those in areas of poor access, tend to produce products that can in one form or other reach a market. In that case, market accessibility governs production patterns even though the farmer utilization of productive resources might be more efficient producing a different product combination. Barter of products within and among communities is beneficial in a distributive sense. It also keeps visible products which can be more efficiently produced and may in time cause market outlets to develop.

With regard to profit and risk, small farmers tend to look to the asset balance sheet rather than the operating statement. They want to possess and own assets with security and a minimum of encumbrances. Risk or insecurity focuses more on possessions than on operations. Consequently, INCORA cosigning promissory notes is preferred by them over mortgage or collateral backed credit.

Livestock are considered as reproducible capital. Farm plans which finance crops usually provide credit for capital improvements. There are exceptions where the credit provided finances operating capital. For example, cotton growing in Aemero and Espinal (Valle projects 1 and 2) indicates a growing degree of commercialization and a corresponding awareness of profits. However, the areas mentioned have a well developed service infrastructure and the risk factor is relatively low with respect to production.

The evaluation chapter which follows shows that outlays for family living rise much less than expenditures for hired labor and farm inputs. When profits rise sufficiently to cover costs and loan repayments (including credit for capital investments), the result is on-farm capital accumulation and greater output.

### III. EVALUATION

#### A. Performance

##### 1. Program Evaluation Procedures

A basis for evaluation was built into the credit program at the beginning. Credit was granted to a borrower only after a farm plan was developed and approved. With each farm plan, the uses for which credit was provided were specified. The cropping or production pattern was specific for each item to be financed. Plans and related patrones (specifying crop costs and projected return) were kept in borrower's dockets at the project or zone and duplicates forwarded to Bogota.

Credit supervisors periodically checked credit utilization after disbursement. They may have suggested various cultural practices or improved methods in the plan and these were checked (fields, prices, returns, and home consumption were checked as were costs of labor, inputs, transport, etc.). At the completion of a plan, the supervisor and borrower together drew up a schedule of realizations or results as a consequence of the plan. If a subsequent plan was requested, changes occurring from the prior plan were incorporated with the preceding plan base. This new base served as a base for developing a new plan.

Credit disbursement schedules as well as repayment schedules were projected. Those schedules were included in the borrower's docket and also transmitted to the Caja Agraria office and to central INCORA. In central INCORA those schedules were key punched and summarized in a libro de cartera portfolio book. Summaries by zone and project were examined by central office inspectors and management. Periodically, the printouts were sent to the zones to advise on scheduled actions. In the subsequent period, the inspectors reviewed the individual zone actions and made field checks if necessary. The total volume of data available through the program is voluminous and of reasonably good quality.

INCORA at one stage attempted to key punch the patrones but the data processing unit was unable to absorb the large volume of data. (On the average, for a single borrower for one plan, the patrone data fills about 50 IBM cards.) Since then, a sample of patrones for 2,900 borrowers was drawn to be used in agricultural sector analysis.

There are some shortcomings in the available data. First, is legibility and numerical accuracy of the plan and patrones. Second, on the schedules of borrower disbursements and repayments in the early years the date of interest payment was omitted. Third, changes detected by management or the inspectors are corrected but on a subsequent listing. These are not serious faults, but do exist in the data.

Data used in evaluating the performance of borrowers with supervised credit were gathered from borrowers' dockets in field offices. A team of two to four INCORA central office credit personnel and a contract employee hired by USAID gathered the data and checked it against central office records. Some borrower data showing obvious errors were returned to the zone offices for recheck and correction.

## 2. Apparent Uses of Credit

Generally, the credit provided for farm plans was used for the specified purposes. However, money is fungible, farm operations are a process, and farm plans are intended to improve the resource base of the farm unit and increase productivity. So long as the borrower complied with the provisions of the farm plan, he was not required to segregate funds by source.

In the case of FFA credit lent for price supported products where small farmers were together grouped to reach minimum size operating units, 40 percent of the credit was advanced before planting and 40 percent advanced before harvest. Supervised credit loans in this instance were explicitly granted for family living and 20 percent of production costs over the production cycle. FFA financed loans through INCORA amounted to 55 million pesos, which was just under 4 percent of total program loan value. The loan value of supplementary subsistence loans from supervised credit amounted to possibly 20 percent to 30 percent of the FFA loan value.

Among the borrowers having farm plans for their farm, there are instances where credit was expressly granted for family living expenses. Again the fungibility question arises with regard to the use of farm generated and/or credit liquidity. As will be shown in a following section, expenditures for family living rose more slowly than other operational components.

Some findings are available on apparent credit use in the INCORA colonization project of Caqueta. The

analysis was based on a representative sample of farms (1968/69) in the principal INCORA zones. The colonists had been on their farms an average of 8 years. Average farm size was about 70 hectares, of which more than 20 hectares were in improved pasture. However, more than one-half was still in jungle and forest regrowth. The farmers had an average of 24 head of cattle, including calves, valued at approximately 25,000 pesos (\$1,500 U.S.).

Cattle raising was the major agricultural enterprise in the region and most of the INCORA credit loans are made to assist in the development and improvement of such operations. Most of the colonists in the sample were enrolled in INCORA's supervised credit program. The average amount of credit received by the colonists in the sample was about 30,000 pesos (\$1,800 U.S.). This represents all credit received since the colonist arrived on the farm regardless of source or use.

Regression analysis was used to determine the extent to which additional credit was associated with agricultural development at the farm level.<sup>9/</sup> Since cattle raising was the dominant regional enterprise, the capital values of cattle and improved pasture were taken as relevant indicators of development. A highly significant and positive association with credit was found. The analyses indicated that substantial quantities of credit were being used either directly or indirectly to develop the cattle enterprise.

As would be expected, credit productivity increased as the average number of years per loan or peso of credit increased. Also credit productivity increased as the level of technical assistance increased, as measured by the number of annual credit supervisor visits.

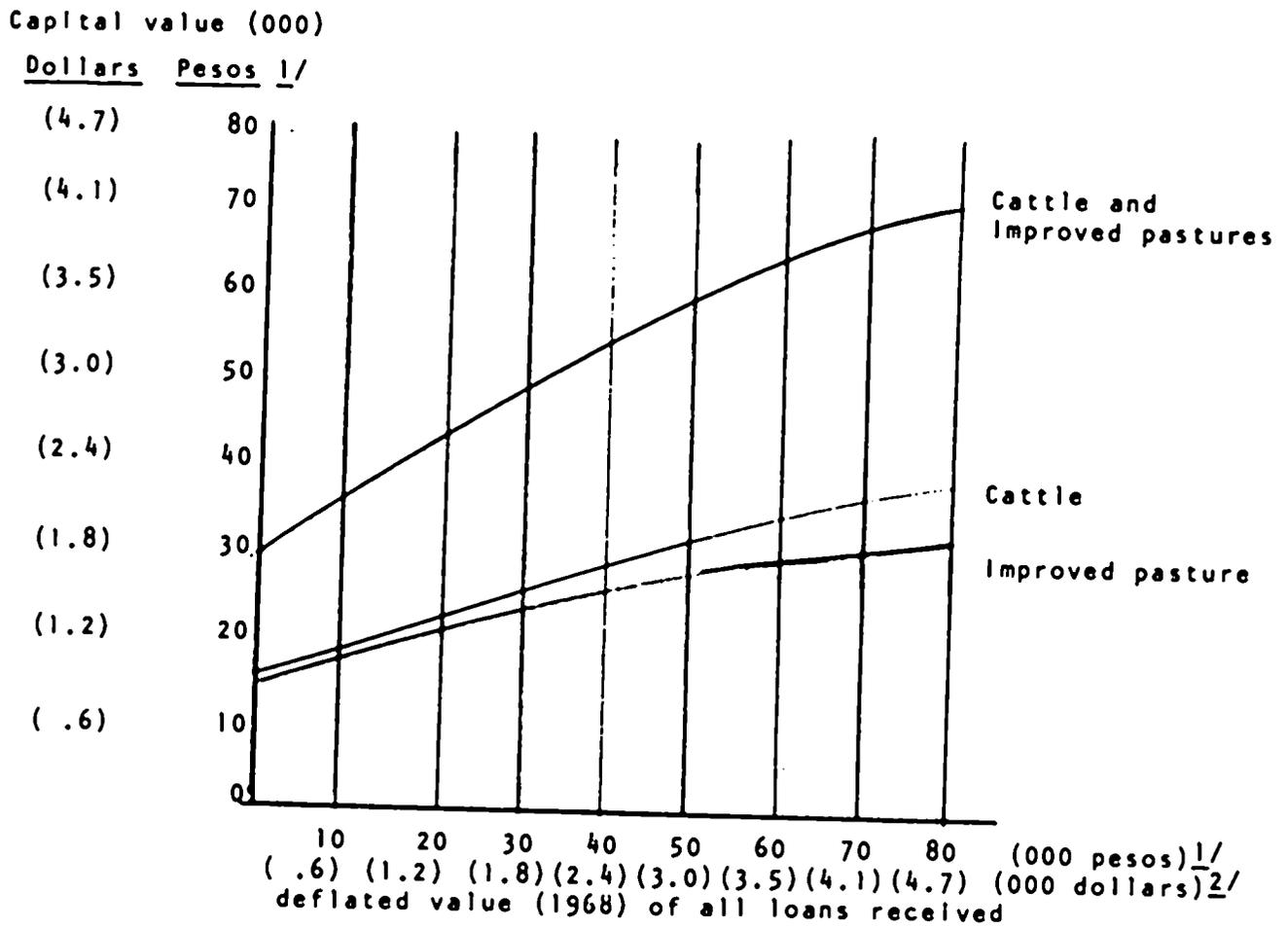
The capital value of cattle and improved pasture for alternative credit levels for a typical farm is shown in Figure 5.<sup>10/</sup> It should be noted that the curves portray a minimum impact since they do not show the impact of these credit levels on annual income levels or on

---

<sup>9/</sup> In this study regression analysis was used to develop an "Infrastructure-Development Model" which was designed to show the effect of such public infrastructure services as roads, credit, technical assistance, and markets on development at the farm level. Feaster, J. Gerald, An Analysis of the Relationship between Infrastructure and Agricultural Development in Caqueta, Colombia, Ph.D. dissertation, University of Kentucky, 1970.

<sup>10/</sup> The values in Table 11 were based on equations in Annex 11. All other variables in the equations were held constant at their respective means. Equations were derived from data from 1968/69 survey in Caqueta. Feaster, op. cit.

Figure 5.--RELATIONSHIP BETWEEN TOTAL CREDIT RECEIVED AND CAPITAL VALUE OF IMPROVED PASTURE AND CATTLE, CAQUETA, COLOMBIA, 1968/69



1/ Constant pesos (1968 = 100).  
 2/ Dollar equivalent.

other capital items such as native pasture, corrals, fencing, hogs, mules, etc. The particular relationship depicted is for a 70-hectare farm located 8 miles from a road and 14 miles from an INCORA marketing cooperative. Furthermore, the colonist was assumed to have 2 years of education, the credit was outstanding an average of 3 years, and that the farmer had received three visits from an INCORA supervisor during the past year. The capital value for selected credit levels are shown in Table 13.<sup>10/</sup>

Table 13.--Relationship between credit and selected development Indices, Caqueta Colonization Zones, 1968

Total credit received	Cattle (value)	Improved pasture (value)	Cattle & improved pasture (value)
----- 1968 pesos -----			
0 .....	14,500 (\$ 860) <sup>1/</sup>	14,000 (\$ 830)	28,500 (\$1,680)
20,000 ..... (\$1,180).....	21,600 (\$1,270)	20,200 (\$1,190)	41,800 (\$2,460)
40,000 ..... (\$2,360).....	28,000 (\$1,660)	24,900 (\$1,470)	53,000 (\$3,130)
60,000 ..... (\$3,540).....	33,800 (\$1,990)	28,300 (\$1,670)	62,100 (\$3,600)

<sup>1/</sup> Dollar equivalent.

The Caqueta study also showed that roads were important factors related to credit utilization and technical assistance in colonization areas. Credit utilization (average 30,000 pesos) decreased by 300 pesos and annual visits by INCORA credit supervisors (average 2.6) decreased by .05 visits for each additional kilometer from the farm to a road. The average distance from a farm to a road was 8 kilometers. It was also found that farms located closer to roads and INCORA cooperatives showed more development, further indications of the importance of roads and marketing facilities.

There is evidence that INCORA credit is being used to stimulate improved agricultural and management practices. This is based on findings from a French Mission SCET/COOP - INCORA study and findings from the Caqueta study (Table 14). The French Mission study showed higher cattle birth rates, lower death rates, and higher stocking rates on cattle farms receiving INCORA credit than on typical Colombian cattle farms. The Caqueta study showed that INCORA credit generally resulted in the use of more improved practices and higher birth rates but that cattle death rates and stocking rates were about the same for both INCORA

and non-INCORA settlers.<sup>11/</sup> The management practices are summarized in Table 15.

Table 14.—Comparison of cattle birth, death, and stocking rates on INCORA and non-INCORA farms

	INCORA cattle farms	Colombia cattle farms
<u>INCORA study (SCET/COOP)</u>		
Birth rate.....	70%	46.2%
Death rate.....	40%	4.5%
Cattle (adult) per hectare...	.75	.46
	INCORA settlers	Other settlers
<u>Caqueta study</u>		
Birth rate.....	59.0%	50.5%
Death rate.....	5.4%	5.5%
Cattle (total) per hectare...	1.1	1.0

SOURCE: French Mission SCET/COOP - INCORA and Ruiz, op cit.

Table 15.—Percentage of INCORA settlers and non-INCORA settlers using selected practices and percentage having selected capital items, Caqueta, 1968

Management indices	INCORA settlers	Other settlers
	Percent	
<u>Improved practice</u>		
Use of salt.....	79.8	77.4
Use of minerals.....	40.4	22.5
Use of sulfos.....	68.6	58.0
Hoof and mouth vaccinations.....	48.5	51.6
Black leg vaccinations.....	44.4	38.7
Paste boba vaccinations.....	40.4	19.3
<u>Capital items on farms</u>		
Sprayers.....	54.4	25.8
Corrals.....	66.6	54.8
Syringes.....	63.6	54.8
Dipping facilities.....	71.7	61.2

SOURCE: Ruiz, op cit.

The use of credit to stimulate cattle production is also apparent on a national basis. At the end of December 1970, supervised credit recipients had 500,000 head of cattle, an average of more than 10 head per borrower. They were valued at \$630 million. The debt outstanding for cattle was at that time \$450 million. In 1970, nearly 30 percent of all credit disbursed was for cattle, an increase from 3 percent in 1964.

<sup>11/</sup> Ruiz, op. cit., pp. 61-62.

### 3. Apparent Production Impact

Evaluation of the INCORA credit program moved through three phases.

First phase -- This was a joint INCORA-IBRD 1967 effort which drew a random sample of 1,300 borrowers from 26 projects. Lists of selected borrowers were sent to INCORA project directors requesting information on the farmer's situation in the year prior to entry into the program and his situation as a result of credit as of the end of his last completed farm plan. INCORA retained the data provided, and IBRD in a 1967 report cited the following comparison made from a portion of the data:<sup>12/</sup>

"Quite remarkable were the results which the program achieved in raising gross output and net income of participating farms. A random sample of 20 percent of the farms participating in four projects which have been in operation for more than two years showed the following results:

	<u>Credit Received</u>	<u>Gross Income</u>	<u>Net Income</u>
Before entering program	3,600	9,400	1,500
After one year participation	13,510	18,210	4,110
After two years participation	9,320	22,180	6,210

"These figures show that, with intensive credit assistance, gross income of farms almost doubled in the first year and net income (after debt service) nearly tripled. In the following year credit assistance could be reduced while gross and net income continue to grow. This indicates that the program is serving its intended purposes and that a further extension of the program is justified."

Second phase--INCORA-USAID Eight Project Evaluation. As a second phase of evaluation in 1969, INCORA and USAID reviewed the sample group data and selected 12 of the 26 projects for additional evaluative study. The conceptual purpose of gathering data from the selected borrowers was to trace through the historical sequence of borrowers' performance while they were in the credit program. The 12 projects selected were: Antioquia, Boyaca, Caqueta, Cordoba, Cundinamarca, Huila, Meta, North Santander, Santander, Tolima, and two in Valle which made an adequately representative

---

<sup>12/</sup> IBRD Report No. TO-611, October 1967, p. 33.

sampling. Field data from projects Antioquia, Huila, North Santander, and Valle #1 were not fully gathered and checked so were not included in the evaluation with the other eight projects. The field data from eight of the projects were gathered and analyzed in 1969-70. Characteristics of the samples used in the INCORA evaluations are listed below.

	<u>Number of borrowers</u>
I. Total original sample, 26 projects (1967)	1,300
II. Historical sample, 12 projects	803
(a) historical sample, 8 projects (1969-70)	659
(b) control sample 4 projects (1970-71)	144
III. Historical sample data, 8 projects (Evaluation study, 8 projects)	659 (100%)
A. Discrimination of borrowers included in analysis	542 (82%)
(a) Borrowers with 5 plans	31
(b) Borrowers with 4 plans	93
(c) Borrowers with 3 plans	185
(d) Borrowers with 2 plans	<u>233</u>
	542
B. Discrimination of borrowers eliminated from analysis	117 (18%)
(a) Deficiency of data	38 6%
(b) Retired voluntarily	40 6%
(c) Borrower default	39 6%
	<u>117 18%</u>

Sample data were tabulated and copied from borrowers' records in the field offices and returned to Bogota for analysis. A total of 117 were eliminated from the analysis because they (a) had completed only one farm plan (32), (b) had voluntarily retired from the program prior to 1969 (40), (c) had abandoned the farm or were delinquent in loan repayments (39), and (d) had died or divided original property among heirs (6). These were included in the deficient data category.

The borrower universe for which the 542 borrower sample is representative consists of 23,300 families and 76,500 farm plans. The 23,300 families comprising the

universe studied closely approximate the INCORA credit program coverage and its expansion over the period 1964-1969 as well as the percentage of borrowers who actually left the program. The substantive conclusions of the study are:<sup>13/</sup>

- (a) The credit provided with supervision has a strong positive effect upon employment generation. The average farm plan financed by 8,500 pesos (constant 1964 pesos--approximately \$850 U.S.) generates .407 man-years of off-farm and .258 man-years of on-farm employment. By implication credit effects reduce or eliminate underemployment on the farm. In aggregate terms, the borrower universe generated 26,400 man years of off-farm and 15,500 man-years of on-farm employment or a total of 41,900 man-years through lending a total of 776 million pesos, of which 221 million pesos were recovered in loan repayments, leaving a net credit outstanding of 555 million pesos. (See Annex III, Table 6b.) From the aggregate calculations, just over 13,000 pesos of current of credit outstanding generates a man-year of employment.
- (b) The gross value of product sold increased substantially as a result of credit. The average increase per plan is 8,700 pesos (\$870 U.S.). In terms of aggregates, the increment of product value amounted to 665.9 million pesos (66.5 million U.S.) over the precredit base of 817.7 million pesos (\$81.8 million U.S.). The production increase is generated by the same credit quantities as noted above. The increment of production is 1.5 times the net credit outstanding, which indicates a counterinflationary pressure.
- (c) Income distribution is favorably altered through credit effects upon employment external to the farm and by substantial increases in income, wealth, and level of living of the farmer borrowers. The average increase in farm and family cash from operations is 2,200 pesos (\$220 U.S.) per plan, which converts almost entirely to debt reduction which increases net worth.

---

<sup>13/</sup> See Annex III for definition of concepts for evaluation, the evaluation process, and tabular material. All peso amounts in the analysis are expressed in constant 1964/65 pesos. In the text an approximate dollar equivalent is also shown. The 1964/65 pesos were converted to dollars at the rate of 10 pesos per dollar.

The family level of living increases by 2,430 (\$230 U.S.) per plan.<sup>14/</sup>

- (d) Measures of farmer progress are highly favorable. Those measures are developed to show average rates of progress in the sequence of plans in composite form (see Annex Tables 5 and 5A). The results are shown graphically in Figure 6.

Farm and family resources generated rise from a precredit level of 11,418 pesos (\$1,142 U.S.) to 35,178 pesos (\$3,528 U.S.) through successive plans. The family living level rises from 3,984 pesos (\$399 U.S.) to 7,797 pesos (\$780 U.S.); expenditures for labor rise from 1,996 pesos (\$200 U.S.) to 6,428 pesos (\$643 U.S.); and inputs purchased rise from 3,876 pesos (\$388 U.S.) to 13,357 pesos (\$1,336 U.S.). Farm and family cash residual rises from 1,562 pesos (\$156 U.S.) to 7,596 pesos (\$760 U.S.), over a four-fold increase.

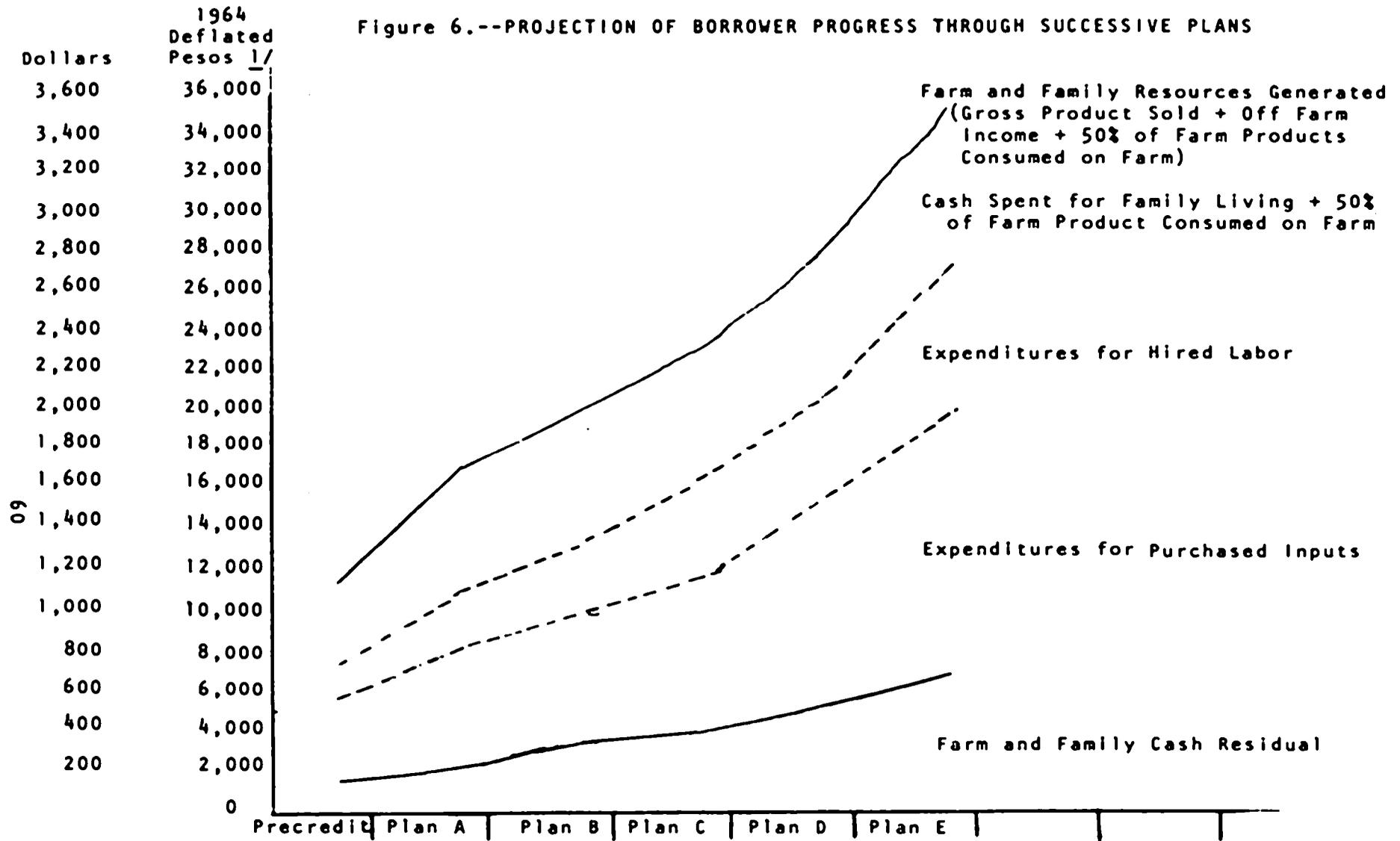
- (e) The foregoing shows a transformation from a nearly subsistence level of operations to an increasing involvement in commercial operations and gives some insights into the behavioral pattern of borrowers. The modest increase in the family living level indicates a rather strong propensity to save and/or to capitalize. The increasing use of labor and inputs, encouraged by credit supervision and farm management advice, certainly creates the opportunity for the steadily increasing net worth via debt retirement and capitalization. The tendency is toward increasing commercialization coupled with indications of a propensity to save and capitalize. These are essential attributes to carry the borrowers through the transition from subsidized credit support to self sufficiency via internal savings.

- (f) Relationships between credit extended, production and cash income generation, and repayment capacity show favorable possibilities. Annex III, Tables 6 and 6A, provide a schematic presentation of those relationships which are shown graphically in

---

<sup>14/</sup> Table 4 in Annex III, line 15, shows 152.1 million pesos increment for family living expenditures. Also, 50 percent of farm produce consumed for family living is 33.4 million pesos increment. The sum is 185.5 million pesos divided by 76,500 plans gives 2,430 pesos per plan increment. The calculation uses base A-1.

Figure 6.--PROJECTION OF BORROWER PROGRESS THROUGH SUCCESSIVE PLANS



1/ Deflated pesos convert to dollars at a rate of approximately 10 pesos = \$1.00 U.S. Dollar.

Annex III, Chart 1. In terms of credit received, incremental amounts decline steadily while the outstanding debt rises and then declines as cash availability from operations increases. It is notable that the farmer cash availability at the end of the 1968-69 period is 110 million pesos, an amount equal to 20 percent of the 555 million of debt outstanding. To the extent that the borrowers continue to move along with the established tendencies they will have achieved the goals of the program.

- (g) Two negative factors are evident as a result of this evaluation. First, the credit is clearly a subsidy, with the time costs of money borne by the GOC through INCORA. The costs of acquiring the funds and administering and supervising them are high, particularly when inflation erosion is considered. The time cost to the borrower in real terms is negative. Secondly, the length of the recovery period ties up the portfolio for long periods of time. The credit works well with the borrowers but imposes a heavy burden of time costs. The relatively slow rate of portfolio recovery denies other farmers the opportunity to follow the equivalent development path. During the next year INCORA plans refinements in program operations which add to credit efficiency without deterring borrowers' progress while expanding program coverage.

Third phase--Four Projects. This phase of the evaluation used the same gathering process for the four projects Antioquia, Valle #1, Huila, and North Santander as was used with the preceding eight projects sample. The concepts for evaluation for the four projects differed somewhat from the format of evaluation of the eight projects.

The four-project evaluation compares borrowers in the sample in relation to all borrowers in the projects; characteristics of sampled borrowers regarding farm size, non-INCORA debt, and number of farm plans completed; and the relationship between INCORA credit to the borrower samples and their net worth.

Table 16 shows both similarities and differences among all INCORA projects and the four-project example. With regard to all projects, the aggregate portfolio as a percent of total loans was 57 percent. For the four projects the percentage was 52 percent, so they are quite similar. Loan value for livestock for all projects was 22 percent of the total value; the four

projects showed 21 percent, again very close. The total portfolio of all projects showed livestock portfolio as 33 percent of the total, but the four-project group had 43 percent. The slowness in recovery of livestock loans in Antioquia (57 percent) raised the percentage. Except for that distortion, the four projects were similar to all projects.

Table 16.--Characteristics of four selected projects

1970 project data	Antioquia	Valle #1	Huila	North Santander	Total of 4 projects
Number of borrowers.....	2,537	926	885	1,183	6,531
Municipalities served.....	36	18	25	8	87
Total value loans made (dollars 000's) <sup>1/</sup> .....	3,801	2,566	4,199	2,841	13,407
Total value loans for livestock (dollars 000's) <sup>1/</sup> .....	1,309	260	522	762	2,854
Livestock loans as percent of total loans.....	34	10	12	26	21
Total Portfolio outstanding (dollars 000's) <sup>1/</sup> .....	2,205	783	2,122	1,878	6,988,000
Livestock portfolio outstanding (dollars 000's) <sup>1/</sup> .....	1,277	160	460	573	3,043,000
Livestock portfolio as percent total portfolio.....	57	20	21	30	43
Total portfolio as percent of total loans.....	58	30	50	66	52

<sup>1/</sup> Peso amounts converted to \$U.S. at exchange rate of 16.5 peso = \$1 U.S. (in 000's).

The farm size distribution varies among the projects. Only four borrowers of 23 in the North Santander sample farmed less than 25 hectares. Valle #1 and Antioquia had much greater concentration on smaller units. Some 35 percent of farms of over 25 hectares were basically in livestock operations; the remaining 65 percent were in crop type and reasonably intensive agriculture.

Of the 152 borrowers 87 had credit from sources other than INCORA. Some farmers had mortgage, local, and family debt. Some had only mortgage and some had local or family debt. The borrowers had completed a total of 432 farm plans or an average of 2.8 plans per borrower. INCORA lending in the North Santander and Huila projects started later than in Antioquia and in Valle #1. Valle #1 averaged 3.4 plans per borrower, Antioquia had 2.8 plans, while Huila and North Santander had an average of 2.4 plans per borrower. Table 17 shows characteristics of the farmer borrowers from samples of the four projects.

Table 18 shows the relationships between INCORA credit activities and the effects upon net worth of the borrower sample.

Table 17.—Characteristics of borrowers in four selected projects

	Project				Total
	Antioquia	Valle #1	Buila	North Santander	
Number of borrowers (sample)	44	42	43	23	152
Total area farmed acres	2,530	1,595	3,590	4,430	12,145
Farm size distribution	Number of borrowers				
Over 100 hectares	4	2	3	7	16
25 to 200 hectares	6	4	14	12	36
10 to 25 hectares	13	6	22	4	45
5 to 10 hectares	14	18	1	0	33
5 hectares or less	7	12	3	0	22
NON-INCOBA farmer debt by type					
Mortgage	10	10	10	1	31
Family or other local	17	8	17	14	56
Taxes	20	3	27	3	53
Number of completed farm plans	124	144	108	56	432
6 plans	0	5	0	0	5
5 plans	3	3	0	0	6
4 plans	5	10	4	1	20
3 plans	18	13	14	8	53
2 plans	17	10	25	14	66
1 plan	1	0	0	0	1

Table 18.—Credit and borrowers net worth relationships  
four project sample

	Antioquia	Valle #1	Buila	North Santander	Total
A. <u>Number of borrowers in sample</u>	44	41	43	23	151
B. <u>Number of farm plans</u>	124	144	108	56	432
	Dollars <sup>1/</sup>				
A. <u>Credit</u>					
1. INCORA credit provided	\$ 67,095	\$198,150	\$ 90,247	\$ 68,665	\$424,157
average credit per plan	541	1,376	835	1,226	982
2. Repayments to INCORA	50,055	154,550	33,855	18,986	257,446
av. repayments per plan	404	1,073	313	339	596
3. Portfolio outstanding	17,040	43,600	56,392	49,679	166,711
av. portfolio per plan	137	302	522	887	386
4. Interest collected	5,786	6,396	5,222	4,751	22,155
av. interest paid per plan	47	44	48	85	51
B. <u>Net worth</u>					
1. Borrower net worth beginning first plan	\$132,532	\$121,000	\$149,000	\$ 57,000	\$459,532
average net worth per borrower	3,012	2,951	3,465	2,476	3,043
2. Borrower net worth end of last plan	\$176,200	\$179,000	\$159,000	\$ 77,000	\$591,220
average net worth per borrower	4,005	4,365	3,697	3,347	3,915

<sup>1/</sup> Converted to dollars at the rate of 16.5 pesos per dollar.

4. Effects on Savings, Farmer Organization, Farmer Attitudes, General Image, And Possible Changes

The program provides a modest amount of cash for the farm unit and some liquid assets are likely to be retained by the family. However, it appears that most savings go for increased capitalization, physical assets, and reduction of liabilities affecting the net worth. Also there is a modest amount of loan repayments paid in advance of due date, which is a different form of savings. In some areas where savings can be readily deposited and withdrawn, some small farmers probably maintained savings accounts. However, the preference for liquidity appears to be less than the preference for physical assets. There is no organized program to put together a form of savings and loan association to supplement the INCORA credit program.

In the early years of the INCORA credit program Caja Agraria made some short-term subsistence loans to small farmers. The amounts loaned were small and minimal collateral was required. Quite recently Caja has further loosened its collateral requirements, increased amounts loaned, and lengthened the loan terms. Whether or not the INCORA program induced that change in the Caja operations is not known.

Small farmer organizations, for economic or political purposes, have been slow in developing. When INCORA initiated the cooperatives, they brought farmers together in an organized sense. In 1969, USAID, via grantee contract, provided a technical group to train campesino leaders as a first step toward broader organization. A training program was set up and about 15 people were trained to identify potential leaders in the INCORA projects. That training program was dropped in 1970, but those trained continue to function.

In 1969, the Agricultural Ministry began organizing the usuario's, users of government services. Small farmers in each municipality were to organize. The departments would have an organization drawn from the municipalities, and, finally, a national organization would come into being. In 1971, the

first national meeting was held even though many departments were very modestly represented. The purpose of the usuario organization was ostensibly to bring people from governmental agencies operating in the municipality to meet with community leaders of the municipality--a coordinating group. Some five or six departments achieved a reasonably strong representation of the small farmers. During the recent invasions of farms the usuario's were frequently blamed as instigators, as occasionally were INCORA personnel.

Apparently neither economically nor politically oriented organizations of small farmers will develop very rapidly. Community development groups, primarily Accion Communal, are the most pervasive in coverage of the country in terms of organization. INCORA has worked frequently with the community action groups. Usually the action group projects are for physical or infrastructural improvements.

Borrower attitudes toward the credit program are usually favorable, although some farmers do not like the particular supervisor or the instructions he is required to perform. As mentioned earlier, for each small farmer benefitted with credit, there is another waiting for financing of his approved plan. So demand is quite strong. In conversations with a fair number of small farmers, about half indicated a preference for Caja and half for INCORA. This applies in areas where INCORA has operations.

One interesting aspect of the small farmers' views relative to credit arises in colonization areas. They argue that INCORA should reduce interest rates on their credit to offset the much higher transportation costs of provisioning and marketing. Only in that context does one hear complaints regarding INCORA interest rates of INCORA but Caja in interest rates but are subject to criticism. On the other hand both supervisors and zone chiefs feel that INCORA interest rates could be raised without serious objection by the farmers.

With regard to individual loans, terms, purposes, or procedures, the farmers tend to take that as part of a rationing and distribution system. There is one observation worth venturing, however,

and that is when the lending program is dynamic and expanding, repayments are more timely, new borrowers come into the program, and farmers are confidently looking to the future. Also, lending quotas to the zones or projects are authorized at the beginning of a quarter and take into account the cyclical requirements more explicitly. When the program is stagnating and shrinking, the lending quotas may be only two or three small quota augmentations during the quarter. When that occurs, competition for funds among borrowers arises with respect to who gets how much and when. In those circumstances, the farmers' confidence weakens and, rather than run the risk of getting a new plan or disbursement, they request an extension of their repayment installment.

In the dynamic and expansion situation, supervisors are occupied doing the work for which they were trained and using the experience they have acquired. In the stagnating and shrinking situation, first priority goes to financing plans currently in operations with a disbursement scheduled within the quarter. If the first quota for the quarter covers half of projected disbursements, do the credit supervisors disburse by scheduled date for half the borrowers; or do they ration proportionately, satisfying half the requirements for each borrower? From that point on, unless the funding shortage is corrected, plans get interrupted as do family farm operations. Farmer confidence weakens and morale of the whole operation degenerates. At this stage, it is not possible to assess the consequences of a prolonged period of underfunding. If a phase-out of the program is planned, then a systematic sequence of steps should be planned and the borrowers informed. Then at least, they could prepare to accommodate themselves to a new situation.

The general image of the credit program was, up until about 1970, that program operation was effective and that the borrowers were benefitted. The credit program, however, is an integral part of INCORA and of agrarian reform. Most critical commentators include the credit program along with other agrarian reform programs, usually arguing that the effort costs too much for what it has accomplished. Other critical commentators are opposed to the very words "agrarian reform" and any activity even remotely connected with them.

Up into the 1970's, both the GOC and USAID considered the agrarian reform and credit programs successful. The people who built and motivated the Institute and dedicated themselves to make agrarian reform a reality neither hid their identity nor disclaimed their association with INCORA (nor does this commentator).

## B. Problems

The fundamental problem of agrarian reform is that it is more costly to accomplish than was initially anticipated if the programs are to be comprehensive. Land reform distribution and redistribution are not the major uses of public funds but neither is there much return from it. Engineering work and rural infrastructure are long-term recovery investments. The creation of family farm units and meeting credit needs of the small farmers require a steadily increasing portfolio which rolls over about once each 3 years. Diversity of conditions, inability to integrate programs effectively, and wide swings in funding for the various programs make costs high. When cyclical funding needs do not correspond with cyclical funding availabilities, as they frequently have, the efficiency of availabilities is diminished and the needs as accommodated yield less than the optimal gain.

Despite the statutory budget appropriations, the emission of agrarian bonds, access to bilateral and multinational lending, and internal transfers of the government, the overall program slows down from lack of funds. At the Institute level there develops competition for shrinking funds by the managers of the various programs. External donors, bilateral or multilateral, normally provide matching money after the Institute has made the target input. A tight Institute budget appropriation then places first priority in acquiring funds for programs or projects subject to the matching condition. The remainder of appropriations or other internally generated availabilities are then distributed among the programs. If developmental priorities for various fund usage were properly assigned and remained relatively stable through time, competition for funding among programs would probably not be serious. However, if priorities change, the possibility arises that funding for target inputs with subsequent matching funds provided by external donors could become less efficient if the priority is down-graded.

It is interesting that the two USAID loans for the credit program led in the financing of the program. Later, repayment funds, bond rediscounting, and other internal financing built the INCORA matching component. Most, if not all, other lending from external donors to INCORA is via matching inputs. The credit program grew rapidly but possibly it could not have started without the lead financing from outside. It might be that other external donors could take the lead in financing certain aspects of program development.

At the farm level the policy change shifting credit away from family farm units toward production cooperatives will reduce credit availability for many or most small farmers with family farm units. As of now that redirection of credit funds is being tested.

### C. Conclusions About Small Farmer Credit

The conclusions drawn from evaluating the borrower sample in this chapter show the program has been successful in improving the income and capital situation of the borrowers and has other beneficial external effects.

One weakness of the program has been that, of the total number of small (or small and medium) farmers in any project area, the number attended by the INCORA credit program is a minority. The reason for the lack of concentration is that INCORA by mandate operates nationwide and INCORA must be visible nationwide. Without much more massive funding availabilities, areas of borrower concentration could not develop, even though many of the small farmers did. Had there been such areas of concentration, organization would follow and, with organization, infrastructural needs would be more likely to receive the attention they deserve.

The INCORA credit program sought to move the farmer and his resource combination up a developmental ladder. Infusion of technology accompanied inputs and practices for production. On the produce market side, technological infusions are less well developed and those that do exist are adopted slowly.

Probably in most cases, the credit provided for a farm plan was, to the farmer, an extraordinary infusion. The increase in the expenditures for input purchases (see Annex III) for successive plans indicates a strong appreciation of the effect they have on production. Farm planning and compliance with recommended farm practices were generally accepted by the borrower.

With regard to small farmers continuing to increase input purchases and adopt improved technology, the supply of credit available to the

small farmers from institutional sources does not satisfy credit demands. The INCORA credit program, focused as it was on both development of the family and its resource base as well as increasing production, may in some cases shift some liquidity away from the operating components and into net worth.

#### D. Improvements to the Program

Considerable attention in this paper has been given to what might be called the conceptual unit. One type of conceptual unit is the family farm unit including a land area, a family labor source, some elements of capital, and at least a modest understanding of management. A different conceptual unit is the production cooperative or a group owning collectively a land unit, with an adequate labor supply, with some capital possessions, and with management by farmer committee and services of INCORA technicians.

There are two basic differences between these concepts. One is that, in the case of family farm units, the family emphasizes capital accumulation and income while in the production cooperatives, income and profits are dominant motivations with capital accumulations accruing in a more liquid form and so more easily subject to conversion for consumption. However, the cooperative might be able to attract savings to finance themselves more rapidly than could an equal number of family farm units where capital is in physical assets.

The other basic difference has to do with management. With periodic guidance from the supervisor, the family farm unit plans how best to utilize its resources. Production cooperatives with credit supervision and technical assistance will probably tend to emphasize production goals and income generation. If the farmer group organization is cohesive enough to participate in management operations, at least some management experience will develop. Otherwise, and probably more likely, planning and management will be carried out by INCORA personnel. In that case, the farmers will become laborers with profit sharing.

Production cooperatives are useful in developing production during the transition period between INCORA's acquisition of land units and final redistribution through titling family farm units to the small farmers. However, only a small fraction of lands affected by INCORA are redistributed. The major portion is distributed (titling of public lands). Distributed lands and colonization patterns are much less adaptable to the production cooperative concept. That is because colonization farms are much more scattered, usually only partly cleared land for production, and families do not have much access to their neighbors. It appears that, if INCORA shifts substantial credit to the production cooperatives, the colonization areas could correspondingly suffer.

The use of credit to provide local infrastructure has not been fully exploited. The physical movement of families being assigned to farm

units and preparation of the land for production has not been adequately supported. Following the initial establishment of occupancy, supervised credit, if funds are available, can finance the farmers' operational and capitalization plans. However, while the farming process develops with available credit, the farmers frequently have no means to improve the local infrastructure. Consequently, credit funding to finance physical resettlement and credit funds to finance local infrastructure might well have a marginal efficiency of capital equal to, or in some cases exceeding, the financing of farm operations and capitalization.

The INCORA credit program does make a public guarantee to Caja Agraria for disbursements, and Caja is only a quasi-public entity. The division of labor between INCORA and Caja appears to be relatively efficient.

Conceptually, each farm plan developed by the credit program should provide a production increment sufficient to cover operations and repayments plus interest. Delinquencies then, as they occur, must be caused by poor plan preparation, poor use of operational techniques, vicissitudes of weather, inefficiencies in converting product to liquidity, or diversion of the acquired liquidity to uses other than agreed to. Some of those causes of delinquency can be corrected as they relate to plan, performance, and misdirection of the proceeds of operations. Natural conditions are usually beyond control of the farmer. Where production value is lost or diminished through the marketing process, deficits occur. The farmer is not likely to stop farming as a consequence. He must accommodate himself to the circumstances and continue to farm.

Some reduction in administrative and supervisory costs has been anticipated as a result of shifting toward production cooperatives. That prospect has not been thoroughly tested to date.

Two other suggestions for procedural improvement of the INCORA credit program are: to discount interest at the disbursement of the loan, and, second, to discount a higher interest rate for each successive plan disbursement to the borrower. Discounting the interest (and borrower insurance) would relieve field personnel from checking and computing interest due on the installment and also it would have the borrower share in the inflationary costs of money. Use of variable interest rates would serve as a transition device for graduation.

#### IV. ROLE OF TECHNICAL ASSISTANCE

##### A. AID Inputs

The connection between AID and what later became the INCORA supervised credit program was partially rooted in the agricultural service (STACA) in the late 1950's. At that time, Caja Agraria and the Livestock Bank were operating at a modest scale with relatively few credit offices.

STACA efforts focused on spreading technical assistance and soon added a credit program as well. Given that combination, the need for provisioning and marketing services became evident, particularly for the small farmers. The STACA programs gave a modest coverage to the settled agricultural areas of Colombia. Credit specialists and extension agents were assigned to the working areas.

STACA was phased out in the early 1960's and, coincidentally, INCORA was being established. While at this distant date it is difficult to evaluate the contribution of STACA to the farmer beneficiaries, benefits INCORA derived from the STACA programs can be identified. The more notable benefits were:

- (a) Training field personnel to work with farmers; building capabilities to plan for credit including with it technical assistance; and providing some farm management supervision to clients;
- (b) Training and providing of management personnel to manage and guide the STACA programs; and to
- (c) Provide an operational experience that would reach outside the village or city to the individual farm unit with mutual gain in cooperation and confidence.

Not all STACA local personnel moved to INCORA after the phaseout. Some technicians joined in associations to provide contract technical assistance, others worked on development projects, and a few worked with USAID. INCORA did absorb and utilize the trained talent to a high degree. As an example, Dr. Gustavo Restrepo Suarez, once manager of the STACA credit program, became director of the Rural Development Division of INCORA and was one of the principal advocates for continuation of the credit system within INCORA.

USAID provided a credit specialist to INCORA for several years and a three-man USDA/PASA team went to Colombia to help get the loan financed program operational. Later, on a grantee contract, U.S. contract personnel trained community leaders for organizational development within agrarian reform. Two contract specialists in the development of cooperatives worked nearly a year with the INCORA crop section.

In 1968, an AID-sponsored USDA agrarian reform and credit specialist worked with INCORA for 4 years. During that time, CLUSA, covered by a regional contract, studied and reported on the overall cooperative effort in Colombia. A livestock specialist in USAID Rural Development

in Colombia for 9 years worked with livestock development. While INCORA developed its livestock credit program, the livestock specialist collaborated with them. Taken in total, a substantial number of people benefitted through efforts of USAID--both farmers and management or program people.

Relationships between INCORA and USAID were frank, friendly, and cooperative. Agrarian reform generates controversy. Throughout the years, INCORA has kept Colombian agrarian reform a strictly Colombian program. The institute received both praise and blame as does any controversial program, but it did not attempt to shift either one in any way.

USAID brought the INCORA credit program into being, nurtured it in the early years, and continues to support it to some degree. Loans and generated counterpart funds were its sustenance (see Annex I). Whether through design or historical accident, the INCORA credit program drew upon previous STACA experience. INCORA recognized the difference between development credit and bank credit, established programs for small farmer development, and borrowed funds to benefit the small farmers. As evaluation shows, those goals are being accomplished.

#### B. Other Donor Inputs

The IDB provided funds for the Bolivar and Cordoba projects and IBRD financed a portion of the Atlantico project. The financing included capital and technical assistance for developing irrigation projects. Preliminary reconnaissance, feasibility studies, and design materials were developed prior to lending. Disbursements through project stages were monitored and technical help was provided through both the construction and production phases.

More recently, IDB is financing two colonization projects, one in Sarare in the Arauca territory and Ariari in the Department of Meta. Still more recently, IBRD is financing colonization efforts in Caqueta. These funds will provide roads and other infrastructure, support credit activities, and improve production. In each case, the financing builds upon the areas serviced by INCORA.

The number of technicians made available for those work programs varies from 75 to 100 with a variety of skills. The Governments of Israel, Holland, England, France, and Mexico provide varying degrees of supporting services. In addition, the U.N. Special Fund provides several man-years of technical services to the Magdalena project (formerly the United Fruit Company operation).

IBRD and INCORA are jointly financing a relatively small project of credit for medium size farm units. The purpose of the credit is to induce a higher degree of utilization of lands (excluded from agrarian reform activities) in the Cuello-Saldania area. It is also for some

livestock operations. A joint arrangement between the Papacy (through IDB), the Colombian Church, and INCORA is financing agrarian reform projects in Cauca.

Sooner or later, each of those projects draws upon the credit program of INCORA. Where intensive production activities replace the usual production enterprises, credit supervisors must correspondingly adjust the farm planning systems to match the changed resource endowment and production schemes.

#### C. Effects of Technical Assistance

The credit program provides an orderly approach to small farmer development. The evaluation of borrower performance indicates that technical assistance capability grew along with the credit program. Sufficient technical capability had to be present for development of realistic farm plans. The evaluation indicates that the planning and implementation were reasonably successful. A few instances occurred where technical assistance concentrated very heavily on production per se and correspondingly reduced emphasis on development of family farm units. By and large, the program was pragmatic, helping through planned credit and performance to increase the viability of family farm units.

Technical assistance provided in conjunction with externally financed projects tended to be of a different and more general order. The orientation was to deal with production possibilities project-wide and marketing of the produce. In some instances specialization was markedly encouraged while diversification was emphasized in other cases.

#### D. Recommendations

The INCORA credit program received a heavy input of funding from USAID loans in the early years. To satisfy demands for technical assistance to accompany credit, INCORA used training courses, contract technicians, and also drew upon ICA-trained people. Later, specialized services for credit were provided, e.g., veterinarians, horticulturists, agronomists, etc. Upon reaching that stage of program development, the flow of credit funding began to decrease. Subsequently, administrative efficiency decreased--a case of too many technicians and too little credit for distribution. Current and future policy will determine whether the program will remain viable, either at a reduced level, balancing technical assistance with lending, or with the restoration of an adequately funded program with appropriate and sufficient balances.

The AID role in fostering credit programs for small farmers probably varies among countries and depends upon development goals to be achieved. The INCORA credit program as a component of a comprehensive agrarian reform effort was necessary and beneficial. AID leadership in lending the initial capital and the supplemental follow-up loan is

commendable. Likewise the technical assistance provided helped INCORA in conceptualizing the program as well as in making a smooth running operation.

After disbursement of the dollar loans, INCORA sought and found additional funding for program growth, e.g., bond rediscount and counterpart funds --granted or loaned. This permitted expansion of the program over the first 5 years. Later, however, funding sources were less generous and subsequently growth slowed.

With hindsight, one can see that a credit window for graduates should have been opened in INCORA with somewhat stricter loan terms and higher interest rates. This could have served to redistribute some of the benefits from graduates to new borrowers. It could have lessened INCORA's carrying costs, or provided credit for preproduction needs in resettlement areas or provided credit for local infrastructure.

Developing small farmers on family farm units is not a quick process. Given the number of small farmers that need development, aggregate costs are considerable. Despite the statutory basis for INCORA, the programs were affected by shifts in funding availabilities. Those shifts in turn reduced the momentum of the programs. Momentum and expansion are requirements for developing a political constituency and only with a developed constituency can the funding requirements be met.

ANNEX I

Sources and uses of financial resources of the INCORA supervised credit program  
(Current pesos in millions) Continued

Uses of funds	1964	1965	1966	1967	1968	1969	1970	1971	Total
Loans to Farmers									
Subtotal	27.5	82.7	145.9	247.2	279.0	345.7	319.5	267.3	1,714.8
Interest Paid Aid									
Subtotal	---	0.4	1.0	2.1	2.4	2.7	3.2	3.2	15.0
Commissions and Interest									
Commissions CAJA Agraria	0.1	0.6	1.2	2.2	3.3	4.0	6.5	6.4	24.3
IFI	---	---	---	0.8	0.7	3.6	6.6	7.6	19.3
Monetary Board	---	---	---	---	---	---	---	---	1.6
Livestock Bank 1/	---	---	---	---	---	12.0	10.4	10.3	32.7
75 CAJA Agraria Interest	---	---	---	---	1.6	---	---	2.4	4.0
Subtotal (Commissions & Int.)	0.1	0.6	1.2	3.0	5.6	19.6	23.5	28.3	81.9
Insurance Payments									
Subtotal	---	---	---	---	0.5	1.9	1.1	1.9	5.4
Technical Assistance									
Subtotal	7.5	14.5	22.4	29.9	45.1	50.6	56.3	61.0	287.3
Annual Totals	35.1	98.1	170.5	282.2	332.6	420.5	403.6	361.7	2,104.3

1/ Includes interest on \$6.1 pesos rediscounted.

2/ Accumulated through previous years.

## ANNEX I

Sources and uses of financial resources of the INCORA supervised credit program  
(Current pesos in millions) <sup>1/</sup>

Sources of funds	1964	1965	1966	1967	1968	1969	1970	1971	Total
<b>Borrowing</b>									
Aid Loans 027 and 046	22.6	75.5	105.6	5.5	7.1	---	---	---	216.3
Aid Counterpart	---	---	---	65.0	62.6	62.4	10.0	28.3	228.3
Subtotal (Borrowing)	22.6	75.5	105.6	70.5	69.7	62.4	10.0	28.3	444.6
<b>Rediscounts</b>									
Series "B" Bonds	---	---	---	70.0	100.0	100.0	70.0	---	340.0
Series "A" Bonds	---	---	---	---	---	---	68.3	---	68.3
Livestock Bank	---	---	---	30.0	29.6	19.9	(12.7)	3.0	69.8
Subtotal (Rediscounts)	---	---	---	100.0	129.6	119.9	125.6	3.0	478.1
<b>Transfers</b>									
DLP	---	---	---	---	12.6	36.9	(8.4)	2.1	43.2
FFA	---	---	---	---	---	16.1	4.6	(2.0)	18.7
Monetary Board #22	---	---	---	---	---	---	---	30.0	30.0
76 Livestock Bank	---	---	---	---	---	---	50.2	(11.3)	38.9
Other INCORA Resources <sup>2/</sup>	---	---	---	---	---	---	---	---	138.0
Subtotal (Transfers)	---	---	---	---	12.6	53.0	46.4	18.8	268.8
<b>Collection of Loans</b>									
Supervised Credit	1.6	18.6	46.7	82.8	108.3	145.8	110.0	103.9	617.7
Supervised Livestock Credit	---	---	0.5	2.7	4.4	21.1	24.0	31.5	84.2
Supervised DLP Credit	---	---	---	---	0.1	6.0	11.2	10.0	27.3
Supervised FFA Credit	---	---	---	---	---	---	35.4	50.6	86.0
Subtotal (Collection of Loans)	1.6	18.6	47.2	85.5	112.8	172.9	180.6	196.0	815.2
<b>Collection of Interest</b>									
Supervised Credit	0.1	1.5	4.3	11.0	17.0	9.2	12.7	14.0	69.8
Supervised Livestock Credit	---	---	---	---	1.7	2.8	4.9	5.5	14.9
Subtotal (Collection of Int.)	0.1	1.5	4.3	11.0	18.7	12.0	17.6	19.5	84.7
<b>Borrower Insurance Premiums</b>									
Subtotal	---	---	---	---	2.4	4.6	3.0	3.0	13.0
<b>Annual Totals</b>	24.3	95.6	157.1	267.0	345.8	424.8	383.2	268.6	2,104.4

<sup>1/</sup> Continued.<sup>2/</sup> Accumulated total shown.

**INFRASTRUCTURAL DEVELOPMENT MODEL I: INDEPENDENT VARIABLES, COEFFICIENTS, AND VARIANCES DERIVED FROM REGRESSION ANALYSIS OF 132 FARM UNITS FROM CAQUETA INFRASTRUCTURE SURVEY**

equation number	dependent variable Δ	constant	Independent Variables a/										R <sup>2</sup>
			C	I	IC	YC	C <sup>2</sup>	I <sup>2</sup>	KlogA	MlogA	HlogA	ElogA	
1.1	DF <sub>1</sub>	2.24	.024** (.00017) ⊆/	1.533** (.7298)	.00183 (.000005)	.00270** (.000002)	-.000009 (.000000)	-.051** (.00066)	-.697** (.0512)	-.648** (.0488)	.242** (.0012)	.754 (.7637)	.60
1.2	DF <sub>2</sub>	-3.14	.029** (.00019)	.931 (.8466)	.00235 (.000005)	-.00047 (.000002)	-.000018** (.000000)	-.066** (.00077)	-.573** (.0524)	-.256 (.0566)	.340** (.0014)	-.452 (.8858)	.57
1.3	DF <sub>3</sub>	-.90	.054** (.00052)	2.464* (2.2892)	.00419 (.000015)	.00223 (.000005)	-.000027** (.000000)	-.117** (.00208)	-1.270** (.1606)	-.904** (.1531)	.582** (.0037)	.301 (2.3951)	.64
1.4	DF <sub>4</sub>	13	.023* (.00020)	1.333* (.8625)	.00313* (.000005)	.00352** (.000002)	-.000011* (.000000)	-.063** (.00079)	-.516** (.0605)	-.780** (.0577)	.227** (.0014)	1.526* (.9024)	.58
1.5	DF <sub>5</sub>	2.96	.018* (.00018)	-.503 (.7983)	.00886** (.000005)	.00174* (.000002)	-.000029** (.000000)	-.127** (.00073)	.043 (.0560)	.221 (.0534)	.142** (.0013)	-1.83** (.8353)	.40
1.6	DF <sub>6</sub>	3.1	.040* (.00052)	.830 (2.2819)	.01199** (.000015)	.00525** (.000005)	-.000040** (.000000)	-.190** (.00207)	-.473 (.1600)	-.558* (.1527)	.369** (.0037)	-.306 (2.3875)	.56

\*Significant at 80% level, one-tail test

\*\*Significant at 90% level

a/ The independent variables are:

b/ The dependent variables are:

- C: total credit received (\$100)
- I: number of INCORA Credit Supervisor visits, 1968
- Y: average weighted years with credit
- A: number of years on farm
- K: kilometers from farm to road
- M: kilometers from trail-road junction to INCORA market-service center
- H: hectares in farm
- E: years of education

- DF<sub>1</sub> = capital value of cattle (\$1000)
- DF<sub>2</sub> = capital value of improved pasture (\$1000)
- DF<sub>3</sub> = capital value of cattle and improved pasture (\$1000)
- I<sub>4</sub> = change in capital value of cattle (\$1000)
- DF<sub>5</sub> = change in capital value of improved pasture (\$1000)
- DF<sub>6</sub> = change in capital value of cattle and improved pasture (\$1000)

⊆/ The variance of the coefficients are in parenthesis.

Source: Gerald Feaster. An Analysis of the Relationship between Infrastructure and Agricultural Development in Caqueta, Colombia, Ph.D. dissertation, University of Kentucky, 1970.

## ANNEX III

### 1. Definitions of Evaluation Concepts and Background

- a) The farm plan consists of five parts; a request for credit, a determination of the appropriate amount and uses of the credit, a schedule of disbursement of credit, a schedule of repayments, and a formal accounting of the results of credit use, "realization," done at the completion of the plan. Usually "completion of the plan" is the date at which the next plan is requested or, in the absence of a request, within 2-3 months after final disbursement of plan credit. Plan terms vary from a minimum of 6 months to up to 2 years, but average about 1.3 years in duration. In some instances a farmer may have 2 plans in effect at a given date, in other instances consecutive plans may be 6-8 months apart. Realization of the plan is jointly determined by the farmer and the credit supervisor and is considered to be reasonably accurate data. Only very sketchy data are available for describing the farmers situation prior to entry in the program. In the evaluation, progress resulting from credit is measured from an estimate of the farmer situation in the period prior to his entry in the program and also from the actual results achieved during his first plan as compared to subsequent plans.
- b) Deflation of monetary data presented a problem because of the variable terms of the farm plans and of the fact that farm plans are initiated and completed throughout the year. There are several indices prepared by GOC agencies which were considered for use in deflating monetary data into constant pesos. None were considered as being better than the average rate of inflation, which is about 8% per year. The actual deflators used were 1964-1965 = 100% of peso amounts, 1965-1966 = 92%, 1966-67 = 85%, 1967-68 = 78%, 1968-69 = 72%. In the case of the estimates for the operational period prior to farmer entry in the program 1963-64 = 108%. Those deflators were used through the analysis, except in Tables 7 and 7a, where credits relative to repayments were compared. In that comparison credit data and repayment data are shown in current pesos.
- c) It was decided at an early stage that manual analysis of a limited scope would be made and that a complete electronic data processing (EDP) analysis would be necessary to handle the mass of available data and to develop a comprehensive evaluation procedure. To date no EDP results are available.

The manual analyses have produced some relevant conclusions with respect to the following: (a) measuring average rates of borrower progress by time in program and as extrapolated from the sample to the borrower universe, (b) estimates of the macro effects of credit on all program borrowers upon employment generation, income distribution and inflation, (c) estimate of credit costs relative to production effects and repayment capabilities, and (d) some insights regarding behavior of small farmer borrowers as they progress as a consequence of the credit program.

Data used in the manual analyses for each plan period include: the value of farm produce sold, (minus) cost of labor hired, (minus) the cost of inputs purchased, (plus) income not a part of farming operations, (minus) cash cost of family living. This leaves a residual of cash available from farm and family operations. One account, farm produce consumed on farm, is tabulated separately, but half is counted as non-cash input to operations and half as non-cash increment to cash costs of family living. Two other accounts, net worth and farm unit size, are accounted separately.

Data available in the sample but not included in the manual analyses are size of farm family, asset and liability accounts, value of family farm labor, all credit data (amounts, uses, terms, repayments, etc.), cropping patterns, or livestock vs. crop enterprises. In other words, the evaluation from sample data is in a strictly accounting format as simplified as possible. Credit data as relevant averages, when used, were derived from central office files.

## 2. The Evaluation Process

### Stage 1 - Classification and Preliminary Aggregation

Field data arriving from project areas were screened to remove nonusable records. The useable sample was sorted by number of completed plans. Each strata of completed plans was tabulated in the sequence. For example, Tolima #3 had 5 borrowers with 5 plans, 9 borrowers with 4 plans, 13 borrowers with 3 plans, and 17 borrowers with 2 plans. Each account (e.g., gross value product sold) was summed separately by strata and each sum then deflated by the appropriate percentage for each plan term. For each strata the accounting elements were then divided through by the number of borrowers in each strata to provide per farm averages. The field data, individual project data summaries, and evaluation done to this point are on file in the AID Mission and INCORA and are not included in this annex.

## Stage 2 - Aggregation of Sample Accounts

This stage aggregated each account total from all projects by strata number of completed plans, as shown in Table 1.

## Stage 3 - Projection of Sample Aggregates to Borrower Universe

Since the sample aggregates are representative of the borrower (credit program) universe, this third stage of aggregation expands the sample aggregates to the universe aggregates with stratification maintained. The results are shown in Table 2. An expansion factor was determined for each strata by dividing the number of borrowers in the sample by the number of borrowers in the program. Thus, for the 5-plan strata, 31 sample items are .00738 of the 4,200 borrowers coming into the program during 1964 and part of 1965.

## Stage 4 - Establishing Bases From Which Progress Can be Measured

Progress could be measured against plan A (i.e. first completed plan) results. Its advantage as a base is that it is determined directly from sample data, however it has two distinct disadvantages. First, the sample has data from 1548 plans of which 1,006 are not plan A's. In other words, the credit effects of about one-third of the plans would be built into the base against which progress of two-thirds of the plans would be measured. Second, between one-third and one-half of borrowers coming into the program had been farm workers or colonists totally without farm operations accounts. In addition, as cited in the text, the IBRD reported a doubling of gross income in the first year of credit, i.e., precredit performance 50% of Plan A. Moreover, all plans subsequent to Plan A show positive progress, so it could hardly be assumed that Plan A results were negative. Thus, some base lower than Plan A would result in more realistic data, and would not understate the rate of progress from subsequent plans by having an unduly augmented base.

In view of the foregoing a base of Plan A-1 was estimated as 62% of Plan A accounts deflated (multiplied by) 108% or 67% of the Plan A level. The Plan A-1 base is referred to as "Base B" in the tables. It is recognized that this is somewhat arbitrary as to the amount and also as applied to the different account components. In the absence of better or more complete data, this base B is considered as the best approximation of the pre-credit situation. Table 3 shows the comparison of compound rates of change in accounts by strata and in total for the program universe.

### Stage 5 - Coefficients of Employment Generation

Table 4 follows through the estimation of increment to all accounts relative to the base A-1 level (base B). Lines 17 and 18 shows the aggregate increment per plan by account and the employment generation generated by account per plan.

### Stage 6 - Measures of Borrower Progress Per Plan

At this stage the aggregated data from Plan A-1 (base B) and for successive plans are rearranged to illustrate progress per plan. That rearrangement is shown in Table 5, and summarized in Table 5A.

Stage 7 - Tables 6 and 6A show, respectively, the adjustments of calendar years with plan terms and relates central office credit and number of families data as adjusted to plan terms. Table 6A is a schematic approximation of lending, repayments, portfolio change and borrower cash availability as applicable to the study data and subsequent projections.

CHART 1

INCORA Division of Credits		ECONOMIC STATUS OF BORROWERS IN SUPERVISED CREDIT PROGRAM SAMPLE							
Date	Project	Code	Zone	Code					
Borrower Name:								Code	
Farm Cropping	Principal								
	Secondary								
C O N C E P T S		YEAR PRIOR to entry	FARM PLANS						
			A	B	C	D	E	F	
1) Number of Persons	Active	Over 16 Years							
		Under 16 Yrs.							
	In-active	Over 16 Years							
		Under 16 Yrs.							
2) Labor	Without food								
	With food								
3) Farm Size and Tenancy	a) Owned								
	b) Rented								
	c) Parcelization								
	d) Colonization								
	TOTAL								
	e) In pasture								
	Economically								
	f) Exploited								
g) Non Cultivable									
4) Assets	a) Real Estate								
	b) Animals								
	c) Machinery								
	d) Crops harvested but not sold								
	e) Crops growing								
	f) Shares in cooperatives								
	g) Other Assets								
	h) Number of cattle								

CHART 2

CONCEPTS		Year Prior to entry	FARM PLANS					
			A	B	C	D	E	F
5) Liabilities	a) Mortgage Debt							
	b) Collateral Loans							
	c) Taxes							
	d) Other Debt							
	e) Family Debts							
6) Total Assets	a) Begin. of Year							
	b) End of Year							
7) Total Liabilities	a) Begin. of Year							
	b) End of Year							
8) Net Worth	a) Begin. of Year							
	b) End of Year							
9) Production	a) Total value of Production							
	b) Value of Farm Consumed Product.							
	c) Value of Prod. Sold							
10) Costs of Operations	a) Labor	Hired						
		Family						
	b) Inputs in other costs							
	c) Interests							
TOTAL								



TABLE 1

AGGREGATES OF SAMPLE DATA STRATIFIED BY PLAN YEARS  
OF BORROWERS IN PROGRAM ALL MONETARY DATA DEFLATED  
(000 PESOS)

SAMPLE		ACCOUNT DATA PER PLAN TERM								Accumulated Data 1/	
Year	Number of Borrowers	Completed Plan	Gross Product Sold	Labor Hired	Inputs Purchased	Off-Farm Income	Family Living Costs	Cash Residual	Farm Produce Consumed	Net Worth	Hectares Farmed
1964-5	31	A	591	121	247	23	157	89	60	1246	774
1955-6	31	B	679	122	297	17	165	112	74	(130)	(21)
1966-7	31	C	759	187	281	39	169	161	73	(114)	(60)
1967-8	31	D	881	199	328	35	198	191	85	(267)	(-39)
1968-9	31	E	905	199	414	42	208	126	67	(-158)	(130)
<b>TOTAL</b>		<b>5 plans</b>	<b>3815</b>	<b>828</b>	<b>1567</b>	<b>156</b>	<b>897</b>	<b>679</b>	<b>359</b>	<b>1599</b>	<b>946</b>
1965-6	93	A	1555	293	695	36	502	101	162	3542	2062
1966-7	93	B	1929	328	764	69	559	347	179	(303)	(36)
1967-8	93	C	2128	378	909	106	573	374	194	( 94)	(13)
1968-9	93	D	2239	371	894	71	531	514	207	(174)	(171)
<b>TOTAL</b>		<b>4 plans</b>	<b>7851</b>	<b>1370</b>	<b>3262</b>	<b>282</b>	<b>2165</b>	<b>1336</b>	<b>742</b>	<b>4113</b>	<b>2282</b>
1966-7	185	A	2575	484	959	132	771	493	398	6153	6628
1967-8	185	B	2826	547	961	176	781	713	428	(431)	(176)
1968-9	185	C	3173	568	918	172	820	1039	413	(1407)	(181)
<b>TOTAL</b>		<b>3 plans</b>	<b>8574</b>	<b>1599</b>	<b>2838</b>	<b>480</b>	<b>2372</b>	<b>2245</b>	<b>1237</b>	<b>7091</b>	<b>6985</b>
1967-8	233	A	3131	632	906	283	1253	623	464	8490	9801
1968-9	233	B	3648	870	957	256	1216	861	534	(1090)	(447)
<b>TOTAL</b>		<b>2 plans</b>	<b>6779</b>	<b>1502</b>	<b>1863</b>	<b>539</b>	<b>2469</b>	<b>1484</b>	<b>1098</b>	<b>9580</b>	<b>10248</b>

1/ NOTE: For each strata Plan A shows end of plan net worth and hectares farmed, for subsequent plans numbers in parentheses shown increase or decrease relative to Plan A. Base. Line Heading: TOTAL shows end of last plan total.

TABLE 2

SAMPLE DATA FROM TABLE 2 PROJECTED TO BORROWER UNIVERSE

ALL MONETARY DATA DEFLATED (000,000 PESOS)

ACCOUNT DATA PER PLAN TERM

	Completed Plan	Sample Number of Borrowers	Universe of Borrowers	Factor	Gross Product Sold	Labor Hired	Inputs Purchased	Off Farm Income	Family Living Costs	Cash Residual	Farm Produce Consumed	ACCUMULATED DATA		
												Net Worth	Hectares Farmed	
98	1966-5	A	31	4,200	.00738	80.1	16.4	33.5	3.1	21.3	12.0	5.1	168.8	104,900
	1965-6	B				92.0	16.5	40.2	2.3	22.4	15.2	10.0	(17.6)	(2,800)
	1966-7	C				102.8	25.3	38.1	5.3	22.9	21.8	9.9	(15.4)	(8,100)
	1967-8	D				119.4	27.0	44.4	4.7	26.8	25.9	11.5	(36.2)	(-5,300)
	1968-9	E				122.6	27.0	56.1	5.7	28.2	17.0	9.1	(-21.4)	(17,600)
	TOTAL	S				516.9	112.2	212.3	21.1	121.6	91.9	48.6	216.6	126,100
-----														
	1965-6	A	93	5,400	.01722	90.3	17.0	40.4	2.1	29.2	5.8	9.4	205.7	119,700
	1966-7	B				112.0	19.0	44.4	4.0	32.5	20.1	10.4	(17.6)	(2,100)
	1967-8	C				123.6	22.0	52.8	6.2	33.3	21.7	11.3	(5.5)	( 800)
	1968-9	D				130.0	21.5	51.9	4.1	30.8	29.9	12.0	(10.1)	(9,900)
	TOTAL	K				455.9	79.5	189.5	16.4	125.8	77.5	43.1	238.9	132,500
-----														
	1966-7	A	185	6,500	.02846	90.5	17.0	33.7	4.6	27.1	17.3	13.9	216.2	232,900
	1967-8	B				99.3	19.2	33.8	6.2	27.4	25.1	15.0	(15.0)	(6,200)
	1968-9	C				111.5	20.0	32.3	6.0	28.8	36.4	14.5	(49.4)	(6,400)
	TOTAL	J				301.3	56.2	99.8	16.8	83.3	78.8	43.4	200.7	245,200
-----														
	1967-8	A	233	7,200	.03236	96.8	19.5	26.0	8.7	38.7	19.3	14.3	262.4	302,900
	1968-9	B				112.7	26.9	29.6	7.9	37.6	26.5	16.5	(33.7)	(13,800)
	TOTAL	Z				209.5	46.4	55.6	16.6	76.3	45.8	30.8	228.7	289,100
-----														
	TOTAL ALL PLANS					1,483.6	294.3	559.2	70.9	407.0	294.0	165.9	1,032.3	822,800

TABLE 3

COMPOUND RATES OF CHANGE BY TIME IN PROGRAM STRATA  
AND AS AGGREGATED FROM BORROWER UNIVERSE ALL MONETARY AMOUNTS DEFLATED  
(000, 000 PESOS)

ACCOUNT DATA PER PLAN TERM

LINE	B A S E							ACCUMULATED DATA			
		Gross Product - Sold	Labor - Hired	Inputs Purchased	+ Off-Farm - Income	Cash Family Living - Costs	CASH RESIDUAL	Farm Produce Consumed	NET WORTH	HECTARES FARMED	
<u>5 Plan</u>											
1.											
2.	Borrowers Est. Base B	53.4	10.9	22.3	2.1	14.2	8.1	5.4	112.5	69,900	
3.	Borrowers Plan A - Base A	80.1	16.4	33.5	3.1	21.3	12.0	8.1	168.8	104,900	
3.	Final Plan	122.6	27.0	56.1	5.7	28.2	17.0	9.1	216.6	128,100	
4.	Rate Line 1 to Line 3	B	18.1%	19.9%	20.2%	22.3%	14.7%	15.9%	11.0%	14.0%	12.8%
5.	Rate Line 2 to Line 3	A	11.3%	13.3%	13.8%	16.4%	7.3%	9.1%	3.0%	6.4%	5.1%
<u>4 Plan</u>											
5.	Borrowers Est. Base	B	60.2	11.3	26.9	1.4	19.5	3.9	6.3	137.1	79,800
7.	Borrowers Plan A - Base	A	80.3	17.0	40.4	2.1	29.2	5.8	9.4	205.7	119,700
8.	Final Plan		130.0	21.5	51.9	4.1	30.8	29.9	12.0	238.9	132,500
9.	Line 6 to Line 8	B	21.2%	17.5%	17.8%	30.8%	12.1%	+50.0%	17.5%	14.9%	13.5%
10.	Rate Line 7 to Line 8	A	12.9%	8.1%	8.8%	25.0%	1.8%	+50.0%	8.5%	5.1%	3.4%
<u>3 Plan</u>											
11.	Borrowers Est. Base	B	60.3	11.3	22.5	3.1	18.1	11.5	9.3	144.1	155,300
12.	Borrowers Plan A - Base	A	90.5	17.0	33.7	4.6	27.1	17.3	13.9	216.2	232,900
13.	Final Plan		111.5	20.0	32.3	6.0	28.8	36.4	14.5	280.7	245,500
14.	Rate Line 11 to Line 13	B	22.7%	20.9%	12.8%	24.6%	16.8%	46.8%	16.0%	24.9%	16.5%
15.	Rate Line 12 to Line 13	A	10.0%	8.4%	Negative	14.2%	3.1%	45.1%	2.1%	13.9%	2.7%
<u>2 Plan</u>											
16.	Borrowers Est. Base	B	64.5	13.0	18.6	5.8	25.8	12.9	9.5	174.9	201,900
17.	Borrowers Plan A - Base	A	96.8	19.5	28.0	8.7	38.7	19.3	14.3	262.4	302,900
18.	Final Plan		112.7	26.9	29.6	7.9	37.6	26.5	16.5	296.1	316,700
19.	Rate Line 16 to Line 18	B	32.2%	43.8%	26.1%	16.7%	20.8%	43.3%	31.9%	30.1%	25.2%
20.	Rate Line 17 to Line 18	A	16.4%	37.9%	5.7%	Negative	Negative	37.3%	15.3%	12.8%	4.2%

TABLE 3 (continued)

<u>ALL PLANS</u>											
21.	Borrowers Est. Base	B	238.4	46.5	90.3	12.4	77.5	36.5	30.5	568.5	506,900
22.	Borrowers Plan A - Base	A	357.7	69.9	135.6	18.5	116.3	54.4	45.7	853.1	760,400
23.	Final Plans		476.8	95.4	169.9	23.7	125.4	109.8	52.1	1,032.3	822,800
24.	Rate Line 21 to Line 23	B	23.8%	46.1%	21.6%	22.1%	16.0%	40.7%	18.4%	20.2%	16.1%
25.	Rate Line 22 to Line 23	A	13.8%	15.0%	10.7%	11.8%	3.5%	37.4%	6.1%	9.0%	3.6%

**TABLE 4**

**DETAIL ON COMPUTATION OF BASE B WITH ESTIMATE OF FARMER  
SITUATION PRIOR TO ENTRY IN PROGRAM EQUAL TO 87% OF PLAN A RESULTS  
(000,000 PESOS)**

LINE		Gross	Labor	Inputs	Off Farm	Family	Cash	Farm	Net
		Product - Sold	Hired -	- Purchased	+ Income	- Living Expend.	= Residual	Produce Consumed	Worth <sup>b/</sup>
1.	5 Plan Borrowers Base B	53.4	10.9	22.3	2.1	14.2	8.1	5.4	112.5
2.	First Yr. in Prog.	80.1	16.4	33.5	3.1	21.3	12.0	8.1	216.6
3.	4 Plan Borrowers Base B	60.2	11.3	26.9	1.4	19.5	3.9	6.3	137.1
4.	First Yr. in Prog.	90.3	17.0	40.4	2.1	29.2	5.8	9.4	238.9
5.	3 Plan Borrowers Base B	60.3	11.3	22.5	3.1	18.1	11.5	9.3	144.1
6.	First Yr. in Prog.	90.5	17.0	33.7	4.6	27.1	17.3	13.9	280.7
7.	2 Plan Borrowers	64.5	13.0	18.6	5.8	25.8	12.9	9.5	174.9
8.	First Yr. in Prog.	96.8	19.5	28.0	8.7	38.7	19.3	14.3	262.4
<b>ESTIMATE OF BASE B TOTALS ALL BORROWERS</b>									
9.	Line 1 x 5 (Plans)	267.0	54.5	111.5	10.5	71.0	40.5	27.0	N.A.
10.	Line 3 x 4 (Plans)	240.8	45.2	107.6	5.6	78.0	15.8	25.2	N.A.
11.	Line 5 x 3 (Plans)	180.9	33.9	67.5	9.3	54.3	34.5	27.9	N.A.
12.	Line 7 x 2 (Plans)	129.0	26.0	37.2	11.6	51.6	25.8	19.0	N.A.
13.	TOTAL BASE B	817.7	159.6	323.8	37.0	254.9	116.4	99.1	
<b>DERIVATION OF INCREMENT, TOTAL ALL BORROWERS MINUS BASE B</b>									
Table 2 Line 27									
14.	Total All Borrowers All Plans	1,483.6	294.3	559.2	70.9	407.0	294.0	165.9	1,032.3
15.	Minus Total Base B Line 13 above	817.7	159.6	323.8	37.0	254.9	116.4	99.1	568.6
16.	Increment	665.9	134.7	235.4	33.9	152.1	177.6	66.8	463.7
<b>DERIVATION OF INCREMENTAL EMPLOYMENT GENERATED PER PLAN (PESOS)</b>									
17.	Increment per plan (76,500 plans)	8,700	1,800	3,100	400	2,000	2,200	900	6,100
18.	Employment per plan man/years	.242 <sup>2/</sup>	.200 <sup>3/</sup>	.052 <sup>4/</sup>	.022 <sup>5/</sup>	.033 <sup>4/</sup>	-	-	.116 <sup>6/</sup> .665m/y

- NOTES: 1/ Lines 2, 4, 6 and 8 are net worth last year in program.  
 2/ 36,000 Ps. of product sold at farm price = 1 m/y off farm employment  
 3/ 9,000 Ps. of labor hired = 1 m/y on farm employment  
 4/ 60,000 Ps. spent for retail purchases = 1 m/y off-farm employment  
 5/ 18,000 Ps. received as off farm income = 1 m/y off farm employment  
 6/ 60,000 Ps. spent for capital improvement = .5 m/y off farm and .5 m/y on farm employment

TABLE 5

**COMPOSITE ACCOUNTS BY STRATA AGGREGATES AND PER PLAN  
TABLES 6a SUMMARIZES AND 6b CONSOLIDATES DATA  
(000, 000 PESOS)**

Number of Plans PLAN	23, 300 A - 1	23, 300 A	23, 300 B	16, 100 C	9, 600 D	4, 200 E
<b><u>GROSS PRODUCT SOLD</u></b>						
5 Plan Borrowers	53.4	80.1	92.0	102.8	119.4	137.5 <sup>1/</sup>
4	60.2	90.3	112.0	123.6	130.0	-
3	60.3	90.5	99.3	111.5	-	-
2	64.5	96.8	112.7	-	-	-
<b>TOTAL</b>	<b>238.4</b>	<b>357.0</b>	<b>416.0</b>	<b>337.0</b>	<b>249.0</b>	<b>137.5</b>
Per Plan Per Farm (Pesos)	10,232	15,323	17,854	20,988	25,980	32,738
<b><u>LABOR HIRED</u></b>						
5	10.9	16.4	16.5	25.3	27.0	27.0
4	11.3	17.0	19.0	22.0	21.5	-
3	11.3	17.0	19.2	20.0	-	-
2	13.0	19.5	26.9	-	-	-
<b>TOTAL</b>	<b>46.5</b>	<b>69.9</b>	<b>81.6</b>	<b>67.3</b>	<b>48.5</b>	<b>27.0</b>
Per Plan Per Farm (Pesos)	1,996	3,000	3,502	4,801	5,052	6,428
<b><u>INPUTS PURCHASED</u></b>						
5	22.3	33.5	40.2	38.1	44.4	56.1
4	26.9	40.4	44.4	52.8	51.9	-
3	22.5	33.7	33.8	32.3	-	-
2	18.6	28.0	29.6	-	-	-
<b>TOTAL</b>	<b>90.3</b>	<b>135.6</b>	<b>148.0</b>	<b>123.2</b>	<b>96.3</b>	<b>56.1</b>
Per Plan Per Farm (Pesos)	3,876	5,819	6,352	7,652	10,031	13,357
<b><u>OFF FARM INCOME</u></b>						
5	2.1	3.1	2.3	5.3	4.7	5.7
4	1.4	2.1	4.0	6.2	4.1	-
3	3.1	4.6	6.2	6.9	-	-
2	5.8	8.7	7.9	-	-	-
<b>TOTAL</b>	<b>12.4</b>	<b>18.5</b>	<b>20.4</b>	<b>17.5</b>	<b>8.8</b>	<b>5.7</b>
Per Plan Per Farm (Pesos)	532	794	876	1,087	917	1,357

<sup>1/</sup> Gross product sold plan E's adjusted upward by 12% because 5 of the 5 plan borrowers (16% of the 31 in the sample) had severe crop loss. For the 5 borrowers Plan D results in the terms of gross product sold was carried forward to Plan E.

TABLE 5 (continued)

Number of Plans Plans	23,300 A - 1	23,300 A	23,300 B	16,100 C	9,600 D	4,200 E
<b>FAMILY LIVING COSTS</b>						
5 Plan	14.2	21.3	22.4	22.9	26.8	28.2
4 Plan	19.5	29.2	32.5	33.3	30.8	-
3 Plan	18.1	27.1	27.4	28.8	-	-
2 Plan	25.8	38.7	37.6	-	-	-
<b>TOTAL</b>	77.6	116.3	119.9	85.0	57.6	26.2
Per Plan Per Farm	3,330	4,991	5,145	5,280	6,000	6,714
<b>FARM PRODUCE CONSUMED</b>						
5 Plan	5.4	8.1	10.0	9.9	11.5	9.1
4 Plan	6.3	9.4	10.4	11.3	12.0	-
3 Plan	9.3	13.9	15.0	14.5	-	-
2 Plan	9.5	14.3	16.5	-	-	-
Per Plan Per Farm	1,309	1,961	2,227	2,217	2,447	2,167
50% to Family Living	654	980	1,113	1,108	1,223	1,083
50% Counted in Gross Prod. Sold	655	981	1,114	1,109	1,224	1,084

TABLE 5A

<b>SUMMARIZATION BY PLAN ACCOUNT AVERAGES (PESOS)</b>						
GROSS PRODUCT SOLD	10,232	15,323	17,854	20,988	25,980	32,738
<u>MINUS</u> LABOR HIRED	1,996	3,000	3,502	4,801	5,052	6,428
<u>MINUS</u> INPUTS PURCHASED	3,876	5,819	6,352	7,652	10,031	13,357
<u>PLUS</u> OFF FARM INCOME	532	794	876	1,087	917	1,357
<u>MINUS</u> CASH COST FAMILY LIVING	3,330	4,991	5,145	5,280	6,000	6,714
<u>EQUALS</u> FARM AND FAMILY CASH RESIDUAL	1,562	2,307	3,731	4,342	5,814	7,596

TABLE 6A DETAIL OF SUMMARY

Schematic representation of relationship between annual loans, cash available for repayment at beginning of year, cash available at end of year, annual and accumulated portfolio. All trends beyond 1968-9 are projections. Cash availabilities beginning and end of year are deflated pesos. Loans and portfolio data are in current pesos. Shown graphically on Chart 1A, 1B and 1C.

	1964-5	1965-6	1966-7	1967-8	1968-9	1969-70	1970-1	1971-2	1972-3	1973-4	TOTAL
(a)											
4200 Borrowers 13,100 Ps Loan	55	37	30	22	5	--	--	--	--	--	149
Repayments - Past year Cash	8	12	15	22	26	17	26	23	--	--	149
Portfolio Change	+47	+25	+15	--	-21	-17	-26	-23	--	--	0
Cash - Current Year	12	15	22	26	17	26	30	34	38	42	262
Accumulated Cash	--	--	--	--	--	--	7	41	79	121	+121
(b)											
5400 Borrowers, 14,200 Loan		77	60	52	30	10	--	--	--	--	229
Repayments - Past year Cash		4	6	20	22	30	38	45	52	12	229
Portfolio Change		+73	+54	+32	+ 8	-20	-38	-45	-52	-12	0
Cash - Current Year		6	20	22	30	38	45	52	57	62	332
Accumulated Cash		--	--	--	--	--	--	--	45	107	+107
(c)											
6500 Borrowers 15,400 Loan			100	65	50	35	10	--	--	--	260
Repayments - Past Year Cash			12	17	25	36	44	52	60	14	260
Portfolio Change			+88	+48	+25	- 1	-34	-52	-60	-14	0
Cash - Current Year			17	25	36	44	52	60	67	74	375
Accumulated Cash			--	--	--	--	--	--	53	127	+127
7200 Borrowers 16,800 Loan				121	72	50	40	17	--	--	300
Repayments - Past Year Cash				13	19	27	35	43	51	59(53)	300
Portfolio Change				+108	+53	+23	+ 5	-26	-51	-59(-53)	0
Cash - Current Year				19	27	35	43	51	59	67(14)	315
Accumulated Cash				--	--	--	--	--	--	--(14)	+ 14

TABLE 6B

RELATIONSHIPS BETWEEN CREDIT, DEBT, REPAYMENT CAPACITY  
AND FARMER CASH POSITION. BORROWER DATA STRATIFIED

(FARMER CASH POSITION DEFLATED constant pesos, 1964/65)

CALENDAR YEARS:	APPLICABLE TO STUDY DATA					STUDY DATA PROJECTED	
	1964	1965	1966	1967	1968	1969	1970
Actual Families Benefited	2500	7600	11600	17800	26400	34900	45000
Annual Increase of Families	2500	5100	4000	6200	8600	7500	10000
Annual Loans Made (000,000 Ps)	27.5	82.7	146.0	247.2	279.1	345.6	318.5

---

As Adjusted to Conform to Farm Plans	1964-5	1965-6	1966-7	1967-8	1968-9	1969-70	1970-1	1971-2	1972-3	1973-4	TOTAL
Number of Families Entering (Total 23,300)	4200	5400	6500	7200	0	0	0	0	0	0	938
Value of Loans Made (000,000 Ps)	55	114	197	263	147	95	50	17	0	0	0

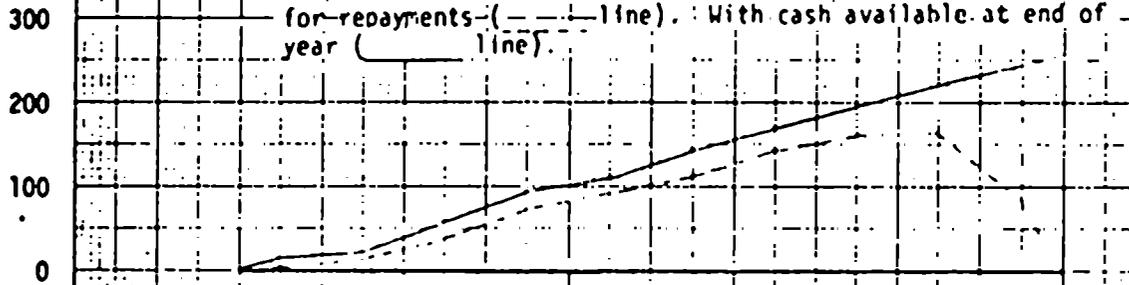
SUMMARY

Value Loans Made (000,000 Ps)	55	114	190	260	157	95	50	17	-	-	938
Repayments (000,000 Ps)	8	16	33	72	92	110	143	163	163	-	938
Portfolio (000,000 Ps)	+47	+98	+157	+188	+ 65	-15	-93	-146	-163	85(53)	0
Current Year Cash (000,000 Ps)	12	21	59	92	110	143	170	197	221	245	1270
Accumulated Cash (000,000 Ps)	--	--	--	--	--	--	7	41	177	369	369
Accumulated Portfolio (000,000 Ps)	47	145	302	490	555	540	447	301	138	53 0	0

Millions  
Of  
Pesos (constant 1961/65)

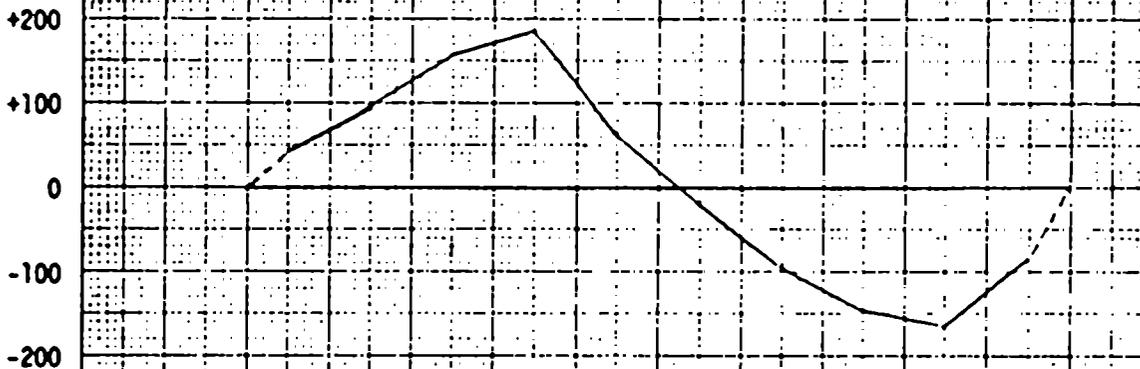
GRAPH 1A

A. Comparison of farmer cash available at beginning of year used for repayments (— line). With cash available at end of year (--- line).



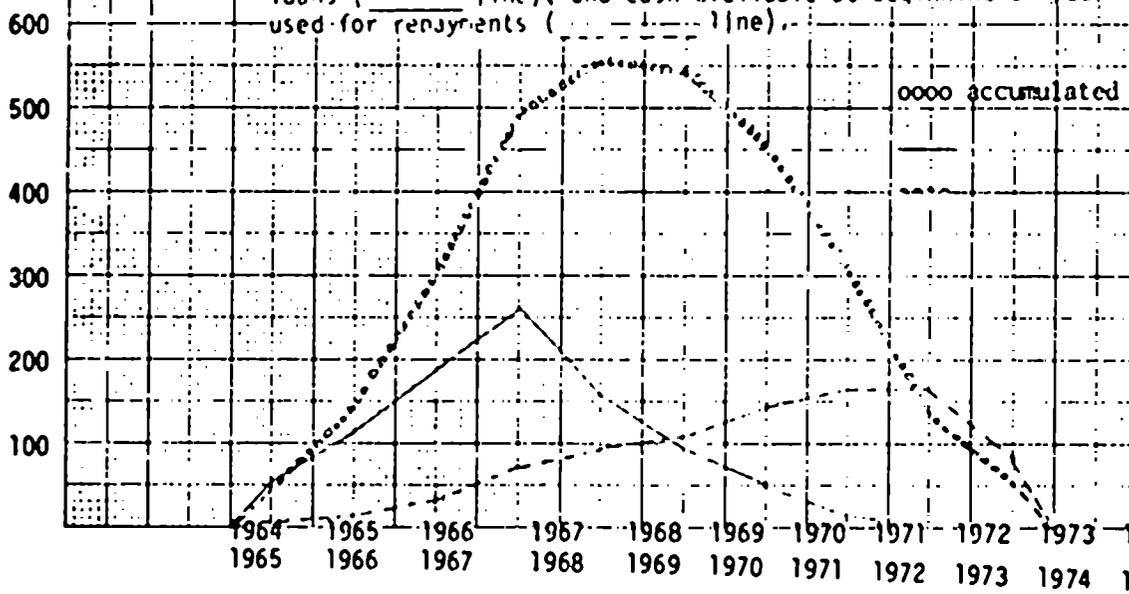
GRAPH 1B

B. Annual change in Portfolio outstanding



GRAPH 1C

C. Shows accumulated portfolio outstanding (..... line), annual loans (— line), and cash available at beginning of year used for repayments (--- line).



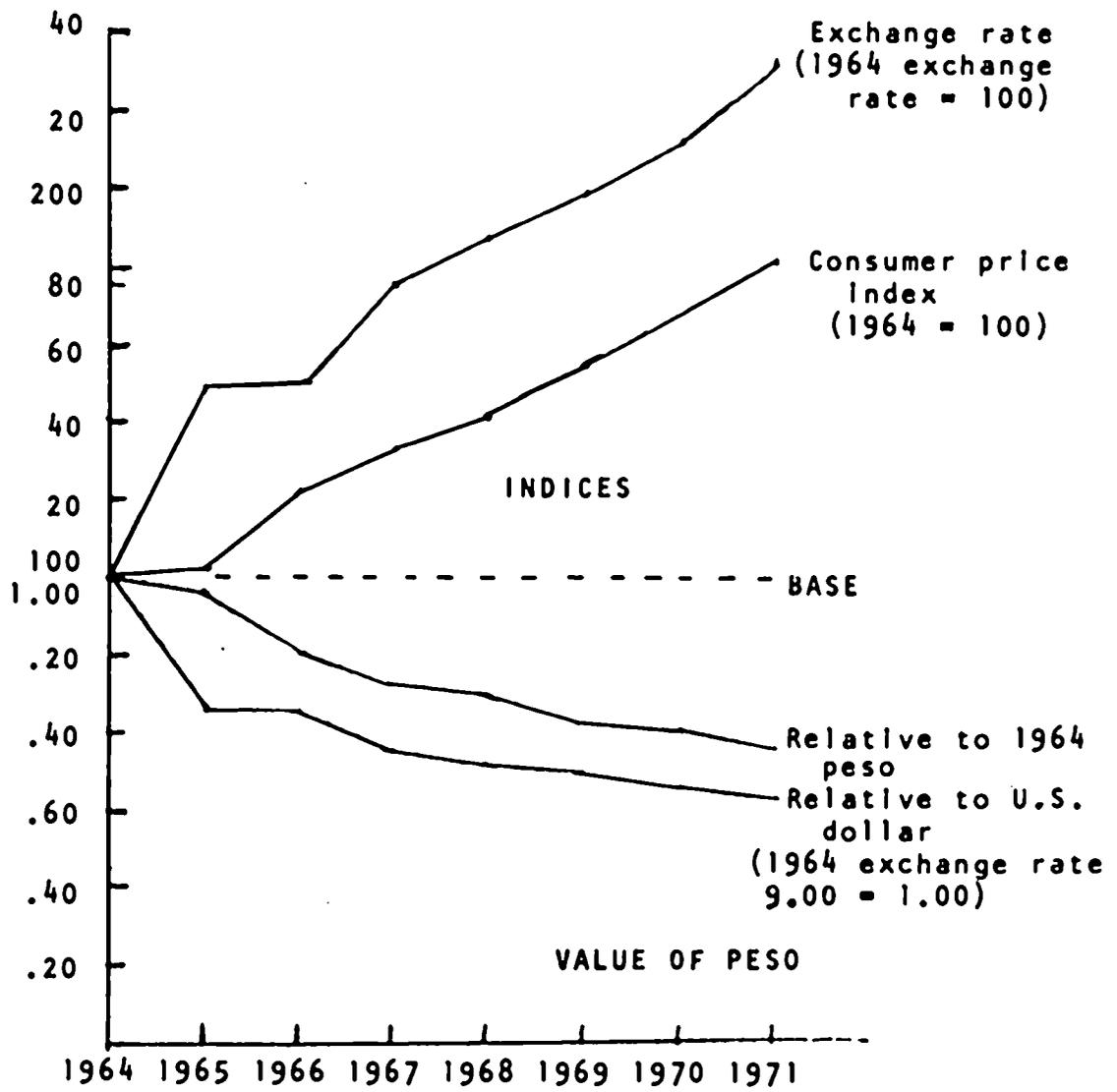
## ANNEX 4

### INFLATION AND EXCHANGE RATES

Often it is desirable to describe foreign time series data both in terms of constant monetary units and in terms of dollars, when inflation and exchange rates are subject to periodic fluctuations. Adjustments for inflation can be made by using a country's consumer price index (CPI) and international exchange rates can be used to convert foreign currency to dollar equivalents. In Colombia, as in most countries, both the CPI and the exchange rate (relative to the dollar) have been increasing. Although both of these indices have been increasing over the last several years, they have done so at different rates. For example, the consumer prices index in Colombia has increased 81 percent from 1964 to 1970, while the exchange rate has increased 133 percent for the same period.

The difference in rate of change in the CPI and the international exchange rate presents special problems when Colombian pesos are converted to dollars for the purpose of describing and analyzing programs which are basically internal to Colombia. If current pesos in a time series are converted directly to dollars by using the exchange rate for the respective years the value of the peso declines at a faster rate than actually occurred within the country. In other words, converting current pesos directly to dollars exaggerates the erosion of the purchasing power of the peso. An alternate method is to convert the current pesos to constant pesos using the CPI and then converting the constant pesos to dollars at the exchange rate prevailing at the base year. This approach has the advantage of being expressed in dollars and more accurately reflects the actual value (purchasing power) over time. The relationship of the CPI and exchange rates over the period 1964-1971 are shown in the table and graph below:

Year	Exchange rate	Consumer price Index	Indices (1964 base)		
			Exchange rate	Consumer price Index	Difference
1964	9	117.6	100	100	0
1965	13.51	121.8	150	104	46
1966	13.50	146.0	150	124	26
1967	15.82	157.9	176	134	42
1968	16.95	167.1	188	142	46
1969	17.93	184.0	199	156	43
1970	19.17	196.6	213	167	46
1971	21.00	213.3	233	181	52



## BIBLIOGRAPHY

Ruiz, Jorge Iriarte. "El Impacto del Credito Supervisado en la Ganaderia en Zonos de Colonizacion." Tesis de Grado, No. 49, Programa de Estudios para graduados en ciencias agrarias, Universidad Nacional de Colombia Instituto Colombiano Agropecuario, Bogota, 1972.

Instituto Colombiano de la Reforma Agraria, Evaluacion Economica del Credito Supervisado del INCORA. Bogota: INCORA, 1971.

Feaster, Gerald. An Analysis of the Relationship Between Infrastructure and Agricultural Development In Caqueta, Colombia. Subgerencia Tecnica, Instituto Colombiano Agropecuario, Boletín No. 14, Bogota, Colombia, December 1970.

Castellanos, Edulfo Camacho. Estado y Proceso del Desarrollo Agropecuario en Cuatro Zonos de Colonizacion en el Caqueto. Departamento de Economía Agrícola, Subgerencia Tecnica, Instituto Colombiano Agropecuario Boletín No. 8, Bogota, Colombia, April 1970.

Banco Ganadero. El Credito Supervisado y sa Implication a la Ganaderia. Bogota: Banco Ganadero, 1970.

Wierer, Karl. Economics of Improving Marketing Organization and Facilities to Accelerate Agricultural Development In Land Settlement Projects. Bogota: Instituto Latinoamericano de Mercado Agrícola, 1967.

Instituto Colombiano de la Reforma Agraria. Productividad de la Ganaderia de Cria y Eonsecuencia sobre los Programas de Crédito Ganadero. Bogota: INCORA, 1964.

\_\_\_\_\_ , El Credito Supervisado en la Reforma Agraria Colombiana. Bogota: INCORA, 1964.

Tinnermier, Ronald. "New Land Settlement in the Eastern Lowlands of Colombia." Unpublished Ph.D. dissertation, University of Wisconsin, 1964.

## BIBLIOGRAFIA

### D. Bibliografía de principales informes y documentos evaluativos sobre Crédito Supervisado del INCORA.

- AID, Washington. Spring Review. Reforma Agraria en Colombia. 1970.
- Banco Mundial. Evaluación de los Programas del INCORA en Colombia. Informe # To-611. 1966.
- Banco Mundial y FAO. Proyecto del Crédito Agrícola INCORA. Informe # 21. 1968.
- Banco Mundial. Crecimiento Económico en Colombia. Volumen 5. Informe #WH200a. 1970.
- Banco Ganadero. El Crédito Supervisado aplicado a la Industria ganadera. 1970.
- Castellanos C. Edulfo. Estado y proceso del Desarrollo Agropecuario en cuatro Zonas de Colonización del Caquetá. ICA. 1970.
- Feaster Gerald. Un análisis de las relaciones entre la Infraestructura y el desarrollo agrícola en Caquetá. Colombia. (Ph.d. Tesis) Universidad Kentucky. USA. 1970.
- IICA - CIRA. El Crédito Supervisado en la Reforma Agraria Colombiana. Un estudio evaluativo. Por Dale W. Adams, Peña y Giles. 1966.
- INCORA. Dos años de Crédito Supervisado 1964 - 1965. División de Crédito.
- INCORA. Síntesis de los estudios y evaluaciones del programa de Crédito Supervisado del INCORA. División de Crédito. 1969.
- INCORA. Principales cifras del Crédito Supervisado de la Reforma Agraria en Colombia 1964 - 1969. División de Crédito. 1970.

- INCORA. El Crédito Supervisado en la Reforma Agraria, Colombiana, División de Crédito. 1970.
- INCORA. El Crédito Supervisado del INCORA. Un medio eficaz para la promoción económica y social del campesino. División de Crédito. 1970.
- INCORA. Carta Informativa #17. El Crédito Supervisado en el INCORA. 1970.
- INCORA. Asistencia técnica agrícola contratada. Necesidades y Perspectivas. División de Crédito. 1969.
- INCORA. Ingresos y costos de producción de cultivos financiados por Crédito Supervisado. División de Crédito. 1966 - 1968 y 1970.
- INCORA. Evaluación Económica del Crédito Supervisado del INCORA. (Resumen de la presente publicación presentado a la V Asamblea de la Asociación Colombiana de Economistas Agrícolas.) Junio 1971.
- INCORA. Fomento Ganadero en la Reforma Agraria. Un resumen de los programas desarrollados en ganadería por el INCORA. División de Crédito. 1971.
- INCORA. Serán objetivas las recientes evaluaciones de la Reforma Agraria?. El caso del Crédito Supervisado. Ernesto Vélez K. 1970.
- Jiménez Guillermo. Evaluación Económica del Crédito Supervisado en Colombia (M.S. Tesis) Universidad de Missouri. USA. 1970.
- SCET-COOP.  
(Misión Francesa). Productividad de la ganadería de cría y consecuencias sobre los programas de Crédito Ganadero. Misión Francesa. 1970.
- SCET-COOP.  
(Misión Francesa) Crédito Supervisado Proyecto Tolima 2-4. Estudio de casos particulares Zona Espinal. Ejemplos de logros alcanzados por prestatarios. Misión Francesa. 1969.

# Bibliografía sobre Crédito Supervisado en Colombia \*

## I. Publicaciones del Instituto Colombiano de la Reforma Agraria (INCORA)

1. **INSTITUTO COLOMBIANO DE LA REFORMA AGRARIA (INCORA):** INCORA Supervised Credit Division; Annual Program Review Report, 1964; General Progress, Operation, Marketing Problems and Prospects for the Future. Bogotá: INCORA División de Crédito Supervisado, 1965, 18 p., dos gráficos y 11 mapas.
2. \_\_\_\_\_: INCORA Supervised Credit Division, Quarterly Report to the Agency for International Development. Loan No. 514-L027, January-March 1965. Bogotá, INCORA División de Crédito Supervisado, 1965, 3 p., y 6 anexos (mimeografiado).
3. \_\_\_\_\_: Loan Application to the Agency for International Development (USAID) for a Supervised Agricultural Credit Program to be Carried Out by the Colombian Institute of Agrarian Reform. Bogotá, INCORA, 1963, 14 p. (mimeografiado).
4. \_\_\_\_\_: Loan Application to the Agency for International Development (USAID) for the Expansion of the National Supervised Agricultural Credit Program in Colombia (Preliminary Draft). Bogotá, INCORA, 1965, 2 p.
5. \_\_\_\_\_: Alianza para el Progreso Program de Crédito Agrícola Supervisado para Colombia; Convenio de Préstamo entre el Instituto Colombiano de la Reforma Agraria, el Banco de la República de Colombia, la República de Colombia, y los Estados Unidos de América (ejemplar autenticado). Bogotá, INCORA, Manuscrito, 1963, 43 p.
6. \_\_\_\_\_: Compendio de Circulares: Complemento al Manual de Instrucciones de Crédito Supervisado. (Circulares 11, 13, 19, 22, 24, 26, 27, 32, 33A, 34, 36, 37 y 39; Telegramas Circular 19 y 39). Bogotá, INCORA, División de Crédito Supervisado, 1965, 6 p. (mimeografiado).
7. \_\_\_\_\_: Crédito Supervisado. Boletín de Información No. 23. Bogotá, INCORA, Oficina de Información, noviembre 1964, 6 p.
8. \_\_\_\_\_: Estudio Agro-Económico del Municipio de Acacías, Meta, para un Distrito de Crédito Supervisado. Bogotá, INCORA, Departamento de Estudios Técnicos, diciembre 1963, 44 p.
9. \_\_\_\_\_: Guía de Visitas para Inspectores de Crédito Supervisado. Bogotá, INCORA, División de Crédito Supervisado, mayo 1965, 13 p. (mimeografiado).
10. \_\_\_\_\_: Informe de Actividades en 1962. Bogotá, Imprenta Nacional de Colombia, 1963, 51 p.
11. Informe y Proyecto de Crédito Supervisado para el Municipio de Pitalito. Bogotá, INCORA, Departamento de Estudios Técnicos, octubre 1964, 97 p., y ocho anexos.
12. \_\_\_\_\_: Manual de Crédito, Instrucciones para el Manejo del Crédito Dirigido. Bogotá, INCORA, División de Coordinación y Control de Proyectos, abril 1964, 23 p.
13. \_\_\_\_\_: Manual de Instrucciones de la División de Crédito Supervisado (Instrucciones DCS-2, DCS-3, DCS-4, DCS-5, DCS-6, DCS-9, DCS-10, DCS-11 y DCS-21). Bogotá, INCORA, División de Crédito Supervisado, agosto 1965.
14. \_\_\_\_\_: Plan de Crédito Supervisado en el Área del Proyecto Santander No. 1. Bogotá, INCORA, Departamento de Estudios Técnicos, noviembre 1964, 62 p., (manuscrito).
15. \_\_\_\_\_: Plan de Crédito Supervisado para el Área de Bucaramanga. Bogotá, INCORA, Departamento de Estudios Técnicos, marzo 1964, 73 p., y nueve tablas adicionales (mimeografiado).
16. \_\_\_\_\_: Plan de Crédito Supervisado para el Departamento de Boyacá. Bogotá, INCORA, Departamento de Estudios Técnicos, julio 1964 (mimeografiado).
17. \_\_\_\_\_: Plan de Crédito Supervisado para el Municipio de Tómeque, Cundinamarca. Bogotá, INCORA, Departamento de Estudios Técnicos, mayo 1964, 238 p., y varios mapas y tablas adicionales (mimeografiado).
18. \_\_\_\_\_: Plan de Crédito Supervisado para el Municipio de Gigante, Huila. Bogotá, INCORA, Departamento de Estudios Técnicos, diciembre 1964, 92 p. (mimeografiado).
19. \_\_\_\_\_: Plan de Crédito Supervisado para el Municipio de Timbío, Cauca. Bogotá, INCORA, Departamento de Estudios Técnicos, febrero 1965, 58 p. (mimeografiado).
20. \_\_\_\_\_: Plan de Crédito Supervisado para el Valle del Cauca (Palмира, Candelaria, El Cerrito y Ginchra). Bogotá, INCORA, Departamento de Estudios Técnicos, abril 1964, 57 p. (mimeografiado).
21. \_\_\_\_\_: Programa de Crédito Supervisado para la Isla de Mompós. Bogotá, INCORA, Departamento de Estudios Técnicos, febrero 1965, 75 p. (mimeografiado).

Esta bibliografía fue recollada por Eduardo Montero. La mayoría de las referencias citadas pueden adquirirse en los archivos y librerías de las respectivas oficinas. Duplicados de varias de las referencias citadas también pueden encontrarse en la Biblioteca del IICA-CIRA.

22. \_\_\_\_\_: Proyecto Cauca No. 2 (Plan de Crédito Supervisado para los Municipios de Belalcázar, Inzá, Jamundí, Tombó, Silvia y Totoró). Bogotá, INCORA, Departamento de Estudios Técnicos, noviembre 1964, 46 p. (mimeografiado).
23. \_\_\_\_\_: Proyecto de Crédito Supervisado para el Oriente de Antioquia. Bogotá, INCORA, Departamento de Estudios Técnicos, abril 1964, 50 p., y dos anexos (mimeografiado).
24. \_\_\_\_\_: Proyecto de un Sistema de Crédito Agrícola Supervisado para Asentamientos Campesinos. Bogotá, INCORA, Departamento de Estudios Técnicos, 1965, 15 p., y varios anexos (mimeografiado).
25. \_\_\_\_\_: Segundo Año de Reforma Agraria: Informe de Actividades de 1963. Bogotá, Imprenta Nacional de Colombia, 1964, 109 p.
26. \_\_\_\_\_: Tercer Año de Reforma Agraria: Informe de Actividades de 1964. Bogotá, Imprenta Nacional de Colombia, 1965, 121 p.
27. \_\_\_\_\_: Solicitud de Préstamo a la Agencia de Desarrollo Internacional (USAID) para Iniciar un Programa Nacional de Crédito Supervisado en Colombia. Bogotá, INCORA, marzo 1963, 14 p. (mimeografiado).

---

THE USE OF INCORA SUPERVISED CREDIT IN

COLOMBIA IN 1969

---

	Page
I. Introduction	1
II. Comparison of Total Credit Use	2
III. Major Types of Use	7
IV. References	13

A Supplement to  
"The INCORA Supervised Credit Program"  
by James Schwinden and Gerald Feaster

by:  
Dana G. Dalrymple  
AID/PPC/PDA

Washington, D.C.  
November, 1972

## I. INTRODUCTION

This short report contains statistical information on the use of credit by 2,900 farmers in Colombia who received supervised credit from INCORA in 1969. It is intended to serve as a supplement to the Colombia Country Program paper prepared earlier by James Schwinden and Gerald Feaster.

The data are taken from a general economic analysis of a sample of INCORA farmers, which in turn is part of a more general agriculture sector analysis of Colombia being sponsored by the Sector Analysis and Strategy Staff of the Bureau for Latin America. Calculation of the credit data was not complete at the time Schwinden and Feaster prepared their paper.

The information cited here was taken from two wholly statistical reports compiled for the Spring Review by James T. Riordan and Thomas Walker. One of the reports in turn summarized some earlier studies by myself and others. This paper represents but the tip of an iceberg of data to be found in these documents. It has merely been my objective to sort out data on some aspects of loan utilization which may be of more general interest.

The basic working documents are listed in the last section of this report. Those with a thirst for more numbers are urged to consult them.

## II. COMPARISON OF TOTAL CREDIT USE

The total amount of credit utilized by a farm can, of course, be influenced by many factors. Three macro measures have been isolated for presentation here: (1) farm size, (2) firm size, and (3) family net income.

They are defined as follows. Farm size is simply the total area in the farm. Firm size is defined as being equal to total investments in durable goods + total sales value of farm production + total variable costs (operating expenses). Family net income is value of production sold and consumed + off farm income - operating expenses.

The amount of credit utilized decreased as each of the three measures increased (Figures 1-3). The amount of credit utilized per hectare dropped most sharply as farm size increased (Figure 1). Since, however, the larger farms are more apt to practice an extensive form of agriculture (WD 17G, pp. 9, 17), it may be more meaningful to look at firm size as measured in economic terms. When this is done, the decline persists but is more gradual for the intermediate size groups (Figure 2). The extent to which the credit is reaching the lower income groups is indicated the ratio between pesos of credit and pesos of income (Figure 3). Clearly the credit ratio is highest for families with incomes under 6,000 pesos; above 6,000 pesos the relative amount of credit was comparatively minor.

Further documentation on the amount of credit utilized per unit of area is available on a type of farming breakdown (Table 1).<sup>1/</sup> It is evident that the largest amount on either a farm or per hectare basis was utilized on mechanized farms. Andean (minifundio) farmers utilized the smallest amount on a per farm basis, while extensive livestock and colonization farms utilized the least on a per hectare basis.

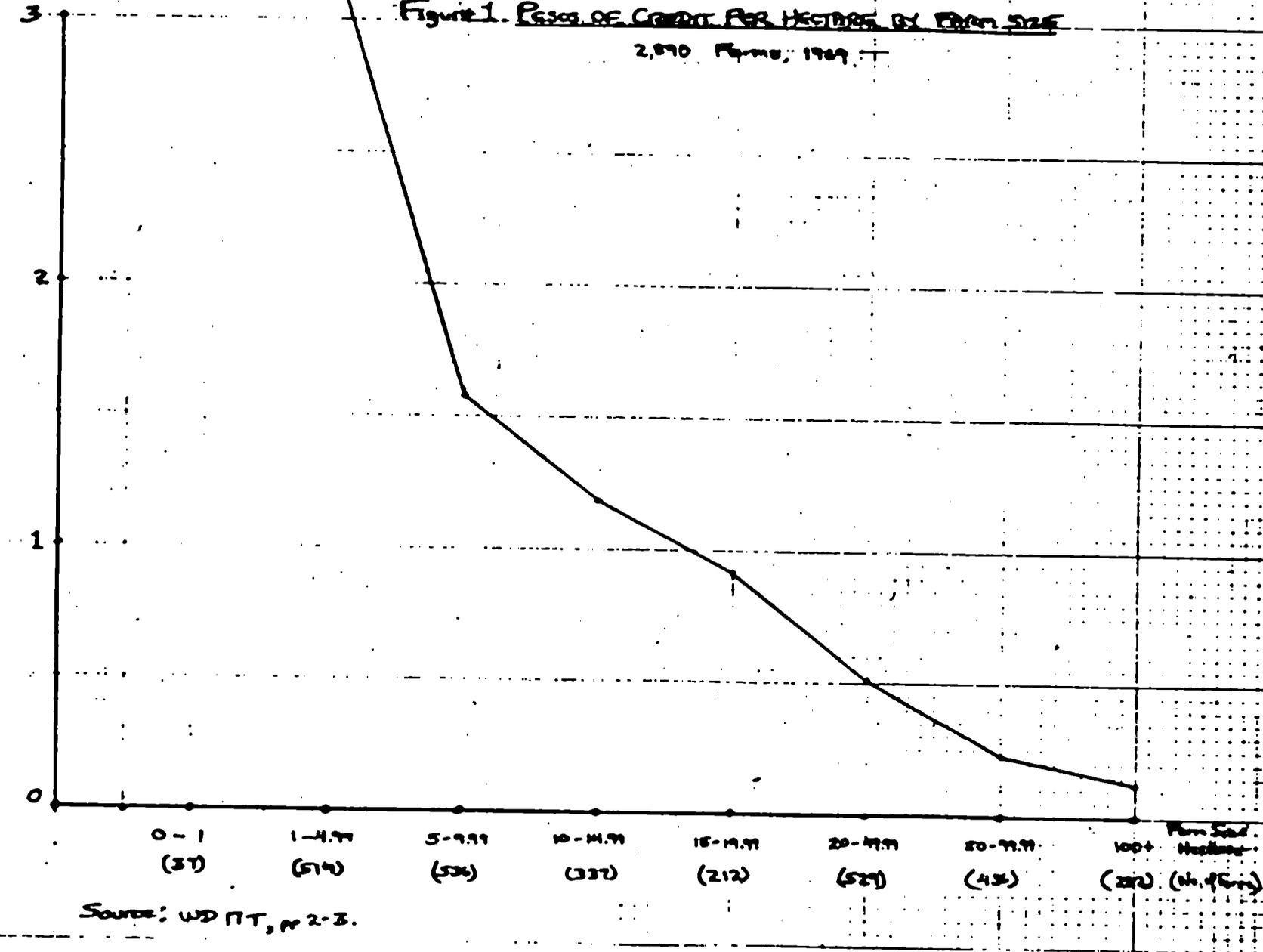
---

<sup>1/</sup>The breakdown was made by zone rather than by individual farm. Hence a few farms of one category may be lumped in with farms of another type which made up the majority of the farms in the zones.

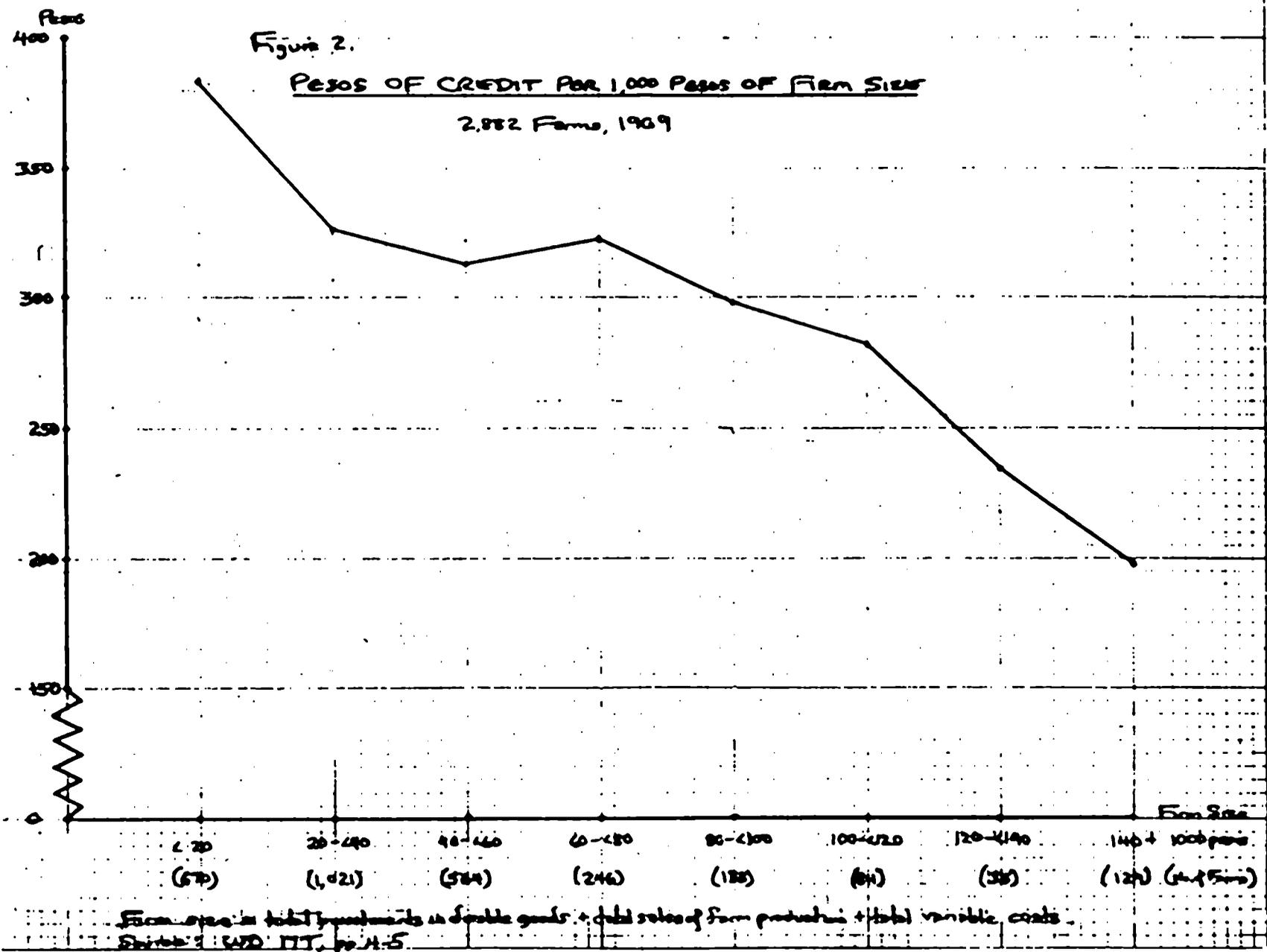
Per cent  
(15%)  
0,000

Figure 1. PERCENT OF CREDIT FOR HECTARES BY FARM SIZE

2,870 Farms, 1969



Source: W.D. IT, p. 2-3.



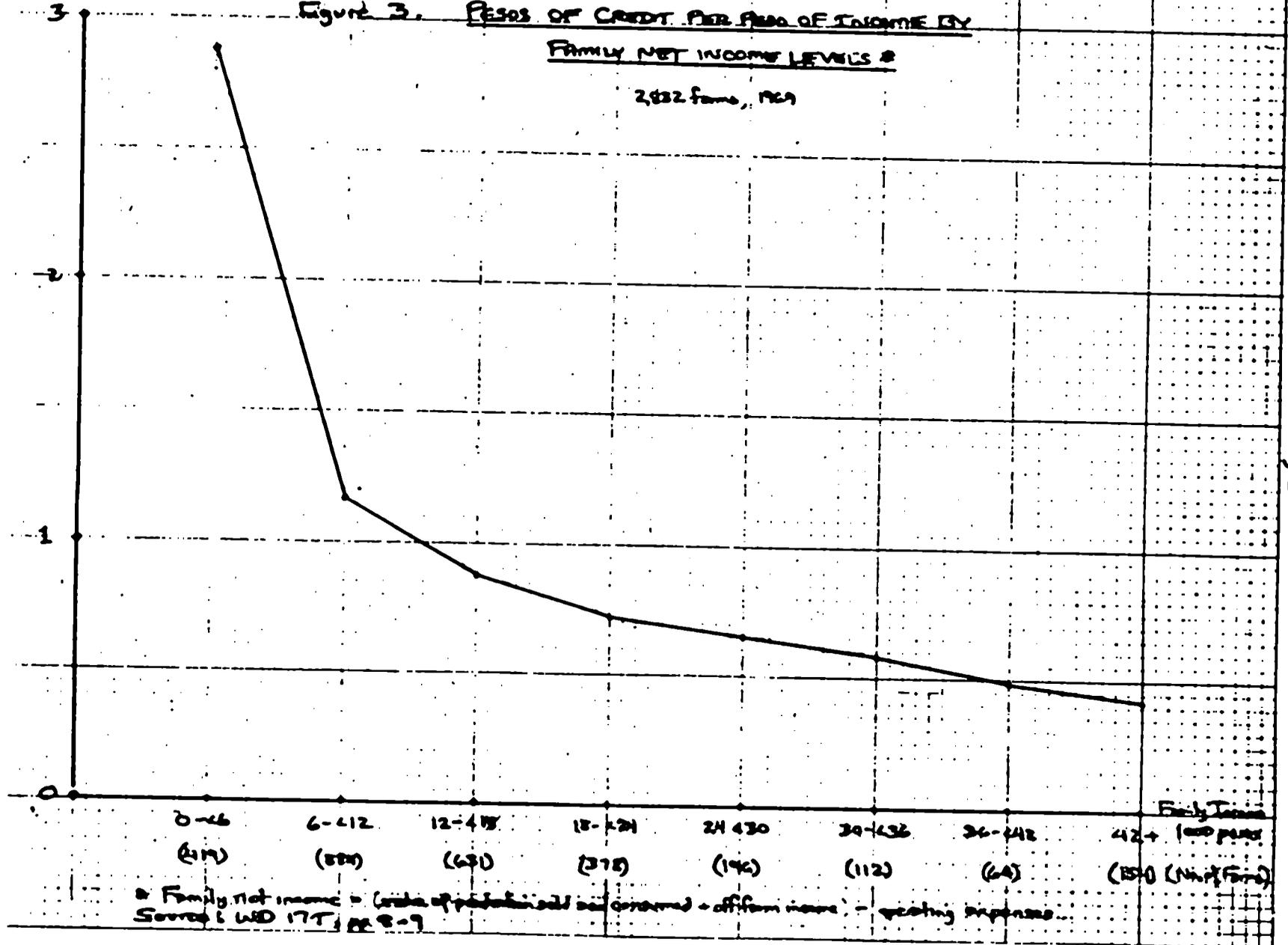
BEX 10110

Ratio of Credit  
Ratio of Income

Figure 3. RATIOS OF CREDIT PER RATIO OF INCOME BY

FAMILY NET INCOME LEVELS \*

2,832 farms, 1969



\* Family net income = (ratio of production and off-farm income) - operating expenses  
Source: WID 17T, pp 8-9

107

WID 1010

Table 1. USE AND AMOUNT OF INCORA CREDIT BY FARM TYPE

2,897 Farms, 1969

<u>Zonal Farm Type</u>	<u>Number of Farms</u>	<u>Credit per</u>		<u>Use</u>		
		<u>Farm</u>	<u>Hectare</u>	<u>Durable Goods</u>	<u>Variable Costs</u>	<u>Home Consumption</u>
		- pesos -		-percent-		
Mechanized	315	22,544	1,453	16.8	83.2	0.06
Andean(minifundio)	1,052	10,062	891	41.6	58.1	0.26
Extensive Livestock	884	14,183	361	67.7	32.1	0.14
Colonization	646	14,795	186	70.4	28.7	0.92
<hr/>						
Total or Average	2,897	13,732	387	52.3	47.3	0.35

Source: WD 1TT, pp. 6-7.

### III. MAJOR TYPES OF USE

Credit provided by INCORA was utilized for three general purposes: (1) purchase of durable goods, (2) variable costs of farm operation, and (3) home use. As may be seen in Table 1, durable goods accounted for about 52% of the total INCORA loan for the sample farms; variable costs accounted for 47%; and home consumption was less than 1%.<sup>2/</sup> Compared with the actual total amount spent for each category (Table 2), loans covered about all of the cost of durable goods, half the variable costs, and but a fraction of home consumption.

The pattern of utilization between durable and variable costs varied with farm size and number of years in the program. The proportion of the loan used for durable goods grew with increasing farm size (Figure 4) but decreased by years in the program (Figure 5). Conversely, the proportion used for variable costs decreased with larger farm size but increased with years in the program.

Why might the proportion of the loan used for durable goods grow with farm size? It has been noted elsewhere (WD 17G, pp. 9, 17) that with increases in farm size, the proportion of cultivated area decreased and the proportion of investment in livestock (a "durable" good) increased. Further, the breakdown by type of farming enterprise cited in Table 1 revealed that the proportion of the loan spent for durable goods on livestock farms was about four times the proportion on mechanized (crop) farms. Hence the answer appears to be tied to type of farming enterprise.

But then why did the proportion of the loan used for durable goods decrease with years in the program? One might hypothesize that farmers simply focus on building up their stock of durable goods in the first years and then as these are acquired they involve variable or operating costs. Other data revealed that as average age of the head of the household increased from 20 to 60, the proportion spent on durable goods decreased (WD 17T, pp. 14-15).<sup>3/</sup>

---

<sup>2/</sup> It should be realized that these proportions were based on what farmers reported to their credit supervisor. Actual use patterns for some borrowers may have been different. Also the figures do not include loans from other sources which may have been utilized in a different way. Some of the variable costs for labor (Table 3) may have represented consumption expenses.

<sup>3/</sup> The proportion spent for durable goods was, as might be expected, considerably higher on privately held land than on rented land (53.1% vs. 23.1 to 38.4%) (WD 17T, pp. 14-15).

Table 2. PROPOSED USE OF INCORA LOAN

2,900 farms, 1969

<u>Category</u>	<u>Proposed INCORA Loan</u> - percent -	<u>Loan as Proportion of Actual Expenditures</u>
Durable goods	57.2**	102.9
Variable costs*	42.5**	50.1
Home consumption	0.3	0.7
<hr/>		
Total	100.0	

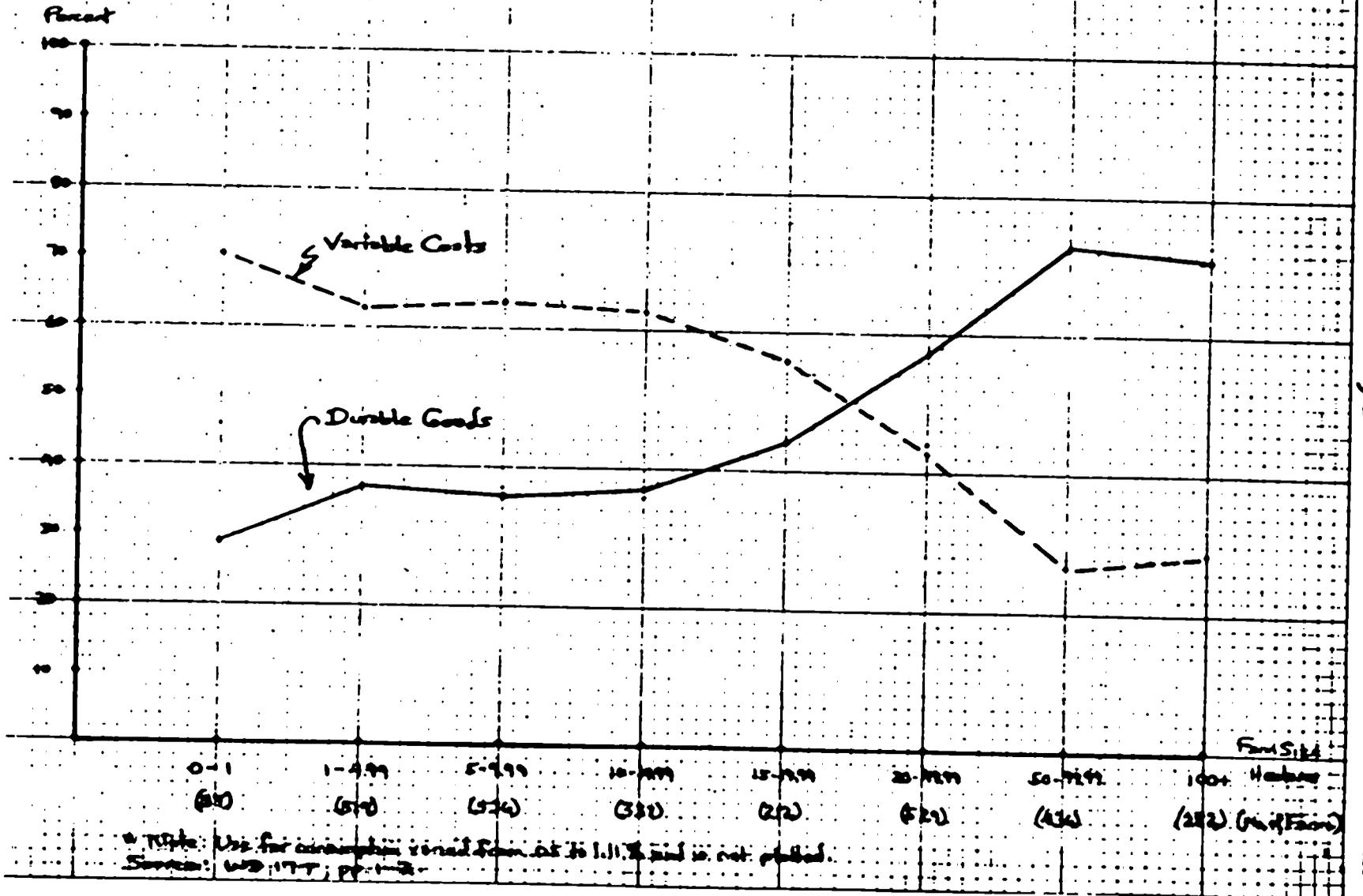
\* Operating costs of the farm including labor.

\*\* These proportions vary by about 5% from those reported in Table 1. The figures in Table 1 are felt to be more representative of actual loan use.

Source: WD 17G, p. 16 (cited in WD 17Y, p. 105).

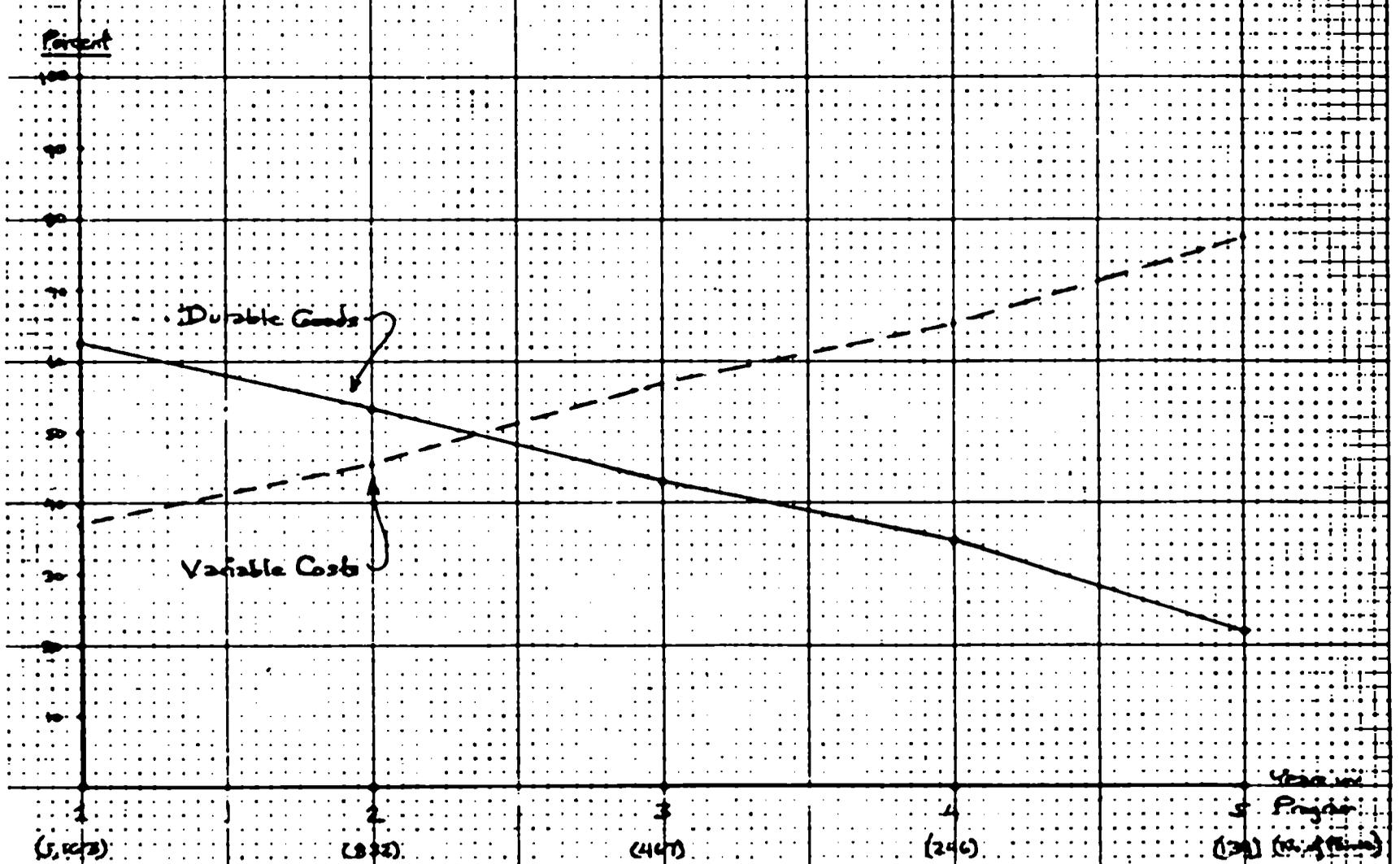
Figure 4. UTILIZATION OF INCOME LOANS BY FARM SIZE\*

2,870 Farms, 1969



111

Figure 5. USE OF INOCRA' LOANS BY YEARS IN PROGRAM, 1967



1 (5,107)      2 (822)      3 (447)      4 (246)      5 (23) (12,471)

1. Use for consumption varied from 0.13 to 0.45% and is not plotted.  
 Source: W.D. ITT, p. 18-19.

12

Given these trends how is the use of the loans broken down within each of the major categories? Unfortunately it has not yet been possible to do this for durable goods, but we do have a detailed list for variable or operating costs (Table 3). Clearly the major use, accounting for about 1/3 of the total, was for labor. It was followed in decreasing order by fertilizer, seed, machinery rental, and pesticides. Together, the five categories represented about 90% of total variable costs. The proportion the proposed INCORA loan represented of total expenses varied widely by individual category.

Table 3. PROPOSED USE OF INCORA LOAN FOR VARIABLE COSTS\*

2,900 farms, 1969

<u>Category</u>	<u>Proposed INCORA Loan</u>	<u>- percent -</u>	<u>Loan as Proportion of Total Variable Cost</u>
Labor	33.1		66.3
Fertilizer	20.1		94.4
Seed	17.6		82.4
Machinery rental	10.1		150.2
Pesticides	9.0		77.2
Packaging	3.5		49.9
Petroleum	1.8		276.5
Transportation	1.2		17.5
Feed and drugs	0.6		155.6
Irrigation	0.5		20.6
Family labor	0.4		2.1
Other	2.1		72.5
<hr/>			
Total	100		

\* Built up from individual crop and livestock enterprises.

Source: WD 17J, p. 66 (cited in WD 17Y, p. 104).

#### IV. REFERENCES

The data cited in this report, as noted in the Introduction, were taken from two statistical documents prepared for the Spring Review by James. T. Riordan and Thomas Walker. They were issued as part of the General Working Document series issued by the Sector Analysis and Strategy Staff of the Bureau for Latin America, AID. The two documents carried the same title: Data for Spring Review Analysis of Small Farmer Credit: The Case of INCORA in Colombia. Document 17Y was dated October 1972; it pulled together relevant statistical material from previous documents: 5A, 17D, 17G, 17I, 17J, and 17 O. Document 17T represented additional analysis.

Authors and titles of the previous Working Documents cited in Document 17Y are listed below:

- 5A. Don Bostwick, Analysis of INCORA Supervised Credit Sample Data, August 1972.
- 17D. Dana Dalrymple, Samuel Daines, and Beverly Lowenstein, Utilization of INCORA Loan and Farm Production, December 1971.
- 17G. Samuel Daines, Dana Dalrymple, Cathy Gleason, and Beverly Lowenstein, Small Farm Economics .2901 Farm Sample. Preliminary Results: Land Use, Profitability, Farm Consumption, Capital Structure, August 1972.
- 17I. Dana Dalrymple, Cathy Gleason, Beverly Lowenstein, Small Farm Credit. 2901 Farm Sample. Income and Credit Ratios by Income Level, August 1972.
- 17J. Dana Dalrymple, Samuel Daines, Cathy Gleason, Beverly Lowenstein, Small Farm Economics. 2901 Farm Sample. Statistical Results for Crop Specific Analysis, August 1972.
- 17O. James Riordan, Small Farm Analysis: Consumption Patterns, October 1972.

Analysis is continuing on the small farm data, and additional reports will be issued in the future.

Background on the basic data gathering procedures is presented in WD 17F by Samuel Daines, Cathy Gleason, Dwight Steen and Thomas Walker: Data Gathering Procedures and Format.

Copies of these Working Documents may be obtained by contacting Rita McKenna, AID-LA/DR/DSA, Room 3247B New State.

115

COUNTRY PROGRAM

---

SMALL FARMER CREDIT ACTIVITIES  
OF THE COLOMBIAN AGRICULTURAL BANK

---

by:  
Ronald L. Tinnermeier  
Colorado State University

Fort Collins, Colorado  
November 1972

## PREFACE

The data collection and analysis, and the preparation of this paper were, by necessity and circumstances, carried out in a relatively short period of time. Therefore, secondary sources of data were used exclusively. Heavy use was made of Caja Agraria and USAID reports and data. The author hereby acknowledges the full cooperation of these agencies in providing the aforesaid data.

The author is also grateful to the many other agencies and individuals who assisted him in getting access to data in Colombia. Some of these include: the Central Bank of Colombia, the Ministry of Agriculture, the Ford Foundation, the Inter-American Development Bank, the World Bank, and IICA-CIRA.

The individuals who were especially helpful in all phases of the study were: Jaime Velez Hernandez, Director of the Caja Agraria Credit Division; Jorge Gamboa, Caja Economic Studies Department; Howard Harper, Rural Development Officer, USAID; Roger Sandage, Deputy RDO; and, Agapito Olea and Hector Sarmiento also in the USAID office.

This paper has been reviewed by the Caja Agraria and the USAID Mission but the author takes full responsibility for any errors of fact or of omission found in the paper. All conclusions are those of the author and do not necessarily represent the views of the cooperating agencies.

## TABLE OF CONTENTS

PREFACE	i
TABLE OF CONTENTS	ii
LIST OF TABLES	iv
LIST OF FIGURES	v
I. INTRODUCTION	1
II. PROGRAM CHARACTERISTICS	5
A. Background	5
1. Historical Summary	5
2. Relation to Other Development and Credit Agencies	6
3. Other Program Activities	8
4. Agricultural Patterns and Potential	10
B. Objectives	14
1. General Objectives	14
2. Terms of Loans	15
a. Purpose	15
b. Period	20
C. Organization	20
1. General Structure	20
2. Local Structure	25
D. Beneficiaries	25
1. Selection Criteria	25
2. Graduation Policy	26
3. Number and Types	26
4. Other Sources of Credit	27
5. Profile of Farm Community	30
E. Lending Policies and Procedures	32
1. Portfolio	32
2. Interest Rates	35
3. Collateral	36
4. Other Subsidy	38
5. Appraisal Techniques	38
F. Collection	41
1. Repayment Record	41
2. Methods	45
3. Special Enforcement Procedures	45
4. Rescheduling	47
G. Costs and Finance	48
1. Portfolio Profits and Losses	48
2. Administrative Costs	48
3. Beneficiary Savings	48
4. External Finance	48
5. Institutional Solvency	50
6. Foreign Exchange Balance	50

H. Complementary Factors	50
1. Technology	50
a. Technology, Extension and Supervision	50
b. Other Arrangements for Technical Transfer	51
c. Nature of Technology	52
2. Supplies and Sales	52
a. Program Supplies	52
b. Program Infrastructure	53
c. General Access and Availability	53
d. Guaranteed Sales and Price Supports	54
e. Insurance	55
f. Other Program Marketing Managements	55
g. General Marketing Conditions	55
h. Profits and Risks	56
III. EVALUATION	57
A. Performance	57
1. Apparent Uses of Credit	57
2. Effects	57
3. Progress Towards Other Objectives	58
4. Image	58
B. Evaluation Procedures and Feedback	58
C. Problems	59
1. Governmental Level	59
2. Agency Level	59
3. Farm Level	59
D. Conclusions About Small Farmer Credit	60
1. Major Problems of Small Farmers	60
2. Role of Credit	61
3. Credit and New Technology	61
a. Triggering Small Farmer Development	61
b. Sustaining Small Farmer Development	62
4. Conditions for Success or Failure	62
5. How Could the Program be Improved	64
IV. ROLE OF TECHNICAL ASSISTANCE	65
A. A.I.D. Inputs	65
B. Other Donor Inputs	65
C. Effects	65
BIBLIOGRAPHY	66
APPENDIX	70
List of Appendix Tables	70
Sources of Data and Other References	79

## LIST OF TABLES

Table 1.	Agricultural Credit in Colombia: number and value of new loans granted and value of outstanding loans by major institutions, 1971	2
Table 2.	Agricultural credit in Colombia: number and value of new loans granted and value of outstanding loans by major institutions, 1967-1971	9
Table 3.	Production and area planted for major agricultural commodities in Colombia, 1968-1971	12
Table 4.	Distribution of land, farms, and income per acre by farm size	13
Table 5.	Distribution and number of new loans made in 1971, by source of funds and amount of total assets of the borrower	17
Table 6.	Amount of new Caja Agraria loans and percentage of total, by activity and year	19
Table 7.	Percentage of value of loans outstanding by activity financed for selected years	19
Table 8.	Distribution of Caja portfolio by term, 1967-1971	21
Table 9.	Loan approval limits by type of borrower and by organizational level	24
Table 10.	Number of credit users and percentage of total by size of borrower, 1969-1971	28
Table 11.	Value and percentage of loans outstanding by size of borrower, 1969-1971	28
Table 12.	Percentage of credit users and value of new loans made by the Caja, by size of borrower, 1970-1971	29
Table 13.	Percentage of farms with less than five hectares as compared with the percentage of Caja loans to similar farms, by Department, 1969	31
Table 14.	Number and value of new loans in the Caja by size of loan for 1967	33
Table 15.	Average loan size by size of borrower, 1970-1971	34
Table 16.	Loan to asset ratios by size of borrower, 1969-1971	37

Table 17. Distribution, number of borrowers, and value of outstanding loans by type of guarantee and size of borrower, November 9, 1971	39
Table 18. The distribution of small farmer loans outstanding, by type of guarantee, November 9, 1971	40
Table 19. Value of due and unpaid loans as a percent of value of outstanding loans by Department, 1968-1971	43
Table 20. Distribution of delinquent borrowers and of value of delinquent loans by size of borrower and zone, November 9, 1971	44
Table 21. Distribution of delinquent borrowers and overdue loans by zone, type of guarantee and borrower size, November 9, 1971	46
Table 22. Caja Agraria balance sheet for selected entries, December 29, 1971	50
Table 23. Fertilizer prices in the Caja and for other distributors by year, Bogota	53
Table 24. A comparison of fertilizer prices and farm product prices by year, 1958-1967.	56

#### LIST OF FIGURES

Figure 1. Organizational Structure of the Colombian Ministry of Agriculture	7
Figure 2. Organizational Structure of the Caja Agraria	22

## 1. INTRODUCTION<sup>1</sup>

There are over 4,000 offices of one kind or another extending agricultural credit in Colombia. Three-fourths of these are commercial banks. The Bank of Agricultural, Industrial, and Mineral Credit (Caja de Credito Agrario, Industrial y Minero,<sup>2</sup> hereafter referred to as the Caja Agraria) has over 600 credit offices. INCORA (the Colombian Agrarian Reform Institute) has about 230 zone offices, the Coffee Bank over 175 branches and the Livestock Bank more than 80 branches and agencies.

Much of the agricultural credit that flows through commercial banks is rediscounted at the Central Bank. One of the Central Bank's specialized rediscount lines is the Agricultural Finance Fund (FFA) which rediscounts 65 percent of the value of loans made by banks for the production of crops specified by the Monetary Board in accordance with Ministry of Agriculture plans. Very few small farmers qualify for loans under FFA regulations and few receive credit from commercial banks (except the Coffee Bank which serviced an estimated 42,000 total loans to coffee farmers in 1971, many of which are small in size). The Caja Agraria is the principal source of institution credit for small farmers. The Caja provided more than 51 percent of all new bank credit to agriculture in 1971 and made more than 80 percent of all loans made by banks to farmers in 1971 (See Table 1). Data from private banks do not indicate size of farms and size of loans. It is known, however, that private banks tend to loan to larger farmers. Therefore, the percentage of all new small farmer loans made by the Caja is probably much larger than that indicated.

There is both a need and a demand for additional institutional agricultural credit for small farmers. In most areas small farmers who borrow from local money lenders, intermediaries, etc., must pay three to five percent per month interest.

Colombia has an estimated 1.2 million small farmers in need of credit. Most of these already have more and better technical knowledge concerning the production of the principal crops or commodities for their areas than they are currently putting into practice. The most important constraints to achieving increased production and income for many of these small farmers are (1) insufficient resources to purchase needed inputs and (2) marketing problems. The increased availability of agricultural credit would help or remove many of these constraints by providing the resources needed to purchase improved seeds, fertilizers and pesticides, to pay for machine hire and peak-season labor, to purchase bags, crates, etc., at harvest time and to pay marketing costs (transport, etc.). Small farmers are currently dependent upon intermediaries of one kind or another to cover many of the

---

<sup>1</sup>Prepared by Roger Sandage, Deputy Rural Development Officer, USAID, Bogota.

<sup>2</sup>Spanish words will be underlined only the first time used.

122

Table 1. Agricultural credit in Colombia: number and value of new loans granted and value of outstanding loans by major institutions, 1971<sup>a</sup>

Institution	New Loans				Portfolio (12/31/1971)	
	Number	Percent	Value (US\$ 000)	Percent	Value (US\$ 000)	Percent
Caja Agraria <sup>b</sup>	367,703	81.7	185,436	51.2	214,266	44.9
Private Banks <sup>c</sup>	61,957	13.7	142,959	39.5	167,631	35.1
Livestock Bank <sup>d</sup>	5,088	1.1	23,731	6.6	59,427	12.4
INCORA <sup>e</sup>	15,851	3.5	7,507	2.1	26,877	5.6
COFIAGRO <sup>d</sup>	140	-	2,380	.6	9,632	2.0
TOTAL	450,739	100.0	362,013	100.0	477,833	100.0

<sup>a</sup> Does not include bank discounts of warehouse bonds.

<sup>b</sup> Caja, Informe de Gerencia, 1971.

<sup>c</sup> Revista Banco de la Republica, June, 1971. Tables 1.2.14 and 1.2.15

<sup>d</sup> Annual Reports. COFIAGRO is a joint public-private financial corporation to promote crop and cattle exports.

<sup>e</sup> USAID files. Includes only loans under supervised credit; other loans included under Agricultural Rural Bank and Livestock Bank.

-123

above costs (if they can be covered at all) at prices which may make increased production through the use of "improved practices" uneconomical.

The timeliness of the availability of the necessary inputs is of critical importance. In some instances, the availability of technical assistance with certain practices may contribute significantly.

The 1972 USAID agricultural sector analysis indicates that significant employment generation and increases in small farmer income can be achieved by changing the crop production "mix" in Colombia even at present levels of technology. Within present market constraints, unfulfilled demand exists for sufficient labor and income intensive agricultural commodities that the production of these could be substituted to a considerable extent for more extensive crops or commodities now being produced. Since there is a significant amount of non-utilized or under-utilized land in the small farm areas, the increased availability of inputs, including hired labor, could achieve increased production of these more intensive commodities without forcing a reduction of others. The allocation of agricultural credit by crop or commodity can greatly influence production patterns on a national or regional basis by making credit more readily available for the more desirable commodities.

Colombia has had experience with several different kinds of small farmer credit. The more important ones are:

(1) the INCORA Supervised Credit Program: This program is a more or less traditional supervised credit system. Loans are based upon a farm plan developed by the borrower and credit supervisor. Loans average about \$1,000<sup>3</sup> (20,000 pesos) per borrower per year. Since 1963, approximately 55,000 families have been reached and in 1971, about 15,000 new borrowers were added to the program. Supervision and administration costs have averaged about 22 percent of the total amount of loans made per year. Studies indicate that recipients of credit under this program have increased their net worth by about 13 percent per year (deflated peso basis).

As shown in Table 1, the INCORA credit program is significantly smaller than the Caja program. Assuming 62 percent of the Caja agricultural credit portfolio goes to small farmers, or \$132.8 million, the Caja extends almost five times as much credit to small farmers as compared to INCORA.

(2) The Caja Agraria's regular agricultural credit program: The Caja is the principal source of bank credit for small farmers. At the present time, about 93 percent of the Caja's new loans, accounting for 62 percent of the amount of agricultural credit granted by the Caja, are being made to farmers with assets of less than \$15,000 (Col. \$300,000). A third of these

---

<sup>3</sup>All peso amounts have been converted to dollars in this paper. The dollar figures are calculated on the basis of the exchange rates shown in Table B, the Appendix, unless indicated otherwise.

funds normally go to very small farmers with assets of less than \$2,500 (Col. 550,000). The total number of new loans made by the Caja in 1971 was 367,703 of which 343,291 were to small farmers. A concerted effort is being made to increase the proportion of the bank's available resources going to small farmers, and to improve the timeliness of this credit and the availability of the inputs to be purchased with credit funds. No study of the increase in borrower's net worth as a result of Caja credit has been completed yet.

(3) The Caja -- ICA<sup>4</sup> program under AID Sector Loan 514-L-060: This is a project through which the Caja makes loans to small farmers on a commodity basis. ICA provides technical assistance pointing to the use of only two or three improved practices for each commodity by working with groups of farmers in a given area instead of working with each farmer individually. It is a relatively small program and is still in the early stages of implementation.

This program has not been underway long enough to make a comprehensive evaluation of results but indications are that the average loan will probably be much smaller and the cost of technical assistance will be much lower than for the INCORA supervised credit program.

(4) The Coffee Bank Program: Loans are made only to the coffee producing areas by this specialized bank. Its program reaches many small coffee producers since 97 percent of the coffee farms are under 10 hectares in size. As mentioned previously, the Coffee Bank made about 42,000 loans in 1971, so in terms of the number of small farmers reached, the Coffee Program is slightly smaller than the INCORA Supervised Credit Program.

Present small farmer credit programs in Colombia are reaching only about 450,000 of the estimated 1.2 million small farmers in need of credit. Approximately 200,000 of those not receiving credit are coffee growers. This leaves a balance of about 550,000 small farmers whose income and production would probably be increased by providing them with agricultural credit at a reasonable cost and on a timely basis.

---

<sup>4</sup>Colombian Agricultural Institute, the research and extension arm of the Ministry of Agriculture.

## II. PROGRAM CHARACTERISTICS

### A. Background

#### 1. Historical Summary

The Caja Agraria is not only the largest development bank in Colombia,<sup>5</sup> but it is also the largest banking institution, public or private, apart from the Central Bank itself. It was formed in 1931 to complement the earlier Agricultural Mortgage Bank (Banco Agrícola Hipotecario) which had extended the major part of its resources into long-term loans.

Originally, the Caja Agraria extended only short-term loans for agriculture thereby complementing the Agricultural Mortgage Bank's operations. During the first few years of operation, the Caja was restricted to (1) extending agriculture loans with no more than a two-year term, (2) limiting 40 percent of the portfolio to loans of relatively small amounts (2,000 Colombian pesos or less<sup>6</sup>), and (3) financing coffee production with at least one-third of the portfolio. So, the Caja Agraria began with an emphasis on small farmer credit but this orientation changed with time and the Caja Agraria has, in later years, been accused of favoring the larger farmers. There now is a tendency by the Caja to again place emphasis on small farmer credit. This trend will be discussed in a separate section of the paper.

The Caja Agraria, through its 680 banking branches, 13 input distribution centers, and 433 farm supply stores, is well distributed throughout Colombia and is the most commonly accessible financial institution for rural Colombians. The Caja principally provides credit services to farmers, cattlemen and small industry for the purchase of machinery, farm supplies, and rural housing, and for the development of farmer cooperatives.

During the period 1932-1950, there was slow but steady growth in the Caja activities. The loan portfolio and asset picture increased slowly during that period (See Appendix, Table A). In the early 1940s, the Caja incorporated industrial and mineral lending activities into its lending program, as reflected in its present name. In 1943, the field credit offices, previously operated by municipal and departmental governments, were transferred to direct control of the Bank. In the same year, the

---

<sup>5</sup>The other development banks include the Central Mortgage Bank, which finances medium and low-income housing; the Savings and Housing Bank, which mobilizes internal as well as external financing for housing construction; the Coffee Bank; and the Livestock Bank.

<sup>6</sup>No attempt was made to obtain exchange rates for the earlier years so no dollar equivalent can be suggested, although it would likely be no greater than \$2,000.

Department of Agricultural Development (Fomento Agrícola) was created. This department was initially responsible for carrying out irrigation feasibility studies but has greatly expanded its activities since that time as discussed in a separate section. Thus, for the Caja, this early period seemed to be one of program consolidation and organization.

Rapid growth took place in the Caja during the 1950-1960 period with a significant increase in the outstanding loan portfolio. During this time, the portfolio almost tripled, reaching \$110 million by 1960. The portfolio increase was also accompanied by an increase in available capital. Since its creation, the Caja has obtained capital from a number of sources including the government; forced investment in agrarian bonds by other banks; some demand deposits; nearly half of Colombia's bank savings deposits; and through re-discounts with the Central Bank.

The growth in the Caja portfolio continued through the 1960s reaching \$230 million by 1970. The passage of Law 33 in 1971 assured further growth for the 1970s through direct government investment, bond sales, and other provisions.

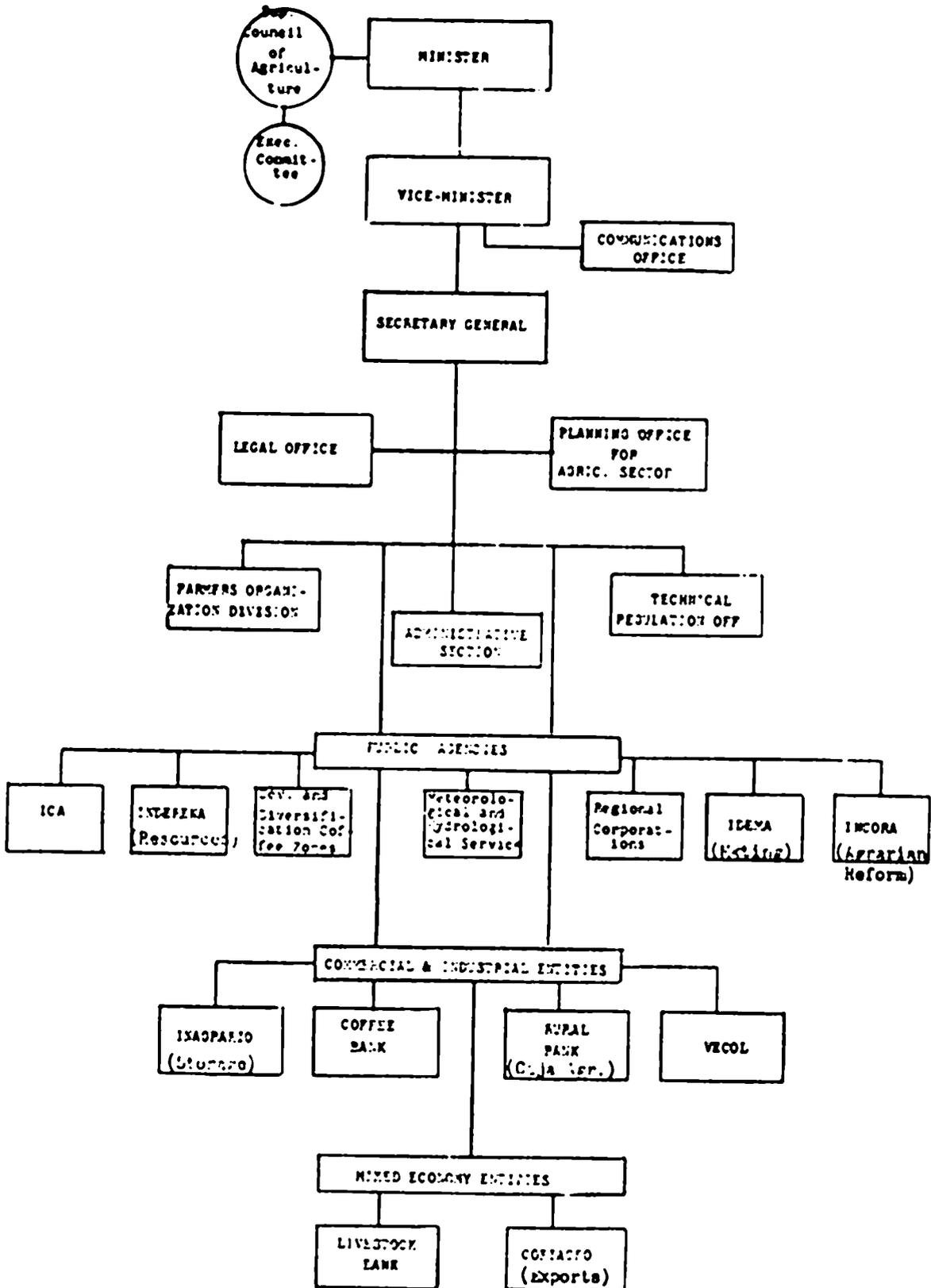
## 2. Relation of Other Development and Credit Agencies

In 1968, Decrees 2420 and 3120 provided the basis and authority for a complete restructuring of the agricultural sector resulting in a reorganization of the Ministry of Agriculture in 1969. The restructuring of the agricultural sector gave the Ministry greatly increased responsibility for the development, coordination, and implementation of agricultural policy for Colombia. It also moved the Caja Agraria, as well as the Coffee and Livestock Banks, under the organizational framework of the Ministry (See Figure 1). The formulation of credit policy is coordinated with the National Monetary Board (Junta Monetaria) and agreement has been reached on the kind and source of specialized technical assistance which should accompany credit.

There are now interlocking Boards of Directors for the agencies attached to the Ministry of Agriculture. It is hoped this will allow closer coordination between the separate agencies working with agrarian reform, research and extension, price stabilization and marketing, and with natural resource development. A recent shift by the Caja to more small farmer loans with technical assistance could be an indication of improved coordination among the agencies.

The Colombian banking system is directed by the government through a series of official rediscount facilities and reserve requirements. The Central Bank (Banco de la Republica) holds the national reserves and is the banker for the government and for other banks. Since 1963, the government-appointed Monetary Board has had control of the banking system (the Minister of Agriculture is one of five members of the Board). It determines the proportion of bank deposits which must be kept in reserve. It also sets the rediscount limits available to the banks in the Central Bank. The Superintendency of Banks (Superintendencia Bancaria) ensures compliance with

Figure 1. Organizational structure of the Colombian Ministry of Agriculture



these requirements through regular inspection of all banks. The Caja Agraria is subject to the same controls and regulations as the other banks but is usually allowed special exemptions to further develop agriculture. The Caja Agraria is tied to the other public or semi-public agricultural banks through the interlocking Boards of Directors and as directed by Ministry of Agriculture policy.

At the end of 1971, the total loan portfolio of the banking system was about \$1.4 billion of which the agricultural portfolio was \$477 million or 34 percent.<sup>7</sup> The agricultural sector's share of the total portfolio has fluctuated in recent years from a low of 32 percent in 1958 to a high of 37 percent in 1964. Thus, agriculture's share of the total portfolio is slightly greater than its share of the gross domestic product, which is about 29 percent.

New lending to agriculture by the banking system in 1971 amounted to \$362 million, or about 32 percent of total new lending for all purposes (See Table 2). Of this, about \$185 million or 51 percent pertains to the Caja Agraria, by far the most important lender to the agricultural sector in Colombia.

The Caja loan portfolio (in peso terms) has grown steadily over the past few years. In 1970, the smallest increase occurred in the value of new loans granted (five percent) and in the loan portfolio (three percent) but the yearly increase has usually been 15 percent or more.<sup>8</sup>

### 3. Other Program Activities

An important reason for including a paper on the Caja Agraria for the Spring Review on Agricultural Credit for Small Farmers is the large number of activities in which the Caja is involved. In addition to extending credit, its most important function, the Caja provides farm inputs, such as seed and fertilizer, some technical assistance, insurance, and is one of the largest savings institutions in the country.

The principal source of bank credit for small farmers in Colombia is the Caja Agraria. The Caja has frequently been accused of favoring larger borrowers but recent evidence suggests that the Caja is turning its attention to Colombia's small farmers. Over the 18 months ending December 1971, about 95 percent of the number of new loans granted by the Caja, accounting for 62 percent of the amount of credit granted, went to farmers with less

---

<sup>7</sup>Figures include commodity storage loans. For this reason, they differ slightly from the figures in Table 2.

<sup>8</sup>All changes are in terms of non-deflated pesos. The dollar figures in Table 2 suggest the real value of the Caja portfolio dropped from 1969 to 1970.

Table 2. Agricultural credit in Colombia: number and value of new loans granted and value of outstanding loans by institution, 1967-1971.

Year	Institutions	New Loans Granted			Outstanding Loans on 12/31/71	
		Number of Loans	Dollar Value (\$ 000)	Percent Change <sup>b</sup>	Dollar Value	Percent Change <sup>b</sup>
1967	Caja Agraria	306,333	133,534	-	176,013	-
	Private Banks	51,349	131,550	-	115,636	-
	Livestock Banks	5,459	16,345	-	29,109	-
	INCORA <sup>a</sup>	18,937	13,476	-	19,645	-
		<u>382,078</u>	<u>294,905</u>		<u>340,403</u>	
1968	Caja Agraria	365,742	163,869	36	203,157	28
	Private Banks	52,722	123,995	5	106,995	3
	Livestock Banks	5,388	16,056	10	33,075	26
	INCORA	24,129	11,705	3	22,763	29
	COFIAGRO	11	1,488	-	1,189	-
	<u>447,992</u>	<u>317,153</u>	<u>20</u>	<u>367,179</u>	<u>20</u>	
1969	Caja Agraria	348,146	191,521	24	214,909	12
	Private Banks	52,444	124,115	6	109,172	8
	Livestock Banks	5,588	23,105	52	43,442	39
	INCORA	31,700	11,105	1	24,147	12
	COFIAGRO	49	5,190	270	4,346	287
	<u>437,927</u>	<u>355,036</u>	<u>19</u>	<u>396,016</u>	<u>14</u>	
1970	Caja Agraria	353,236	170,863	5	207,657	3
	Private Banks	52,063	120,260	3	105,912	2
	Livestock Banks	5,755	24,179	11	52,204	28
	INCORA	25,000	10,162	-3	26,894	19
	COFIAGRO	187	11,352	133	6,766	166
	<u>436,241</u>	<u>336,836</u>	<u>10</u>	<u>398,543</u>	<u>7</u>	
1971	Caja Agraria	367,703	185,435	17	214,266	12
	Private Banks	61,957	142,959	9	167,631	11
	Livestock Banks	5,088	23,731	6	59,427	23
	INCORA	15,851	7,507	-20	26,877	8
	COFIAGRO	140	2,360	-77	9,632	54
	<u>455,993</u>	<u>362,013</u>	<u>9</u>	<u>477,833</u>	<u>14</u>	

<sup>a</sup>Includes only loans under supervised credit: other INCORA loans are included under the Caja or Livestock Bank data.

<sup>b</sup>Percentage change from the previous year. These represent changes in the amount of Colombia pesos -- changes in dollar amounts would be misleading due to foreign exchange movements.

<sup>c</sup>Estimates for 1971 were presented in the original table so will differ from the 1971 data shown here.

SOURCE: USAID [60].

than \$15,000 (Col. \$300,000) in total assets; a third of the funds were granted to farmers with less than \$2,500 in total assets. Large farmers, those with assets greater than about U. S. \$85,000, received less than 30 percent of the credit granted by the Caja. As further evidence of the shift to smaller farmers, Law 33 of 1971 allows the Caja to extend credit to farmers on the basis of the production or income arising from the crop or activity financed. Up to that time, repayment capability based on existing collateral was the principal criterion used by the Bank for making agricultural loans, thereby eliminating access to Caja credit for many small farmers.

This new law signals a significant shift in Caja philosophy from the traditional "banking" attitude to a more "development" oriented policy. This shift in attitude is already evident at the national level but is less evident in the field. Efforts are being made to extend this philosophy to all levels of operation; this will likely require considerable retraining of the field personnel accustomed to using the more traditional criteria for borrower selection and supervision.

The INCORA supervised credit program, reported in a separate country paper, also provides credit to small farmers but it reaches only a small percent of the potential borrowers. Nevertheless, there is some competition between the Caja and INCORA to reach the small farmer clientel, although they generally service different areas. Similar competition exists between the Caja and the commercial suppliers of seeds, fertilizers, chemicals and farm machinery.

ICA (Instituto Colombiano Agropecuario) is the government's research, extension and education organization which was established in 1963. In 1971, ICA was given responsibility for the coordination of the pilot development areas under a Caja-ICA agreement. New methods of extension are being tried in the pilot projects but they are still in the early stages of development. Since the Caja also employs an estimated 60 agronomists to provide technical assistance within its own credit program, there is bound to be some competition, too, in the area of providing technical assistance. In fact, some Caja officials feel that the Bank should assume the role of providing technical assistance to small farmers.

It should be pointed out that the Caja has been responsible for all the financial accounts of both the INCORA and ICA credit programs mentioned previously. The borrower receives money directly from the Caja offices and repays his loan in the same manner even though he is selected and supervised by INCORA or ICA technicians. All credit accounts, financial summaries, and other data for these two small farmer credit programs are prepared by the Caja.

#### 4. Agricultural Patterns and Potential

Agriculture plays a critical role in the Colombian economy, contributing approximately 29 percent of the nation's gross domestic

product, employing almost half of the country's labor force and providing 85 percent of the value of exports, excluding petroleum. However, despite recent progress, the sector is not developing its potential sufficiently or making the optimum contribution to overall development that it could.

Coffee still holds a dominant position in the Colombian economy. From the height of its importance in 1954, when it accounted for 84 percent of export earnings and about 16 percent of GDP, it has declined, in 1971, to account for 53 percent of exports and seven percent of GDP. Coffee is grown on about 21 percent of Colombia's total land under cultivation and on about 300,000 farms, 97 percent of which are under 10 acres in size [60].

The Coffee Bank provides the bulk of the credit to coffee producers but the Caja is also an important source of coffee credit. In 1971, coffee was the second most important crop financed by the Caja, with \$13.6 million destined for that activity. Even so, the amount of credit for coffee has been relatively low given the importance of coffee to the economy.

Corn is the second most important crop in land area and is also an important crop for small farmers. Approximately 800 thousand hectares were in corn in 1971 as compared to over 785 thousand hectares in coffee, as shown in Table 3. Other important crops for small farmers include plantain, cassava, potatoes, and beans. The Caja is also the main credit source for these crops.

Crop yields are relatively low but with considerable variation from area to area and by size of farm. Atkinson [4] found a steady decline in income per acre as farm size increases, and attributed this to larger farms having poorer land and producing on a smaller proportion of their total area. Nevertheless, it does suggest that small farms are making good use of their land resources relative to larger units. But this does not mean small farmers are using their resources well. Neither group is making good use of its resources, especially land. With the exception of potatoes, no significant relationships between farm size and yield were found for the crops traditionally grown by small farmers.

Colombia's climate is as diverse as its topography and the two are intimately related. Much of the land area is in jungle, grasslands or forests of varying quality. Large elevation variations are characteristic of the mountainous sections of the country resulting in great differences in rainfall, temperature, and crop adaptability within relatively short distances. The land use patterns and distribution patterns of people on the land are quite complex. However, the small farms are usually found in the mountainous regions where 59 percent of the population lives on 14 percent of the land. A high proportion of the land in these areas is too steep to mechanize which also precludes any significant increase in farm size.

Small as well as large landholdings are common in Colombia as shown in Table 4. In 1960 over 62 percent of the farms were less than 12.1 acres

Table 3. Production and area planted for major agricultural commodities in Colombia (1968-71).

Commodity	Production by year				Area planted by year			
	1968	1969	1970	1971	1968	1969	1970	1971
	(000,000 metric tons)				(000 hectares per year)			
Corn	800	940	740	825	740	855	715	800
Coffee	477	474	507	492	807	810	810	785
Plantain	1,600	1,640	1,681	1,723	230	236	242	248
Rice	786	695	753	770	277	250	233	235
Cotton	101	139	128	117	174	233	257	226
Cassava	900	1,000	1,100	1,150	152	163	175	180
Sugar	671	701	688	740	92	94	95	95
Potatoes	950	850	980	950	95	83	107	95
Sorghum	60	70	130	180	30	35	67	82
Beans	48	38	40	38	69	54	85	78
Barley	85	75	90	110	52	52	61	75
Soybeans	87	100	95	120	47	56	52	66
Bananas	770	793	817	840	58	60	62	63
Wheat	125	80	50	45	105	73	46	42
Cocoa	17	15	17	18	38	39	39	39
Tobacco	42	43	44	43	22	24	23	23
African Oil Palm	118	147	180	225	21	21	21	21

SOURCE: [60]

Table 4 Distribution of land, farms, and income per acre by farm size.

	No. Farms	Percent	No. Acres (000)	Percent	Income per acre (\$)
Less than 1 Ha (2.47 acres)	298,071	24.7	326	0.5	
1 - 2.9 Has (7.2 acres)	308,352	25.5	1,349	2.0	61.03
3 - 4.9 Has (12.1 acres)	150,182	12.4	1,386	2.0	46.66
5 - 9.9 Has (24.5 acres)	169,145	14.0	2,878	4.3	38.42
10 - 49.9 Has (123.3 acres)	201,020	16.6	10,401	15.4	24.15
50 - 99.9 Has (246.8 acres)	39,990	3.3	6,620	9.8	14.87
100 - 499.9 Has (1,234.8 acres)	36,010	3.0	17,265	25.6	11.82
500 - 999.9 Has (2,469.8 acres)	4,141	0.3	6,746	10.0	10.81
1000 - Has. plus (2,470 plus acres)	<u>2,761</u>	<u>0.2</u>	<u>20,555</u>	<u>30.4</u>	<u>5.91</u>
TOTAL	1,209,672	100.0	67,526	100.0	

SOURCE: 1960 Census

In size and accounted for only 4.5 percent of the acreage. Since 1960 there has been only a slight shift from large to medium size farms, and no significant change in the minifundio problem.

## B. Objectives

### 1. General Objectives

Although the Caja has a number of different objectives due to its many activities, this discussion will focus only on those related to agricultural credit. In the recently revised Credit Manual it is stated that the objective of the Caja is to provide credit for the development of agricultural and livestock production, and industrial and mineral production, for those producers who lack sufficient resources for the proposed production plan. It also indicates that the activities financed by the Caja will be limited to those priorities established by the general economic and social plan for the country.

The five major agricultural sector objectives as outlined in Colombia's latest development plan [36] are:

1. To increase productive employment;
2. To increase income and improve its distribution;
3. To raise the productivity of agricultural resources;
4. To increase production in the agricultural sector; and
5. To stimulate exports and substitute for imports where advantageous.

One of the key policies outlined in the plan is to allocate credit in accordance with the development plan, combining it with technical assistance. In general, credit will be directed toward the small and medium-sized farmers.

The credit policy of the Caja Agraria appears to be consistent with the Ministry of Agriculture and National Planning Office policies.<sup>9</sup> As mentioned previously, more resources are being shifted to the small farmers by the Caja and the earlier strict collateral requirements have been lifted. All technical assistance personnel in the Caja have been directed to assist only the small borrowers. Previously, the Caja professionals provided technical assistance only to the medium and large-sized borrowers. For small farmer loans supported with technical assistance, the future value of the activity financed will serve as the guarantee for the loan. It is recognized that adequate technical assistance is the key for this type of development credit and efforts are being made to not only improve the technical knowledge of the Caja personnel but also to coordinate the Caja credit with outside technical assistance largely provided by ICA.

---

<sup>9</sup>A complete discussion of the change in the Caja's credit policy can be found in an article by Jaime Velez Hernandez, Director of Credit Operations [65].

135

All the so-called "regular" funds of the Caja are now available to only small and medium-sized producers. The large farmers will utilize resources available through "special" funds, such as the Agricultural Finance Fund, and through loans from the Inter-American Development Bank (IDB) and the World Bank. The small farmers may also use the externally provided funds if they are able to meet the loan requirements.

Thus, the present Caja credit policies differ significantly from those of only a few years ago. The traditional lending practices requiring credit worthiness of the applicant through land or other collateral is now giving way to new, more flexible policies geared to meet the needs of the small farmers.

Recognizing the difficulty of reaching many small farmers, a Department for Group Credit was established by the Caja in 1971 in an attempt to reach more farmers without greatly increasing administrative costs. The new department is responsible for handling the loan requests from cooperatives, farmers unions, and other farm groups. The establishment of this department is to support the new emphasis on small farmer loans.

Because the shift in national policy has happened only recently, it is too early to judge whether or not the new policies are really being implemented throughout the country. However, preliminary loan data do suggest that considerable shift has taken place towards the small producers. Greater emphasis on credit coupled with technical assistance could well change the production practices of a large number of presently marginal farmers, resulting in increased income levels for that same group.

## 2. Terms of Loan

### (a) Purpose

The Caja Agraria finances many distinct activities in almost every part of the country. It presently recognizes two basic forms of small farmer credit: individual production credit, and group credit.

Individual production loans make up the largest number of loans and the greatest amount of credit extended by the Caja. These loans are usually commodity oriented based upon the credit policy jointly agreed to by the Caja and the Ministry of Agriculture every six months. Almost all loans are for a specific crop or purpose.

Subsistence credit, a special type of individual production credit, is extended to the very marginal farmers who have difficulty meeting even the regular Caja requirements. The Caja recognizes that loan delinquency will be higher for this group but it feels a social obligation to help these farmers thereby reducing the social and political instability in the rural areas. Nevertheless, even the very small borrowers understand that the loan is to be repaid--it is not a handout, nor is it specifically identified as subsistence credit to the farmer. In general, the Caja considers subsistence

loans to be those loans to farmers with total assets under \$500. About 15 percent of the borrowers receive loans under this classification, representing 6 percent of the value of all new loans extended during the year. Although these subsistence loans are considered as production loans by the Caja, they also serve for family consumption expenditures.

Cooperative or other forms of group loans are now being extended concurrent with the greater stress on small farmer loans. Group loans are used to reach more farmers while reducing administrative costs at the same time. However, no loans are made to cooperatives or other associations who then make sub-loans to the individual members of the association and, at present, there are no plans to extend credit in this way. High administrative costs, higher interest costs to the farmer, and poor control are the reasons given by the Caja for not providing this type of group credit.

Small farmers, including renters and share-croppers, are eligible for Caja credit when they satisfy the following general requirements:

(1) The total assets of the farmer (including those of his wife) must be less than about \$15,000 (Col. \$300,000).<sup>10</sup> The value of the land is included in that limit. This is the main criterion for identifying small farmers. The distribution and number of new loans made in 1971 by source of funds and amount of total assets of the borrower can be found in Table 5.

(2) He must have "commercial morality," that is, he must have a reputation of fulfilling business contracts, paying debts, and in general not have a history or reputation of trying to escape agreed-to commitments. He usually must provide at least three references to this effect unless this requirement is waived by the Caja.

(3) He must be physically capable of working his farm.

(4) He must obtain 80 percent or more of his income from agriculture and must dedicate the major part of his time to agriculture. All public employees, businessmen, etc. are therefore excluded.

(5) The loan plan must demonstrate repayment capacity.

Each small borrower is limited to a maximum outstanding balance of \$10,000 for crop loans, and \$7,500 for livestock loans. For beef fattening loans the limit is reduced to \$1,500 and for working animals the maximum allowed is \$1,250.

Special provisions are allowed for those who are classified as small farmers. These include the following:

---

<sup>10</sup>Farmers within the total asset limit but with more than 15 hectares of land cannot qualify for a small farmer loan.

Table 5. Distribution and number of new loans made in 1971, by source of funds and amount of total assets of the borrower<sup>a</sup>

Total Assets (\$)	Regular Funds				Special Funds				Total			
	Number of borrowers	Percent of total	Value (\$ 000)	Percent of total	Number of borrowers	Percent of total	Value (\$ 000)	Percent of total	Number of borrowers	Percent of total	Value (\$ 000)	Percent of total
Through 2,500	202,269	58.4	51,394	34.5	10,911	50.6	5,076	14.1	213,180	58.0	56,469	30.5
2,501 - 5,000	69,539	20.1	21,315	14.3	2,672	12.4	1,555	4.3	72,211	19.6	22,870	12.3
5,001 - 10,000	39,804	11.5	19,655	13.2	1,887	8.8	2,229	6.1	41,691	11.4	21,885	11.8
10,001 - 15,000	15,269	4.4	11,536	7.7	940	4.4	1,972	5.4	16,209	4.4	13,508	7.3
Total Small Farmers	326,881	94.4	103,900	69.7	16,410	76.2	10,832	29.9	343,291	93.4	114,732	61.9
15,001 - 20,000	5,375	1.6	4,844	3.3	579	2.7	1,534	4.2	5,954	1.7	6,378	3.4
20,001 - 25,000	3,312	1.0	3,441	2.3	504	2.3	1,581	4.4	3,816	1.0	5,022	2.7
25,001 - 50,000	6,708	1.9	10,582	7.1	1,456	6.8	5,535	15.3	8,164	2.2	16,117	8.7
50,001 - 75,000	2,204	.6	4,792	3.2	901	4.2	4,439	12.2	3,105	.8	9,231	5.0
75,001 - 85,000	452	.1	1,247	.8	243	1.1	1,259	3.5	695	.2	2,506	1.4
Total Medium farmers	18,051	5.2	24,906	16.7	3,683	17.1	14,348	39.6	21,734	5.9	39,254	21.2
85,001 - 100,000	238	.1	1,266	.8	245	1.1	1,443	4.0	483	.1	2,709	1.5
100,001 - 125,000	190	.1	841	.6	350	1.7	2,504	6.9	540	.1	3,345	1.8
125,001 - 150,000	151	-	835	.6	244	1.1	1,707	4.7	395	.1	2,542	1.4
150,001 - 250,000	309	.1	4,166	2.8	355	1.7	2,818	7.8	664	.2	6,984	3.8
250,001 - 500,000	132	-	4,003	2.7	167	.8	1,721	4.7	299	.1	5,724	3.1
500,000 or more	226	.1	9,055	6.1	71	.3	869	2.4	297	.1	9,925	5.3
Total large farmers	1,246	0.4	20,167	13.6	1,432	6.7	11,062	30.5	2,678	0.7	31,230	16.9
Country Total.....	346,178	100.0	148,973	100.0	21,525	100.0	36,243	100.0	367,703	100.0	185,216	100.0

<sup>a</sup>Exchange rate: Col.\$20.00 = US\$1.00

SOURCE: Caja, Informe de Gerencia, 1971

138

Crop loans - Up to 100 percent of the cost of production can be financed through the Caja. The cost of family or hired labor can be included as part of the cost but the Caja has not generally financed all the family labor used. All crops are eligible providing they are recommended for the zone and are within the list of priority crops to be financed.

Livestock loans - As for crop loans, 100 percent of the investment can be financed. However, as indicated previously, the loan limit is reduced to \$1,500 for beef fattening and \$1,250 for working animals.

Land purchase - Loans are permitted for buying land provided the size of the plot is of sufficient size to adequately support a family. Smaller plots can be financed if they add to an existing plot. No loans are permitted for buying small lots resulting from private land parcelation. The maximum amount permitted for small farmer land purchase is \$10,000.

Land titling - The limit is \$500 per borrower. The payment of lawyer and other fees to legalize the possession or ownership of property is permitted.

Rural housing - Up to \$1,500 can be borrowed by small farmers for home construction if the farmer has resided in the area for two or more years and if the urban population of the town where he lives does not exceed 30,000 inhabitants.

Tax payment - Up to \$500 can be borrowed to pay land taxes if the farmer can demonstrate that he lacks sufficient cash to meet the payment deadline.

Debt redemption - Small farmers are eligible for loans up to \$2,500 to cancel debts if the payment requires selling off some of their assets.

Other activities, such as small-scale industry, contracting technical assistance, and rural youth clubs are also eligible for financing through the small farmer credit program of the Caja.

The Caja has always been strongly oriented towards extending production loans for particular crops or livestock activities. With the recent emphasis on small farmers, the special provisions referred to earlier have been established to meet some of the special needs of the small farmers. The Credit Department considers the portion of the loan used for the payment of family labor as consumption credit. Labor costs make up from 30 to 55 percent of the crop production cost figures prepared by the Caja. No data are available to determine the percentage of small farmer loan funds which actually go into consumption credit in this form but small farmer cost of production guidelines of the Caja suggest 40-60 percent of the labor costs (family or hired) can be covered by a loan.

Crop and livestock loans are by far the most important activities of the Caja as shown in Table 6. At least 94 percent of the value of all new loans extended over the past ten years has gone for these two purposes.

Table 6. Amount of new Caja Agraria loans and percentage of total, by activity and year.<sup>a</sup>

Year	Crops	Livestock	Industry Mining	Other	Total
1961	45.1 (50.3) <sup>b</sup>	43.7 (48.7)	.5 (.6)	.4 (.4)	89.7
1962	40.4 (47.8)	43.3 (51.2)	.5 (.6)	.3 (.4)	84.5
1963	52.4 (46.3)	59.1 (52.3)	1.1 (1.0)	.5 (.4)	113.1
1964	54.5 (51.1)	48.7 (45.8)	1.9 (1.8)	1.4 (1.3)	106.4
1965	47.2 (65.2)	20.5 (28.3)	3.2 (4.4)	1.5 (2.1)	72.4
1966	65.7 (62.6)	34.6 (33.0)	3.6 (3.4)	1.1 (1.0)	105.0
1967	90.0 (64.2)	43.5 (31.1)	4.9 (3.5)	1.7 (1.2)	140.1
1968	106.6 (62.4)	57.2 (33.5)	6.0 (3.6)	.8 (.5)	170.6
1969	142.0 (71.6)	49.5 (25.0)	6.6 (3.3)	.2 (.1)	198.3
1970	133.1 (74.0)	37.7 (21.0)	8.6 (4.8)	.4 (.2)	179.8
1971	142.9 (77.2)	32.3 (17.4)	9.6 (5.2)	.4 (.2)	185.2

<sup>a</sup>Colombia pesos converted to dollars according to exchange rates listed in Table B, the appendix.

<sup>b</sup>Figure in parenthesis indicates percentage of yearly total extended for the activity.

SOURCE: Caja Agraria, [21].

Table 7. Percentage of value of loans outstanding by activity financed for selected years.<sup>a</sup>

Item	Percentage of total value of new loans by year					
	1950	1960	1965	1967	1969	1971
	(percent)					
Corn	.9	1.2	3.3	3.8	4.0	5.5
Potatoes	3.8	1.5	2.0	2.4	2.1	2.8
Vegetables	.3	.4	.7	.3	1.0	.7
Dairy	3.2	3.1	2.8	3.0	3.9	4.2
Other Cattle	44.7	33.3	30.1	26.0	24.8	23.8
Land purchases <sup>b</sup>	1.0	8.4	4.8	5.6	7.3	5.1
Rural housing	.0	5.6	5.4	3.5	4.7	3.8

<sup>a</sup>Loans outstanding calculated for June 30th of the year indicated.

<sup>b</sup>Includes land purchases for crop and livestock production.

SOURCE: Table C, Appendix

Loans for small industry and mining account for only a small part of the Caja lending activities. It can be seen in the same Table that the Caja has steadily moved out of livestock production and into crop production. In the early 1960s the annual value of new loans was distributed almost evenly between crop and livestock production. In 1971 livestock loans accounted for less than 20 percent of all new loans and crop loans made up over 77 percent of the value of new loans extended during that year. It is assumed that the Livestock Bank has expanded its lending to allow for this shift.

In an attempt to identify the Caja lending activities to small farmers, a historical trend of the value of loans outstanding for activities typically related with small farms is presented in Table 7. Since 1950 the Caja has gradually increased the percentage of its loan portfolio in corn and in land purchases. The percentage in cattle loans, excluding dairy, has gradually declined. The other items show no discernable trend. No further data breakdown is available to see if the increases in corn production and land purchases were in fact received by small farmers. The historical trend of Caja lending activities can be seen in more detail in Tables C and D of the Appendix.

No data are available to examine the extent to which farmers have used Caja credit for land titling, tax payments, or debt repayments. However, since these items fall in the "other" classification, the amounts would be insignificant.

#### (b) Period

Little information exists or is available which indicates the time period for small farmer loans. In general, as shown in Table 8, about 41 percent of the total loan portfolio of the Caja has gone into short-term loans and an equal percentage has been used for medium-term loans. The rest, about 18 percent, has gone into long-term loans. The Credit Department estimates that 75 percent of the small farmer loans are short-term and that 25 percent are medium and long-term loans based on a 1969 field sample. Medium-sized farmers are thought to hold about 55 percent in short-term loans and the rest in longer term. The large farmers secure more long-term loans in the Caja and obtain their short-term loans in the private sector.

### C. Organization

#### 1. General Structure

The Caja Agraria is divided into six divisions as shown in Figure 2. Each division operates independently but under the administrative direction of the Director General.

The Credit Division is further divided into the Department of Credit, which handles all individual loans, and the recently formed Department of

441

Table 8. Distribution of Caja portfolio by term<sup>a</sup> 1967 - 1971.

Year	Short Term	Medium Term	Long Term	Total
1967	76.8 (40.3) <sup>b</sup>	82.0 (43.1)	31.6 (16.6)	190.4
1968	91.3 (41.7)	92.6 (42.3)	34.9 (16.0)	218.8
1969	103.2 (41.5)	106.5 (42.8)	39.0 (15.7)	248.7
1970	102.9 (41.9)	101.5 (41.3)	41.3 (16.8)	245.8
1971	109.8 (41.6)	103.0 (39.1)	50.9 (19.3)	263.7

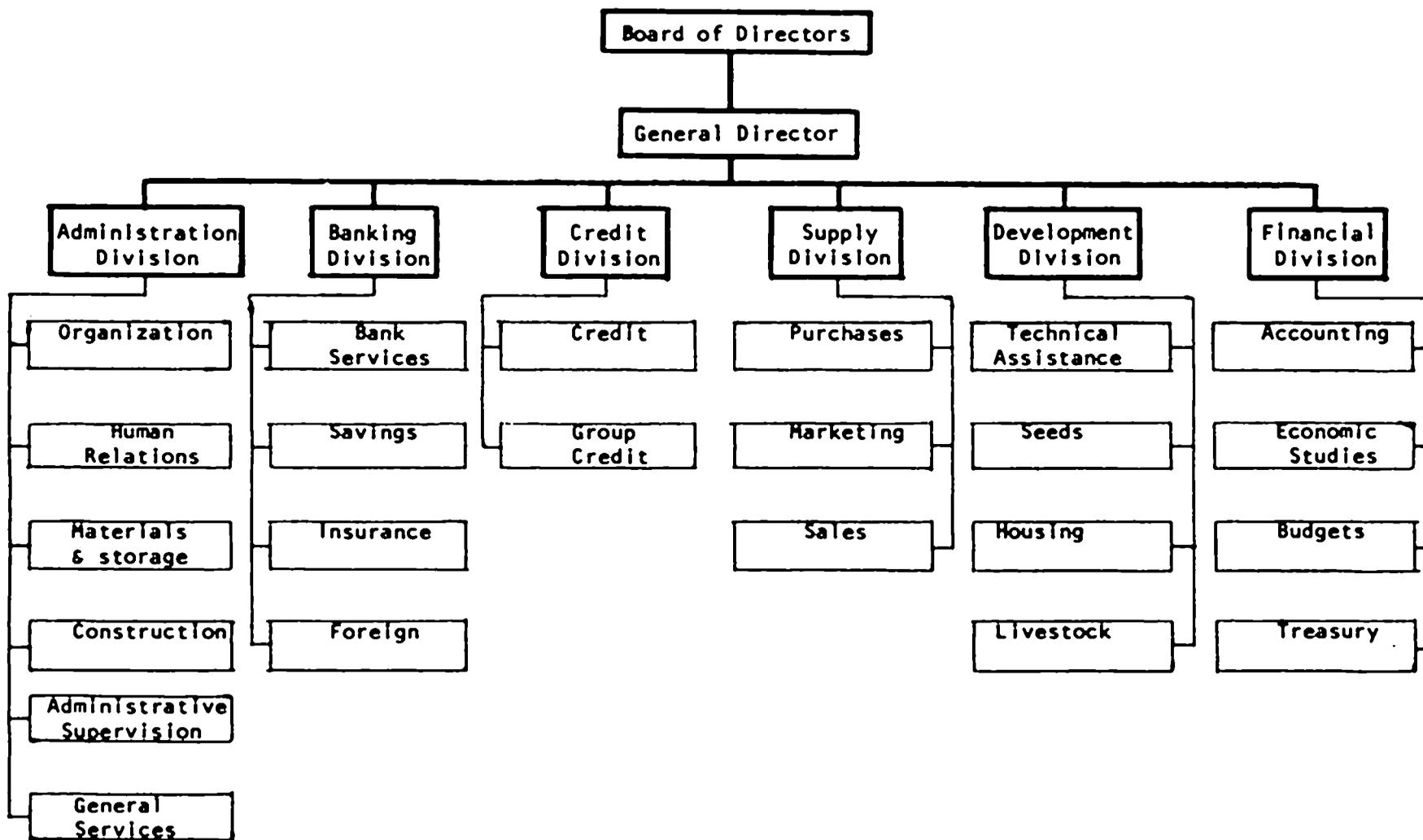
<sup>a</sup>Short term is one year or less; medium term is from one year to six years; and long term is for more than six years.

<sup>b</sup>Percentage of year total.

SOURCE: Banco de la Republica [ 5 ].

142.

Figure 2. Organization structure of the Caja Agraria



-143

Group Credit, which extends loans to cooperatives and other groups. The small farmer credit is an integral part of the credit division and no special administrative provisions exist for its operation.

The Banking Division handles the insurance and savings activities of the Caja. The Caja's Savings Bank (Caja Colombiana de Ahorros) is the largest savings institution in Colombia and in 1971 it listed about \$99 million in savings deposits or 47 percent of the total savings in the country. The data in Table A in the appendix show the historical trends of Caja savings deposits. No data exist on who does the saving but it is a common practice of the Credit Division to encourage each Caja borrower to deposit his loan in savings and withdraw it as needed. It appears that most small farmers follow this practice but it is unknown how significant this amount would be in comparison with total savings. Large farmers do not generally follow this practice. The Banking Division also handles the mandatory life insurance program which accompanies the Caja loans. An additional one percent charge is made for the insurance and the author was informed that a surplus results from this charge.

The Agricultural Supply Division provides inputs and supplies to the Caja borrowers or to other farmers through 13 distribution centers and 435 farm supply stores. The local farm supply stores administratively are separate from the credit activities but are usually located in the same building where farmers obtain Caja credit. Again, no data are available to relate the purchase of inputs in the store with the extension of credit. The Caja is presently discussing the policy of requiring all borrowers to purchase their inputs and supplies through the store unless the item is out of stock.

The supply division was established in 1952 and by 1964 retail sales totaled \$14.7 million. In 1971 sales totaled \$24.9 million, of which about half was in fertilizer sales. A breakdown of fertilizer sales by nutrient can be found in Table E, the appendix. In the same year, pesticide sales accounted for eight percent and machinery sales for 16 percent of total Caja sales. The Caja Agraria fertilizer plants produce about 20 percent of the country's total output. Approximately 36 percent of all retail fertilizer sales in 1971 were handled by the Caja farm supply stores.

Fertilizer use in Colombia varies considerably by crop and by area. The most important consumer of fertilizers in terms of total area fertilized is potatoes--a crop produced mostly by small holders--with more than 90 percent of the producing area fertilized. Cassava, beans, and corn--traditional small farmer food crops--receive very little fertilizer although they cover a vast land area. Therefore, one can tentatively conclude that many of the small farmers producing potatoes do buy their fertilizer through the Caja.

The Caja is attempting to better coordinate the activities of the Credit and Supply Divisions but much remains to be done. At the beginning of the 1972 cropping season (September), numerous complaints were heard concerning the unavailability of fertilizer in the Caja farm supply stores.

144,

The Development Division's (Fomento Agrícola) most important function is to manage Cresemillas, an enterprise for multiplying, processing, and distributing Improved seed stock. This enterprise is the main distributor of seed for wheat, corn, beans, and potatoes in the country. Cresemillas is also the price leader on the seeds which it handles. Sales data of seed for potatoes, wheat and corn are presented in Table F of the appendix. Fomento also provides technical assistance to some borrowers but it is not geared to assist a very large proportion of the total. In fact, the Development Division operates independently from the Credit Division so the limited technical assistance capability of that division is often spread so thinly that little direct technical help accompanies small farmer loans.

Twenty-two regional bank offices exist, one in the capital city of each of the major departments. Each of these offices in turn, is responsible for all of the local Caja offices within its jurisdiction. The number of field offices grows each year (See Table A, Appendix) and there are now 680 offices.<sup>10</sup> Since 1971, most of the authority for making loan decisions has passed from the central office down to the regional and local offices. The central office, in coordination with the Ministry of Agriculture and the National Planning Office, assigns crop and agency loan limits each six months. The local office is relatively free to operate within these established limits. The agencies are classified into three groups with local authority defined by the classification. The local or regional offices may extend, renew, or refinance loans as long as the particular office does not exceed its established limit as shown in Table 9. Most local agencies fall within the Group 3 classification.

Table 9. Loan approval limits by type of borrower and by organizational level.

Category <sup>a</sup>	Maximum size of loan authorized		Credit Board
	New Clients	Experienced Clients	
		-dollars-	
Regional	7,500	12,500	To maximum
Local - Group 1	5,000	7,500	25,000
Local - Group 2	3,000	5,000	10,000
Local - Group 3	1,500	3,000	6,000

<sup>a</sup>The majority of the local agencies are classified in group three.

<sup>b</sup>Generally those who have had two or more successful loans.

SOURCE: Caja Credit Manual [27].

<sup>10</sup>This includes the regional offices as well as some 70 offices with only savings facilities. There are approximately 600 field offices which handle credit activities.

A "credit board" or advisory group of four local citizens is formed at the regional and local levels to advise the respective directors on credit matters. Larger loans (above the limit imposed on the director) can be approved at each of the levels if the loan is submitted to the credit board, as shown in Table 9.

## 2. Local Structure

The typical Caja agency includes a director, secretary, accountant, loan inspector, and one or two clerks and messengers. For agencies that have been operating for many years, an additional accountant and loan inspector (or more) will be added to the personnel. Perhaps a tenth of the 680 agencies are large enough to employ from 10 to 15 people. The inspectors are responsible for visiting potential borrowers to verify information and for checking on how farmers are using their loans. Most agencies, however, do not have enough inspectors to adequately carry out this supervision.

The director or his appointed representative has authority to approve loan requests up to the authorized limits mentioned previously. A high proportion of the loan requests are handled at this level.

### D. Beneficiaries

#### 1. Selection criteria

Farmers are normally classified into two groups depending upon their experience with Caja credit. The first group includes all farmers applying for their first Caja loan. A lower approval limit for the field offices is set for this group as shown in Table 9. The second group includes those farmers who have satisfactorily repaid two short-term loans or who have met all obligations on medium or long-term loans for a year. Once the farmer is classified as experienced (experimentado) the offices are able to grant larger loans without consulting at a higher level. Loans are also granted with less delay once a farmer is classified in the second group.

New clients, especially small farmers, have found it difficult to meet all of the loan guarantees, personal references, and other requirements demanded by the Caja in the past. Soles [56] is especially critical of the past ineffectiveness of the Caja in reaching the small farmers. The Caja appears to be trying to overcome these constraints on small farmer credit.

In the ICA-Caja Agraria rural development projects the extension agents recommend farmers to the Caja on the basis of their field contacts. The Caja also prepares its own list of potential borrowers so conflict sometimes occurs. Efforts are now being made to have the ICA and Caja technicians jointly prepare a list of potential small borrowers to ensure better coordination of credit and technical assistance.

The most important selection criteria for the Caja are the borrower's honesty and past business reputation. If a farmer is known not to comply

146

with business or other agreements, then he is considered ineligible for Caja credit. Also, all applicants must submit a net worth statement dated within one year of the loan request. If the loan is for more than \$5,000, the statement must be for the previous month. The net worth statement is used to judge the applicant's repayment capacity and the loan size is determined on that basis. The recent small farmer credit regulations allow loans to finance up to 100 percent of the cost of producing the crop, regardless of the farmer's net worth. This, of course, has opened up credit to many farmers who were previously excluded because their net worth was inadequate.

For a time (beginning in 1963), no net worth statement was required of new clients and a visit to the farm took place after the loan was granted. Since August of 1972, the Caja requires that all new clients be visited before their loans are approved to verify the accuracy of the net worth statement submitted by the applicant.

A further change in the regulations prohibits the use of a co-signer for small farmer loans. This was a common practice of the Caja in the past where the landowner's signature (or the signature of others) served as a guarantee for the loan. The landowners were reluctant to sign for their renters or share-croppers since those loans were subtracted from the total amount the landowners were allowed to borrow. Therefore, the renters and share-croppers often found it difficult to find a loan co-signer.

The Caja defines all loans for farmers with \$500 total assets or less as subsistence credit. These are considered as higher risk loans but repayment is required, nevertheless. The subsistence loans are meant to help the very poor maintain themselves during the crop season; but little production response is expected.

Poor credit performers are judged primarily on repayment. Those who do not repay are ineligible for further loans. For cases where there is clear evidence of crop or other loss completely beyond the control of the producer, loan renewal or refinancing is permitted. No measure of credit productivity is used to separate good performers from poor performers.

## 2. Graduation Policy

No attempt is made by the Caja Agraria to shift experienced borrowers to other sources of credit. In fact, the commercial banks do not finance small farmers and their regulations and orientation would have to be modified to accept any Caja small borrowers.

The Caja presently accepts "graduates" from the INCORA supervised credit program in areas not located directly under land reform projects but which have been included under the INCORA supervised credit activities.

## 3. Number and Types

Since 1969 the Caja has classified its borrowers into three groups--small, medium, and large--according to the value of their total assets.

Small borrowers are those with assets of \$15,000 or less; medium borrowers have assets from \$15,001 through \$85,000; and large borrowers are those with more than \$85,000 in total assets.<sup>11</sup> A breakdown of the number of credit users and of the value of loans outstanding by group since 1969 is shown in Tables 5, 10, and 11. The percentage of the total number of users classified as small borrowers declined slightly to 89.4 percent in 1971, while the percentage of the total classified as large farmers increased (Table 10). It should be noted, however, that the "user" classification may be misleading since it could include the same individual a number of times if he receives more than one loan from distinct funds within the Caja. Therefore, the number of users should not be taken to mean the number of individual borrowers.

A better measure of program emphasis is the actual amount of credit which reaches each group. If we analyze the percent of the total value of loans outstanding going to each group we find that the small farmers gained (from 53.6 percent in 1969 to 57.3 percent in 1971) at the expense of the medium-sized group (Table 11). The large borrowers also experienced a slight increase over this period.

On the basis of these data one could conclude that the Caja is shifting more towards the smaller farmers, albeit slowly. However, the picture becomes confused when the percentage of new loans being extended to small borrowers is studied (rather than percentage of loans outstanding). From 1970 to 1971 there was a significant decline in the percent of the total value of new loans going to the smaller farmer, as shown in Table 12. This decline also held for each of the four sub-groups of small farmers but especially for those with assets of \$2,501-\$10,000. In 1971 only 62 percent of the value of new loans extended during the year ended up in the hands of the small farmers as compared to 72 percent in 1970. Again, the larger group showed a significant increase. Therefore, only time will tell if there is indeed a shift by the Caja to smaller farmers. The data in Table 12 could reflect a trend away from small farmers or may just reflect a unique year due to the short time period covered. Nevertheless, it does lend some credence to those who question that the Caja has really shifted its resources to the small farmers. The author can only conclude it is too early to tell, given the available data.

#### 4. Other Sources of Credit

No information is available concerning the prior level of indebtedness of Caja borrowers nor if they continue to use other sources of credit once they receive Caja credit. However, a limited, unpublished Caja study of loan delinquency in selected agencies in 1971 did show that 16 percent of the delinquent Caja borrowers also had delinquent loans with other banks or with private money lenders. This obviously suggests that other credit sources were used but it was not determined whether the other debts occurred before or after the Caja loans were made.

---

<sup>11</sup>Using the 1971 exchange rate of 20 pesos to the dollar.

Table 10. Number of credit users and percentage of total by size of borrower, 1969-1971<sup>a</sup>

Size of Borrower	1969 <sup>b</sup>		1970 <sup>b</sup>		1971 <sup>c</sup>	
	Number of Users	Percent of Total	Number of Users	Percent of Total	Number of Users	Percent of Total
Small	312,402	91.1	349,537	91.1	384,744	89.4
Medium	27,612	8.0	30,754	8.0	38,777	9.0
Large	<u>3,029</u>	<u>.9</u>	<u>3,365</u>	<u>.9</u>	<u>6,736</u>	<u>1.6</u>
Total	343,043	100.0	383,656	100.0	430,255	100.0

<sup>a</sup> It is highly unlikely that the number of "users" is equivalent to the number of individual borrowers.

<sup>b</sup> Represents data from 95 percent of the offices

<sup>c</sup> As of November 9, 1971. The other years are based on loans outstanding on December 31 of the indicated year.

SOURCE: Caja data, [14,15].

Table 11. Value and percentage of loans outstanding by size of borrower, 1969-1971.

Size of Borrower	1969 <sup>a</sup>		1970 <sup>b</sup>		1971 <sup>c</sup>	
	Value	Percent of Total	Value	Percent of Total	Value	Percent of Total
			(000)		(000)	
Small	118,583	53.6	138,632	54.7	149,485	57.3
Medium	65,961	29.9	74,213	29.3	66,166	25.4
Large	<u>36,395</u>	<u>16.5</u>	<u>40,404</u>	<u>16.0</u>	<u>45,132</u>	<u>17.3</u>
Total	220,939	100.0	253,249	100.0	260,683	100.0

<sup>a</sup> Includes data on 88.8 percent of total portfolio.

<sup>b</sup> Includes data on 97.9 percent of the portfolio.

<sup>c</sup> As of November 9, 1971. The figures for the other two years are as December 31 of the year indicated.

SOURCE: Unpublished Caja data, [14,15].

149'

Table 12. Percentage of credit users and of value of new loans made by the Caja by size of borrower, 1970-1971.

Borrower Size	1970 <sup>a</sup>		1971	
	Percent of Users	Percent of Value	Percent of Users	Percent of Value
<u>Small</u>				
Through \$2,500	61.6	32.0	58.0	30.5
2,501 - 5,000	18.4	17.0	19.6	12.3
5,001 - 10,000	10.8	16.1	11.4	11.8
10,001 - 15,000	<u>3.5</u>	<u>7.4</u>	<u>4.4</u>	<u>7.3</u>
Sub-Total	94.3	72.5	93.4	61.9
<u>Medium</u>	5.5	25.0	5.9	21.2
<u>Large</u>	<u>0.2</u>	<u>2.5</u>	<u>0.7</u>	<u>16.9</u>
Total	100.0	100.0	100.0	100.0

<sup>a</sup>Based on loans made the last half of 1970.

SOURCE: Caja data.

158.

The Coffee Bank is readily accessible to small farmers and is the main source of credit for the coffee producing areas. No data were gathered for this paper to show what percentage of its portfolio goes to small farmers but the greatest proportion of its resources goes to the larger producers.

A special program of INCORA and the Livestock Bank does provide loans for very small livestock producers. The maximum loan size permitted in 1968 was about \$4,000 and the average number of cattle financed per borrower runs about 25 head. This program is not country-wide, however, so not all small farmers have access to this source of credit. The separate INCORA Supervised Credit Program works only with small farmers and is discussed in a separate country paper.

A few small farmers with five hectares or more receive credit through the Agricultural Finance Fund which is available to the Caja and to all commercial banks. The amount of credit reaching small farmers through this fund is insignificant, however.

## 5. Profile of Farm Community

Over 59 percent of the population of Colombia lives in the mountainous region which comprises only 14 percent of the land area. The small farmers are concentrated in the Departments of Boyaca, Cundinamarca and Marino which accounted for 57 percent of the farm units in Colombia with less than five hectares in 1969, as shown in Table 13. For those same Departments a high percentage of the total number of farms within the Department were less than five hectares in size. For example, almost 90 percent of all farms in Boyaca are less than five hectares in size. The same Table gives a breakdown of the Caja loans extended in the same Departments. As can be seen, the percentage of loans made in the Department to farmers with about five hectares of land is similar to the distribution of farms in the area. In Boyaca, for example, 88.8 percent of all farms were less than five hectares in size and 81.3 percent of all loans made by the Caja in the 12 Department were to farmers with five to seven hectares or less of land. The last column shows the percentage of the value of loans made in the Department which went to farmers with total assets of \$5,000 or less.

The other Departments in Colombia are more heterogeneous in terms of farm size; that is, the small farms are interspersed with larger, more progressive farms. The Cauca Valley, the Magdalena Valley and the areas near the Caribbean Sea would fall within this general classification.

---

<sup>12</sup> Although the Caja is loaning in accordance with the existing land distribution patterns, directing an even greater portion of the loans to small farmers could result in a significant increase in capital formation on small farms thereby enhancing the prospects for a future reallocation of the land resources to complement the agrarian reform activities in the country.

Table 13. Percentage of farms with less than five hectares as compared with the percentage of Caja loans to similar farms, by Department, 1969.

Department	Farms with less than five ha. as percent		Caja loans to small farmers percent of Department total <sup>a</sup>	
	of country total	of Department total	Number	Value <sup>b</sup>
	(percent)			
Antioquia	10.9	59.7	75.8	30.7
Boyaca	27.2	88.8	81.3	52.1
Caldas	3.9	65.0	75.3	31.8
Cauca	6.1	72.1	87.8	52.4
Cundinamarca	17.6	74.2	68.5	18.2
Narino	12.3	87.9	81.6	52.4
Santander	n.a.	62.0	77.4	37.9

<sup>a</sup>Includes only loans to farmers with \$5,000 total assets or less which is estimated to be equivalent to about five-seven hectares of land.

<sup>b</sup>In terms of loans outstanding at the end of the year.

SOURCES: Caja data and DANE [35].

152-

No data are available on the percentage of qualified farmers who actually receive Caja credit. But in 1966 the Caja estimated that 35 percent of the loan applications were rejected [43]. In that same study it was estimated that only 27 percent of the total number of farmers in Colombia received institutional credit.

## E. Lending Policies and Procedures

### 1. Portfolio

General data on the activities financed since 1950 are shown in Tables C and D of the appendix and these data are summarized in Table 7. Crops are now being stressed over livestock production. Further data on loan purposes according to size of farm or size of loan were not available at the time of the study. A summary of the portfolio by size of borrower also has been discussed in a previous section (Tables 10 and 11).

Loan size varies from only a few dollars to thousands of dollars as shown in Table 14. In 1967, 94 percent of the new loans were for \$1,358 or less but these same loans accounted for less than one half of the total value of loans made during the year. Data were not published for later years but Soles [56] has compared the 1967 data with earlier years to determine if there was any particular trend in loan size. He found a general trend away from the smaller loans during the period 1961 to 1967.

As one would expect, average loan size increases as farms become larger. A detailed analysis of the data, however, shows that the loan size does not increase as fast as the increase in value of total assets (Table 15). In other words, less credit is extended per dollar of asset as farms become larger. Keep in mind that the 1971 data in Table 15 might be misleading, as noted in the Table footnote. Nevertheless, we do know that the average loan size for all of the small farmer groups increased between 1969 and 1970. Because data used in 1971 are based on different figures, no definite conclusion can be made for the change that year, although it appears the average loan size declined.

It is very likely that some farmers have more than one loan so the Caja data might be misleading because of that fact. The author is unable to judge how serious that factor might be on the data presented in this report.

A Caja study in 1968 found that borrowers had received credit from the Caja an average of 13 years [20]. Over 33 percent of the borrowers had been in the program for more than 16 years. This means there are many repeat clients and few new ones.<sup>13</sup> The median fell in the range of 6-10 years.

---

<sup>13</sup>Only 17.5 percent had been with the Caja from one to five years which would lead one to conclude that less than five percent are new clients in any one year.

Table 14. Number and Value of new loans in the Caja by size of loan for 1967.

Loan Size In dollars <sup>a</sup>	Loans			Value of Loans		
	Number	Percent	Accumulated percentage	Value (\$000,000)	Percent	Accumulated percentage
Up to 67	54,332	17.7	17.7	2.92	2.0	2.0
68 - 340	183,174	59.7	77.4	34.00	23.2	25.2
341 - 670	35,171	11.5	88.9	18.47	12.6	37.8
671 - 1,358	16,733	5.5	94.4	17.79	12.1	49.9
1,359 - 2,037	6,268	2.0	96.4	16.77	11.4	61.3
2,038 - 2,715	2,987	0.9	97.3	7.20	4.9	66.2
2,716 - 3,394	2,135	0.9	98.2	6.92	4.7	80.9
3,395 - 6,789	3,956	1.3	99.5	18.13	12.3	83.2
6,790 -10,183	626	0.2	99.7	4.28	2.9	86.1
10,184 -or more	952	0.3	100.0	20.36	13.9	100.0
	<u>306,334</u>	<u>100.0</u>		<u>146.84</u>	<u>100.0</u>	

<sup>a</sup>Converted at 14.73 pesos to the dollar.

SOURCE: Caja, Informe de Gerencia, 1967.

154

Table 15. Average loan size by size of borrower, 1969-1971.

Borrower Size <sup>a</sup>	Average loan size <sup>b</sup>		
	1969	1970	1971
	(dollars)		
<u>Small</u>			
Through \$2,500	225	243	264
2,501 - 5,000	472	497	316
5,001 - 10,000	766	822	525
10,001 - 15,000	1,250	1,245	833
Average	380	395	334
<u>Medium</u>	2,390	2,413	1,806
<u>Large</u>	12,016	12,008	11,662

<sup>a</sup>Value of total assets using the 1971 exchange rate.

<sup>b</sup>The 1969-70 data are for loans outstanding at the end of the year. The 1971 data are for new loans made during the year. Therefore, the data are not entirely equivalent which may explain the decrease in average size in 1971

SOURCE: Unpublished Caja data and [21].

There is no limit on the number of loans a farmer can obtain providing he meets the loan size limitation established for the activity in question. Limitations exist on the amount which can be loaned per acre, per head, and in total for any one borrower for given activities. No more than the following amounts can be loaned (including large as well as small farmers): \$10,000 for agriculture; \$7,500 for livestock operations; and \$7,500 for small industry. Special maximum restrictions hold for dairy cows (\$1,500) and work animals (\$1,250). Large farmers can borrow up to \$50,000 for the purchase of machinery or other inputs sold by the Caja stores or for reforestation or irrigation projects.

## 2. Interest Rates

For at least the past ten years these interest rates were used:

	<u>Short term</u>	<u>Medium term</u>	<u>Long term</u>
Loans through 5,000 pesos	8%	10%	12%
5,001 pesos or more	9%	11%	12%

In 1971 these rates were raised as indicated:

	<u>Short term</u>	<u>Medium term</u>	<u>Long term</u>
Small borrowers	10%	11%	12%
Medium borrowers	12%	13%	14%
Large borrowers	13%	14%	15%

An additional 50 percent of the existing rate is added to the charge for delinquent loans. All interest is discounted from the loan at the time granted so the true interest charges are slightly higher than those indicated. An additional one percent charge is made on all loans to cover mandatory insurance on the life of the borrower for the amount of the loan.

The existing Caja interest rates for small borrowers are modified for some types of investments. These include:

-Fruit production:	12%	-Dairy and sheep production:	
-Reforestation:		Short or medium term	12%
First 10 years	7%	Long term	13%
10th to 12th year	9%	-Beef Cattle:	
12th year and after	12%	Caja	14%
-Machinery:	14%	World Bank	12%

156

-Property tax payment:	12%	-Land purchase:	13%
-Refinance debts:	13%	-Housing: with technical	
-Small industry:	12%	assistance, 6% until	
-Group credit:	12%	built, then 12%; with-	
		out TA, 10% for loans	
		of 5000 pesos or less,	
		12% if more than 5000	
		pesos.	

For those few small farmers who obtain credit through the Agricultural Finance Fund, the interest rate is 12 percent.

For comparison, the INCORA supervised credit and INCORA-Livestock Bank program charge an interest rate of 8 percent. The Caja, then, is now charging higher rates for credit than INCORA or than it has in the past. However, as of June 1971, about 51 percent of the Caja portfolio (80 percent of which was devoted to crops) was earning from 10-11 percent annual interest and the remaining portion was earning 8-9 percent reflecting the fact that many loans extended under the previous lower interest rate schedule were still outstanding.

The twenty-year average annual inflation rate for Colombia is about 10 percent. This means the small borrowers are now paying a real interest charge of 0-4 percent annually.

### 3. Collateral

The collateral requirements set by the Caja in the past have seriously limited small farmer participation. Some of these requirements still hold but efforts are being made to reduce the traditional collateral requirements in favor of more flexible procedures to meet the needs of the small farmers.

An analysis of loan to asset ratios for small borrowers does suggest that the Caja is becoming more liberal in terms of the amount loaned per dollar of asset. In Table 16, loan to asset ratios (the loan as a percentage of total assets) are presented for varying amounts of assets per borrower for the past three years. These ratios increased from 1969 to 1970 but declined in 1971. Unfortunately, the 1971 ratios are based on the value of new loans made during the year while the ratios for the other two years are based on the value of loans outstanding as of the end of the year in question. Therefore, we cannot definitely conclude there was a decline in loan to asset ratios in 1971. In addition, it is important to mention another factor which might seriously affect the conclusions which can be drawn from Table 16. A 1968 study by the Caja found that borrowers tended to underestimate the value of their assets [20]. If such a practice is widely practiced by the larger farmers, this could explain the higher ratios for the large group as compared with the medium or small borrower groups. Further research is required to determine if in fact the Caja lends more money per dollar of asset to the larger farmers as shown in the Table.

157

Table 16. Loan to asset ratios by size of borrower, 1969-1971.

Borrower Size <sup>a</sup>	Loan to asset ratio <sup>b</sup>		
	1969	1970	1971 <sup>c</sup>
	(percent)		
<u>Small</u>			
Through \$2,500	15.6	17.9	21.1
2,501 - 5,000	10.9	12.2	8.4
5,001 - 10,000	8.8	10.1	6.9
10,001- 15,000	8.6	9.2	6.6
average	4.4	4.8	4.4
<u>Medium</u>	4.1	4.4	3.6
<u>Large</u>	6.9	7.3	7.7

<sup>a</sup>Value of total assets using the 1971 exchange rate.

<sup>b</sup>Figures indicate the average amount loaned as a percent of total assets (all in current pesos), using the mid-point of each borrower size as an indicator of the average amount of assets for that range.

<sup>c</sup>Based on values of all new loans extended. The 1969-1970 data are based on values of loans outstanding at the end of the year.

SOURCE: Unpublished Caja data.

15a

The Caja customarily uses four different loan guarantees: (1) personal signature of the borrower, (2) co-signature of a responsible person with collateral, (3) chattel mortgages, and (4) real estate mortgages. The use of these different guarantees by type of borrower is shown in Table 17. As of November 1971, over one half (50.9 percent) of all borrowers had received loans only through the guarantee of their signature. This type of guarantee included 27.8 percent of the value of all loans outstanding at that time. Chattel mortgages (primarily existing property) were the next most utilized loan guarantee in terms of the number of borrowers. However, this method accounted for the largest portion of the value of loans (33.9 percent of the total).

A more detailed breakdown of loan guarantees for just the small borrowers is presented in Table 18. As of November 9, 1971, over 89 percent of all borrowers were classified in the small farmer group which represented 57.3 percent of the value of loans outstanding (columns 2 and 5, respectively). Small farmer loans guaranteed by signature represented 47.8 percent of all loans. This same guarantee was used for 53.4 percent of all small farmer loans.

In terms of the value of outstanding loans, the use of personal signature still was the most important guarantee used by small farmers through 1971 (39.5 percent). The second most important guarantee used was chattel mortgages. However, the use of land mortgages was almost as important as chattel mortgages in terms of the amount of credit guaranteed by this method (24.3 percent versus 27.4 percent). Almost one-fourth of the value of small farmer loans was covered by some type of land collateral. Considering the small average loan size for this group, it is questionable whether the expense of obtaining land collateral is justified from either the Caja's or farmer's point of view.

Collateral requirements for small borrowers have been modified recently as outlined in the Credit Manual. The use of a co-signature for small farmers is no longer permitted although this has commonly been used as a guarantee as shown in Table 18. Personal signature can be used only for loans of six years duration or less. Longer-term loans must still have additional collateral, either through chattel mortgages on existing property or on the expected product. Long-term loans for permanent crops must be guaranteed by a land mortgage although the financing for the first six years of production can be guaranteed using other collateral. It is expected that during the initial period the loan will be covered through the addition of a land mortgage.

#### 4. Other Subsidy

No direct subsidies to the borrowers are provided by the Caja other than through reduced interest rates. Some subsidy might exist in the provision of inputs to the farmers but insufficient data are available to measure this component of the total program. The Caja is a price leader for fertilizer and selected seeds since it is one of the largest distributors of these inputs. Even so, it would appear little subsidy exists for the

Table 17. Distribution, number of borrowers, and value of outstanding loans by type of guarantee and size of borrower, November 9, 1971.

Guarantee and size of borrower <sup>a</sup>	Number of borrowers	Percent of total	Total value of loans (\$000)	Percent of total value
<b>By Signature</b>				
Small Farmer	205,463	47.8	59,020	22.7
Medium	11,427	2.7	10,754	4.1
Large	<u>2,074</u>	<u>0.4</u>	<u>2,702</u>	<u>1.0</u>
Total	218,964	50.9	72,476	27.8
<b>Co-Signed</b>				
Small	31,531	7.3	13,088	5.0
Medium	2,803	.7	4,358	1.7
Large	<u>775</u>	<u>.2</u>	<u>3,986</u>	<u>1.5</u>
Total	35,109	8.2	21,432	8.2
<b>Chattel</b>				
Small	105,360	24.5	40,935	15.7
Medium	13,491	3.1	25,001	9.6
Large	<u>2,095</u>	<u>.5</u>	<u>22,485</u>	<u>8.6</u>
Total	120,946	28.1	88,421	33.9
<b>Mortgage</b>				
Small	42,390	9.8	36,343	14.0
Medium	11,056	2.6	26,053	10.0
Large	<u>1,790</u>	<u>.4</u>	<u>15,958</u>	<u>6.1</u>
Total	55,236	12.8	78,354	30.1
Country Total	430,255	100.0	260,683	100.0

<sup>a</sup>Size of borrower is by total assets: Small, less than \$15,000; medium up through \$85,000; and, large, more than \$85,000.

SOURCE: Unpublished Caja data.

Table 18. The distribution of Caja small farmer loans outstanding, by type of guarantee, November 9, 1971.

Type of guarantee	Number and value of loans outstanding					
	Number of borrowers	Percent <sup>a</sup>	Percent <sup>b</sup>	Value (\$ 000)	Percent <sup>a</sup>	Percent <sup>b</sup>
By Signature	205,463	47.8	53.4	59,020	22.6	39.5
Co-signer	31,531	7.3	8.2	13,088	5.0	8.8
Chattel	105,360	24.5	27.3	40,935	15.7	27.4
Mortgage (land)	42,390	9.8	11.1	36,343	14.0	24.3
	<u>384,744</u>	<u>89.4</u>	<u>100.0</u>	<u>149,386</u>	<u>57.3</u>	<u>100.0</u>
Bank Total	430,255	100.0		260,683	100.0	

<sup>a</sup>Small farmers as a percentage of total Bank portfolio.

<sup>b</sup>As a percentage of the small farmer portfolio of the Bank

SOURCE: Caja, Subgerencia de Credito.

161

borrowers through the sale of Caja inputs. The Superintendency of Price Regulation, a national agency with power to regulate the prices of agricultural products and inputs, does fix prices on selected inputs like pesticides, feed concentrates, and machinery repair parts.

## 5. Appraisal Techniques

For new small farmer clients a special loan request form is filled out which includes the name of the applicant, the purpose of the loan, and the type of guarantee which will be used. An abbreviated net worth statement or balance sheet is included in the request. In addition, a land title, rental contract or other proof of right to use the land must be presented. Two personal or commercial references also are required. If the rental contract is verbal additional data about the owner are required.

Upon receipt of the loan request, a credit inspector visits the farm to ascertain the validity of the balance sheet, to evaluate the purpose of the loan, and to recommend the loan terms. Upon recommendation of the inspector, the director of the agency officially approves the loan and a loan contract is prepared. For loans of over 50,000 pesos (about \$2,400), proof of income tax filing for the previous year must be submitted.

For old clients (those with two or more cancelled loans), no farm visits are made before loan approval. A farm visit is made after the loan is granted to the farmer.

Attempts are made to visit all borrowers at least once during the loan period to see that the credit is being used for the specified purpose, but this often is not accomplished due to the limited number of field personnel.

Where chattel or real estate mortgages are to be used as loan collateral, a separate form must be completed by the field inspector. This form includes more detail about the borrower and his operation: location of farm, type of tenancy, general conditions of the farm, soil characteristics, availability of water, a complete balance sheet, and a detailed description of the planned investments.

## F. Collection

### 1. Repayment Record

Few historical data are available on repayment rates by Caja borrowers. It is known, however, that the Caja experienced more loan defaults from 1969 to 1971 as compared with earlier years. For example,

1/62

at the end of 1967, the total value of loans outstanding was \$190.5 million. Of this, \$7.0 million or 3.7 percent was considered in default or uncollectable.<sup>14</sup> In 1971, the total value of loans outstanding was \$263.6 million and \$15.7 million or 5.9 percent was considered in default by the Caja.

A more detailed breakdown of delinquency<sup>15</sup> by zone and Department is presented in Table 19. Two points stand out from this Table: (1) the delinquency rates have been increasing each year since 1968, and (2) the Caribbean area has considerably higher delinquency compared with the mountainous area.

It can also be seen that the delinquency rates in the Departments with a high concentration of small farms (and presumably with small farmer Caja loans) are somewhat below the area or national average.

In the following Table (Table 20) the percentage of borrowers and of value of loans which were delinquent are tabulated by borrower size and Department. Using total country data, a lower percentage of the small borrower group is delinquent (16.1 percent) as compared with the medium and larger borrower groups (17.5 and 31.9 percent, respectively). At the same time, 17.6 percent of the outstanding loans to small farmers were overdue as compared with 18.7 and 17.5 percent, respectively, for the other two groups.

In most of the Departments this same relationship holds. For example, 16 of the 24 Departments show a lower percentage delinquency in the small farmer group as compared with the other two groups. Unfortunately only 1971 data are classified in this manner and we are unable to see any historical trends by group. In terms of loan values, 13 Departments show a lower delinquency rate for the small farmer group. These more detailed data are presented in Tables G and H of the appendix. On the basis of these data, albeit for only one year, the tentative conclusion is that the small farmers are no more delinquent than the larger farmers and often are less delinquent.

---

<sup>14</sup>The Caja considers loans due for two or more years as 'defaulted' and unlikely to be collected in the future. "Delinquency" is a more general measure of all unpaid loans.

<sup>15</sup>The delinquency rates presented in this section are only indicators of the true rates. There are two reasons for this: (1) the total value of all medium and long-term loans enters the unpaid statistics once the interest or one payment is overdue--only part of the loan may actually be overdue. For this reason, the Caja suggests the true rate is 35 percent less than that indicated. For example, a delinquency rate of 18 percent would in fact be around 11.7 percent where only the unpaid portion of medium and long-term loans is included. (2) On the other hand, the amounts unpaid and due are compared with the total portfolio which includes many loans not yet due. This tends to bias the delinquency estimate in the other direction or downward. Therefore, the delinquency rates are only approximations of the real rates.

Table 19. Value of due and unpaid loans as a percent of value of outstanding loans by Department, 1968-1971.

Department	Ratio of value of due loans to value of outstanding loans <sup>a</sup>			
	1968	1969	1970	1971
	(percent)			
<u>Caribbean Zone</u>				
Atlantico	12.0	14.5	26.3	44.2
Bolivar	17.6	21.1	33.0	38.7
Cesar	16.4	17.1	30.4	39.5
Cordoba	15.3	20.9	27.2	32.3
Guajira	19.2	29.0	34.8	47.7
Magdalena	17.8	26.7	30.5	38.8
Sucre	13.5	20.0	25.4	37.8
San Andres	12.5	19.6	19.2	38.5
Total	16.0	20.4	29.3	39.2
<u>Andean Zone</u>				
Antioquia	6.9	8.2	9.7	11.6
Boyaca <sup>b</sup>	5.8	6.4	7.6	8.3
Caldas <sup>b</sup>	4.9	5.2	6.7	7.8
Cauca	10.1	14.6	19.5	21.2
Caqueta	8.4	23.1	22.8	17.0
Cundinamarca <sup>b</sup>	7.3	6.8	16.2	11.8
Choco	7.9	9.2	17.7	21.2
Hulla	6.0	9.7	9.5	6.5
Meta	16.7	19.7	20.8	22.1
Narino <sup>b</sup>	4.7	6.2	11.4	14.1
N. Santander <sup>b</sup>	4.4	5.2	6.5	8.0
Quindio	5.9	5.6	5.0	5.5
Risaralda	6.6	5.5	8.5	9.8
Santander	9.2	13.2	16.0	16.0
Tolima	8.2	12.5	10.5	9.7
Valle	7.2	5.4	8.1	8.7
Amazonas	23.1	22.2	20.5	11.9
Arauca	12.0	13.8	16.7	17.6
Guainia	9.7	18.6	27.9	8.6
Putumayo	8.9	13.1	20.2	23.7
Vaupes	22.1	29.2	44.7	45.3
Vichada	14.6	16.0	23.4	17.3
Total	9.2	11.4	12.5	11.9
Country Total	10.8	13.6	17.2	18.7

<sup>a</sup>Data represent the condition of the portfolio at the end of each year indicated.

<sup>b</sup>Departments with a high concentration of small farms.

SOURCE: Summary of unpublished Caja data.

Table 20. Distribution of delinquent borrowers and of value of delinquent loans by size of borrower and zone, November 9, 1971.

Zone and borrower size	Ratio of delinquent to total borrowers in group <sup>a</sup>	Ratio of value of due loans to outstanding loans
	(percent)	
<u>Caribbean Zone</u>		
Small	33.9	32.5
Medium	32.1	30.5
Large	47.5	31.8
Total	34.0	31.8
<u>Andean Zone</u>		
Small	10.8	12.8
Medium	11.8	13.7
Large	20.5	10.3
Total	11.0	12.6
<u>Total Country</u>		
Small	16.1	17.6
Medium	17.5	18.7
Large	31.9	17.5
Total	16.5	17.9

<sup>a</sup>Ratio of the total number of borrowers with loans due to total number of borrowers with loans outstanding within the group.

SOURCE: Summary of Table G the appendix.

The 1971 delinquency data have also been tabulated on the basis of the type of loan guarantee used as shown in Table 21. Generally speaking, regardless of the type of guarantee used, the small borrower group had at least as good, or a better loan repayment record compared with the medium or large borrower groups. This holds almost without exception when looking at the percentage of borrowers with outstanding loans which were delinquent for each type of guarantee used (there is no discernable trend by size for loans with real estate mortgages). There is less of a relationship between borrower size and delinquency within each guarantee grouping when loan values are considered.

In addition, there is little evidence to support the claim that loan repayment improves with the use of the more traditional real estate or property guarantees. When studying any one size group, there does not seem to be any significant difference in delinquency among the four types of collateral used, with the possible exception of chattel mortgages which does appear to be associated with slightly lower rates for all groups.

Insufficient data exist for directly relating delinquency with size of farm, type of crop, or with other variables. An internal Caja review of loan delinquency, especially in terms of the coastal area, concluded that 30 percent of the delinquency could be explained by factors outside the control of the producer; i.e. disease, loss of crop or livestock, hail, and flood. The remainder was attributed to the poor selection, supervision and control of borrowers by the field personnel. The increase in the delinquency rates has been attributed primarily to the greater emphasis on small farmer loans, although the previous analysis questions that conclusion. Nevertheless, even though the small borrowers are presently no more delinquent than the medium or larger borrowers, if they (the small borrowers) had had lower delinquency in the past then the increase could be due to the recent emphasis on small farmers (the new small borrowers are more delinquent than the "old" small borrowers).

## 2. Methods

All borrowers are expected to repay their loans in cash at the nearest Caja office. No special provisions have been established for loan repayment by the small farmers.

## 3. Special Enforcement Procedures

The traditional enforcement procedures are used by the Caja for delinquent borrowers, especially those who are considered to be intentionally trying to avoid their obligations. Written notices and personal visits are used initially. If this is not effective, then judicial methods are used to force the sale of property to cover the debt. The judicial methods are used not only to collect loans but also as a moralizing force for others. Group sanctions or other social pressures are not used now, but if group loans are emphasized, as they are expected to be, then this method will likely be used.

166

Table 21. Distribution of delinquent borrowers and of overdue loans by zone, type of guarantee, and borrower size, November 9, 1971.

Guarantee and borrower size	Due loans as a percentage of outstanding loans			
	Caribbean Zone		Andean Zone	
	Borrowers <sup>a</sup>	Value <sup>b</sup>	Borrowers	Value
	(percent)			
<u>By signature</u>				
Small	35.8	33.1	10.6	12.7
Medium	36.8	31.2	9.7	12.7
Large	40.4	33.2	19.5	26.0
Total	35.9	32.9	10.6	13.1
<u>Co-signer</u>				
Small	29.3	33.3	13.5	13.3
Medium	39.2	37.1	13.6	16.4
Large	56.4	12.3	36.5	13.0
Total	30.8	27.7	13.9	13.9
<u>Chattel Mortgage</u>				
Small	28.6	26.5	8.7	11.3
Medium	29.1	31.4	11.8	12.8
Large	52.9	49.4	15.5	7.2
Total	29.6	33.1	9.1	10.6
<u>Real Estate</u>				
Small	33.7	40.9	15.2	14.4
Medium	29.1	26.8	13.4	14.6
Large	49.4	27.9	22.5	13.3
Total	33.5	31.1	15.1	14.3

<sup>a</sup>Percentages of borrowers in the groups indicated which were delinquent.

<sup>b</sup>Percentage of the value of outstanding loans for the group indicated which was in arrears.

SOURCE: Summary of unpublished Caja data.

All loans which are overdue for more than one year are automatically classified in the Caja accounts as "bad loans" as required by the Superintendency of Banking. A special fund is specifically set aside to cover the bad loans. Each agency is expected to prepare a monthly list of all loans overdue for nine months so action (legal or other sanctions) can be taken to correct the delinquency before they are classified as "bad" loans or of doubtful repayment. A special fund is budgeted each year to cover bad or defaulted loans and the uncollectable loans are then dropped from the overdue classification. However, the borrower is still identified as defaulted and cannot receive another loan.

The Caja is concerned about the recent increase in delinquency and has instigated some special measures to reduce delinquency. The agency directors have been notified of their responsibility to reduce delinquency. Periodic meetings are held in the field to discuss delinquency and methods for its reduction. Finally, in 1971 the interest rate on overdue loans was increased to 18 percent for the first two months the loan is overdue, and to 24 percent thereafter.

#### 4. Rescheduling

The due date on loans is often extended for borrowers who anticipate they will not be able to pay on time because of justifiable reasons (late crop year, low prices, etc.). The date can be extended for a maximum of one year but only if the original guarantee for the loan still exists. The local Caja director is able to automatically allow a 60 day extension of the due date for a group of loans which unexpectedly face the same type of repayment problem. This allows time to analyze each individual case on its own merits.

Small borrower loans which cannot be repaid by the due date and which no longer are covered by the original guarantee, but are caused by natural acts outside the control of the borrower (hail, frost, flood, disease, etc.), are eligible for refinancing. Refinancing takes the form of extending the due date of the original loan for a longer period or by changing the loan from short to medium-term (up to six years) and by establishing a new loan guarantee (personal signature, chattel or real estate mortgages). Medium and large borrowers are allowed less refinancing flexibility, at least according to published regulations.

Special instructions accompany the refinancing regulations stressing that this method should not be used for conditions other than those already mentioned and then only for special circumstances. The refinanced loans are not separately identified in the Caja data so the extent of refinancing is unknown.

A complete restructuring of the loan or of all the borrower's loans is permitted where necessary. This would occur when a simple extension of the due date or refinancing the loan would still not allow sufficient income to

cover the scheduled obligations. In this case new obligations, guarantee, and due dates would be needed causing the loan to be completely restructured.

For borrowers who do not qualify for loan extension, refinancing, or restructuring, the debt is either cancelled and the borrower declared bankrupt, or legal sanctions are applied. Borrowers who face legal sanctions are specifically identified as "sanctioned" in a central Caja file and must petition to the regional office if they wish to clear their records and borrow in the future.

## G. Costs and Finance

### 1. Portfolio Profits and Losses

The change in portfolio size over time was discussed in section 11.D.3 and is shown in Table A, the appendix. The loan and capital portfolios have increased over time with the exception of the 60s when the capital (in dollar terms using market exchange rates) was less than in the 1950s. The Caja has consistently reported a profit in its operations each year but due to its many activities, the sources of the profit are unknown. The last column of Table A gives some idea of the turnover of the available capital (savings and paid-in capital) since 1935. There has been a consistent improvement in the turnover ratio over the years.

### 2. Administrative Costs

No data were obtained.

### 3. Beneficiary Savings

All small borrowers are required to deposit their loan capital in either a checking account or in a savings account. For those unfamiliar with checking accounts the savings account deposit is mandatory. The borrower then withdraws money as needed. The Caja is the largest savings institution in Colombia but data are not available to indicate the proportion of savings which can be attributed to small farmers. However, one would expect they make up a significant proportion of the Caja savings portfolio due to the mandatory provisions discussed previously.

As shown in Table A, the appendix, the Caja savings deposits have accounted for 30-40 percent of the value of all outstanding loans each year and obviously is an important internal source of funding.

### 4. External Finance

Commercial banks have been required to buy Caja bonds for a number of years. They are presently required to invest five percent of their

total sight deposits in Caja bonds and another five percent in National Development bonds. They must also invest ten percent of their time deposits in Caja bonds. In addition, they are required to invest six percent of their total loan portfolio in six-month bills of the Agricultural Finance Fund (Fondo Financiero Agrario) which is also available to the Caja. However, the Fund is not for small farmers; to qualify for financing, the field plot must be between 10 and 100 hectares, although the lower limit is now being dropped to five hectares.<sup>14</sup> The commercial banks generally exceed their required levels for extending agricultural loans utilizing the Central Bank rediscount lines but they seldom exceed the required limits for purchase of Caja bonds since they yield considerably less.

Nevertheless, the forced purchase of Caja bonds by commercial banks does contribute to increasing the Caja's lending capability. As shown in Table 22, about ten percent of the total assets of the Caja is provided through purchase of Caja bonds by the other banks (\$43.6 million). As of the end of 1971, slightly over half of the Caja's total loan portfolio was supported by these same bonds and through rediscounts; the rest was financed through deposits and paid capital. The Agricultural Finance Fund has also been used by the Caja for its lending activities, reaching a level of \$27.8 million in loans outstanding by the end of 1971 (approximately ten percent of the Caja's total loan portfolio). Additional laws, such as Law 26 of 1959, and other decrees, require commercial banks to loan to the agricultural sector but apart from the Caja.

More recently, with the passage of Law 33 in 1971, the way was opened for substantial future increases in capital resources for the Caja. That law stipulated that: (1) the government is obligated to buy \$10 million of Caja bonds over the next ten years, (2) the Caja may issue and sell bonds on its own, (3) the Caja is exempt from all past forced investment of savings deposits requirements (resulting in an estimated ten percent increase in overall lending capability), and (4) the Caja was able to increase the interest paid on savings deposits from four to eight percent thereby inducing additional savings deposits. It is still too early to analyze the effect of this increase in returns to savings.

---

<sup>14</sup>Personal interview with the Director of the Agricultural Finance Fund.

Table 22. Caja Agraria balance sheet for selected entries, December 29, 1971

ASSETS		LIABILITIES	
(In millions of dollars)			
Reserves	34.7	Demand Deposits	57.2
Rediscounted Loans	115.1	Time Deposits	99.0
Net Discountable Loans	121.7	Central Bank Discounts	115.9
Agricultural Finance Fund	24.9	Bonds	43.6
Loans to INCORA	16.8	Agrarian Finance Fund	13.1
Forced Investments	27.7	Other	84.3
Other Investments	4.0	Capital	27.2
Commodity Inventories	24.9		
Bad Debts	24.5		
Other	46.0		
TOTAL	<u>440.3</u>	TOTAL	<u>440.3</u>

SOURCE: Caja [21].

### 5. Institutional Solvency

The Caja is considered to be very solvent financially. It is the author's impression that this has been true of the Caja since its infancy.

### 6. Foreign Exchange Balance

The increased production of cotton, wheat, corn and sorghum, and of livestock, resulting from the Caja activities, has likely had a positive impact on foreign exchange reserves either through exports or through import substitution. On the other hand, the importation of inputs like fertilizer and farm machinery by the Caja has reduced those same reserves. However, no data were gathered to determine the net impact of these two opposing actions.

## H. Complementary Factors

### 1. Technology

#### (a) Technology extension and supervision

Almost all of the Caja credit is in cash and, therefore, is not directly tied to a set of inputs or to new technologies. A few loans

are in kind which forces the borrower to obtain the inputs through the local Caja farm supply store but this method is seldom used. There is now a move to require borrowers to purchase all their inputs through the store unless the item is unavailable. Nevertheless, this policy is for the purpose of supporting the input supply activities of the Caja rather than forcing the use of recommended technology. There appears to be no conscientious effort by the Caja to force or at least to strongly encourage its borrowers to apply the recommended levels of input use.

Virtually no technical services accompany the credit provided by the Caja. This is due to the very limited number of technical people working in the program. Approximately 60 professional technicians work in the Caja and they are available to the field agencies as consultants. They are not used to provide continuous technical assistance to the borrowers. These technicians visit a zone to assist with special problems encountered in crop or livestock production activities.

(b) Other arrangements for technical transfer

Historically, the Caja has either assumed the inputs or technology were readily available to the borrower or that the existing extension service of the Ministry of Agriculture provided the technical knowledge. In fact, agreements were signed between the two agencies. Even so, dissatisfaction with that system developed within both the Caja and the Ministry.

In 1968, an agreement was signed between ICA, the present research and extension arm of the Ministry of Agriculture, and the Caja (referred to as the ICA-Caja program). The original contract allocated about \$650 thousand for this joint program. A 1971 agreement provided for an additional three million dollars to set up ICA-Caja pilot project areas. Five projects are now in operation and a total of 20 are planned by 1973. The regional projects are patterned after the Puebla project in Mexico. It is an attempt to coordinate and consolidate all governmental activities in the area, especially the technical assistance activities of ICA and the credit activities of the Caja.

ICA sets up field experiments and makes technical recommendations while the Caja provides the credit. The experience to date shows that the availability of credit far surpasses the availability of new technology. ICA is reluctant to make recommendations without a sound research base. Numerous field experiments are just beginning to provide this information. The Caja feels that the technicians are too slow in making recommendations while those with ICA feel that credit is too readily available, given the present levels of knowledge.

Under these conditions, if a farmer does not repay, conflict is likely to develop. Separate lists of potential borrowers are prepared by the two agencies which further increases the probability of agency conflict. Efforts are now being made to jointly prepare a list of potential borrowers who will receive the coordinated support of both ICA and the Caja.

### (c) Nature of technology

The ICA research is focusing more and more on the specific problems faced by the small farmers, especially as related to crop production. In the pilot project areas, on-farm experimental and demonstration plots are used to develop and disseminate new information.

ICA's research program covers the breeding and selection of all the major crops as well as studies of disease, pest and weed control measures. Although soil fertility requirements are studied at the main research stations, there is insufficient experimentation at the farm level to test the results thus obtained. Consequently, there is as yet insufficient knowledge on fertilizer needs for the main groups of soils which results in weak recommendations at the local level on optimum fertilizer use. The pilot projects are expected to help fill that gap in knowledge.

Nevertheless, sufficient knowledge is available in many areas, but the credit and inputs are not readily available for its use. Some argue the main priority should be to make the inputs available, and once that is done, significant increases in production will occur. Others, while recognizing the importance of input availability, argue that such a program would be highly selective and could possibly accentuate income and social disparities in the rural areas. By emphasizing the ICA program, the Government of Colombia obviously assumes more must be done for the small producers than just providing seed and fertilizer.

## 2. Supplies and Sales

### (a) Program supplies

As mentioned previously, the Caja maintains farm supply stores in many parts of Colombia, usually in the same building where farmers obtain Caja credit. Farmers must transport the inputs to their own farms since the Caja does not provide this service. Even though there are many Caja stores, a large number of farmers still live great distances from the stores and the transportation of inputs and products is time consuming and costly.

The Caja tends to be the price leader for the items it sells and thus has a moderating effect on local input prices. A 1968 report [35] found that the Caja (Bogota office) had a mark-up on fertilizer of 10-12 percent while other firms had mark-ups of 14-23 percent. The price of complete fertilizer (10-30-10) was found to be the following (Table 23):



(d) Guaranteed sales and price supports<sup>15</sup>

The Government of Colombia has established an agricultural price stabilization program oriented toward the prime objective of maintaining a level of prices that will assure the necessary increases in production to satisfy an expanding domestic demand, and to increase exports of selected commodities. Also, the price support program is designed to maintain stable prices for basic consumer foodstuffs as part of an overall economic stabilization effort.

For a number of years IDEMA<sup>16</sup> and its predecessor INA have carried out price stabilization operations on selected storable commodities. The level of support prices has usually been announced at planting time. The announced support prices have intentionally been somewhat below the anticipated open market price in order to encourage the commercial sector to handle the bulk of the commodities. At the same time, however, the support prices have been set high enough to cover the farmers' production costs and allow enough profit to keep stimulating production.

Although IDEMA has been maintaining floor prices for some 10 storable basic commodities, more than 85 percent of total purchases during the 1968-71 period were concentrated in three commodities: rice, corn, and wheat. IDEMA purchases as a percentage of total national production were highest on wheat (14 percent to 46 percent). Rice purchases were exceptionally large (21 percent of production) in 1969, a year when storage stocks that had accumulated from previous years put downward pressures on prices. Purchases of corn have ranged from two to seven percent of total production while bean purchases reached 13 percent of production in both 1968 and 1969.

For many years the effectiveness of the price stabilization operations was hampered by a lack of public storage facilities and public funds with which to buy commodities. However, since 1964 IDEMA more than doubled its storage capacity. Currently an IDB loan is supporting a 50 percent increase in IDEMA storage capacity during the period 1970-73; the expansion program also involves a major technological shift to modern facilities for cleaning, drying, classifying, and mixing grains using bulk handling methods. If properly managed, the new facilities will reduce losses and facilitate the price stabilization efforts of IDEMA.

Few small farmers directly participate in the IDEMA program since their product sales are usually at the local market. The regular Caja credit program has no provision to assist the farmers in marketing their products although efforts are being made in the ICA and INCORA related projects to form marketing cooperatives. Corn producers, and these are largely small

---

<sup>15</sup>Sections (d), (f), and (g) were prepared primarily by Hector Sarmiento, USAID, Bogota.

<sup>16</sup>The Institute for Crop and Livestock Marketing.

farmers, face sharp seasonal price fluctuations. To avoid these sharp local price declines at harvest, IDEMA must have many more purchase points than it now has to be effective.

(e) Insurance

All Caja borrowers must pay an additional one percent interest charge to provide insurance on the life of the borrower for the amount of the loan but not to exceed about \$15,000 (300,000 pesos). If the farmer has a short or medium-term loan and is over 60 years in age, he does not qualify. For loans over six years the maximum age limit is 50 years. The present one percent charge results in a surplus in the insurance account. No crop or other type of insurance is available.

(f) Other program marketing managements

Food wholesaling operations in the larger urban centers are carried out by a large number of relatively small, highly productive specialized firms offering very little service to the retailer. The GOC has recently established a wholesaling agency (PAN) which promises to improve the situation. All these improvements in food marketing can have an important and potentially favorable effect on both rural and urban development. Wholesalers receive most of the food from specialized assemblers. These assemblers contact producers in the assembly centers where they negotiate the sale of the product just before harvesting. The transaction negotiation with urban wholesalers is done by telephone, usually three to four days in advance of delivery. The assemblers usually arrange and pay for transport of the product. It is unknown how this system affects the small producer.

(g) General marketing conditions

Colombia's internal marketing system for food and basic consumer goods has evolved from the village market days that date back to the colonial period. Market days are still a common occurrence in rural trading centers. The small producers sell their products in these centers, usually for cash. If the local market is small, which is often the case, the price is highly sensitive to changes in supply. Increases in production resulting from credit or other programs can sharply lower prices discouraging the purchase of inputs like fertilizer. An effective support price the small farmer can rely on will help solve this problem.

Plaza type markets are found in all of the major urban centers in Colombia although these markets are relatively less important in the larger cities. Supermarket type retail outlets have been gaining slowly in importance, but account for less than 10 percent of total retail food sales in Bogota and Cali, two of the major cities in Colombia. In the larger urban centers the bulk of the food retailing is done by small neighborhood stores and public market stall operators.

## (h) Profits and risks

It is difficult to determine the profitability of new technology for small farmers for a number of reasons. For example, the returns to fertilizer use are unknown because: inadequate data exist on product prices received by farmers; prices paid for fertilizer at the farm level are unknown; and the true crop response to various levels of nutrient use is uncertain. Nevertheless, during recent years the average price for fertilizer has risen more rapidly than farm produce prices as shown in Table 24. That is, the farm products-fertilizer price index has been dropping. This suggests fertilizer use is becoming less attractive unless new, more responsive crop varieties are being introduced to off-set this relative product-fertilizer price decline. It is unknown whether this price relationship has continued through the early 1970s.

Table 24. A comparison of fertilizer prices and farm product prices by year, 1958-1967

Year	Fertilizer <sup>a</sup> price index A	Farm price index B	B ÷ A
1958	100	100	100
1959	110	106	96
1960	110	107	97
1961	110	126	115
1962	120	123	103
1963	207	172	83
1964	241	234	97
1965	243	224	92
1966	282	255	90
1967	318	267	84

<sup>a</sup>Based on average price of 10-22-11-2 fertilizer mix.

SOURCE: [35] and [37].

No data were obtained on the profitability of other inputs or cultural practices. However, one report strongly suggests profitable technology does exist [52]. In the agency of Piedecuesta, which is part of the ICA-Caja program, significant increases in net incomes resulted from combining the ICA technical assistance with the Caja credit. Net income per hectare from beans and from corn more than doubled. Yields per hectare doubled or tripled by using the new methods introduced by ICA and financed by the Caja. The paper

does not indicate whether these data are from projections or from actual farmer results. One would suspect this is what the extension agents expect.

A field trip report by CIMMYT technicians in 1970 suggested that the present average levels of production in the Rionegro area could not be increased much over 50 percent in the next 6-8 years. In the Caqueza area they estimated corn yields could be more than doubled. A three or four fold increase in corn production was estimated for the Garcia Rovira area.

It does appear, at least for some areas of Colombia, that significant increases in productivity are possible. Whether this potential translates into increases in small farmer incomes will depend on price stabilization, marketing, and other governmental policies.

Risk and uncertainty are important considerations for the small farmers in Colombia. The responsiveness of these small farmers to new higher cost technologies will likely be dependent upon the amount of risk or uncertainty associated with the new technology. Technologies or practices which are output increasing but which do not involve additional cash costs or risk will be adopted more rapidly. More research is required to test the above hypothesis--it is the author's opinion that this is one of the most crucial factors affecting small farmer production practices.

### III. EVALUATION

#### A. Performance

##### 1. Apparent Uses of Credit

Few data exist concerning the true use of Caja credit by the borrowers. The limited farm visits by the Caja inspectors help ensure the money is used for productive purposes but field studies have not been made to empirically measure borrowers' compliance with loan objectives. No doubt, the loans to very small farmers are used for consumption expenditures and the Caja has assumed this is the case.

##### 2. Effects

No data are available on the impact of credit on production, farm income, choice of technology, employment, or on other factors. A research team in the Central Bank is beginning such a study but results are not yet available. Also, considerable data are being collected in the ICA-Caja project areas and will be available shortly.

A limited study in one municipality by the Central Bank team did show that the Caja small borrowers used considerably less new inputs as compared with the INCORA borrowers. For example, over 98 percent of the INCORA borrowers used fertilizer and improved seeds while less than half of the Caja borrowers used these two items. Of course, the INCORA program includes

an intensive technical assistance component. No data are available to measure the added benefits resulting from the INCORA credit and assistance (which is costly) as compared with the benefits from the less costly Caja credit without technical assistance.

### 3. Progress Towards Other Objectives

With the recent shift towards smaller farmers, the Caja does seem to be making some progress towards reaching this group more effectively. The establishment of the ICA-Caja projects is probably the most significant action taken by the Caja to effect this change.

### 4. Image

The Caja is considered to be a responsible, competent and serious institution by people at almost all levels. This general positive attitude is rather surprising considering the size of the Caja. The Caja is respected by the farmers. The rules and regulations appear to be spelled out clearly and are adhered to by the field offices. When a farmer borrows from the Caja there is no doubt that he is expected to repay the loan. This does not mean, however, that discontent does not exist. Small farmers who cannot receive loans through the Caja obviously will be critical of the established requirements and would like to see them changed. Failure to provide the right kind of inputs on time in the supply stores is also a common complaint.

In summary, the collective opinion of many observers is that the Caja is a well managed, successful banking operation. One should not assume, however, that observers feel the Caja is effectively helping the small producers in the country. The general feeling is more mixed in this regard.

### B. Evaluation Procedures and Feedback

No systematic evaluation procedures exist in the Caja credit program. In addition, few base data are collected from the farmer when he first enters the program nor are periodic studies made of the borrower's progress over time. Therefore, the Caja is unaware of the impact of its credit on productivity, income, income distribution, employment, or on the net worth of the borrowers.

The Caja has evaluated its credit program in terms of the traditional banking criteria of profit or loss, numbers of loans, and delinquency. Little attention, until recently, has been paid to the development effects of its credit program. Very few field studies have been initiated by the Caja to measure program performance, but the increasing amount of data from the ICA-Caja projects should help fill this information gap.

179

### C. Problems

#### 1. Governmental Level

For many years the Caja operated independently of the Ministry of Agriculture. And, as a result, the credit policies of the Caja often were not in harmony with those of the Ministry of Agriculture. This conflict has now been largely resolved with the reorganization of the Ministry of Agriculture and with the inclusion of the Caja under the organizational umbrella of the Ministry. The establishment of the interlocking boards of directors for all the major institutions working in agriculture has also brought about more coordination. Nevertheless, further coordination of price, marketing, credit, extension, and research policies is needed to effectively reach the small farmers. This also implies closer coordination between the credit division and the other divisions in the Caja itself. The Caja now faces a major problem of how best to reach the many small farmers without significantly increasing costs. It also faces the job of establishing a systematic procedure for analyzing the effect of the credit on the small producer and measuring that effect over time. This implies a rather massive on-the-job training program for field personnel.

#### 2. Agency Level

Lack of trained personnel is probably the biggest problem facing the field offices. Many agencies are not able now to visit each borrower and if further emphasis is placed on small farmers this problem will become even more serious.

Establishing effective coordination between ICA and the Caja at the local level is likely to be a problem in many areas as the ICA-Caja projects are expanded. Close coordination between the technical assistance of ICA and the credit of the Caja is a must for these projects to succeed.

The slow borrower turnover is also a problem for most agencies. Few new borrowers enter the program in any one year. If a large number of new borrowers enter the program through the ICA-Caja projects, the existing application and loan procedures may bog down and cause excessive delays. In anticipation of this problem, the Caja needs to seriously evaluate present loan procedures for the purpose of establishing new forms and procedures to rapidly handle more loans while at the same time maintaining sufficient loan control and supervision to ensure repayment. Present collateral requirements may have to be modified to meet this objective.

#### 3. Farm Level

Many problems exist at the farm level. Farms are often located great distances from the Caja office making it difficult and expensive for the Caja agent to visit the farm or for the farmer to obtain credit or inputs from the Caja. This same distance also affects loan repayment and collection.

- 130

Farmers are highly individualistic which makes group loans or cooperative loans more difficult. Even when groups are formed, it is often a serious problem to keep them intact due to the lack of local leadership or interest.

Most of the small farmers live in the mountainous regions and their plots are fragmented and often are on steep slopes reducing the production alternatives available to them. Technical recommendations must often be modified to account for the large variations in altitude, soils, and climate within the same agency.

#### D. Conclusions About Small Farmer Credit

##### 1. Major Problems of Small Farmers

The problems faced by the small farmers in Colombia are as numerous and as complex as any found in the world. These include:

- (a) Lack of land - the units are small and scattered, little potential exists for land expansion where small farmers are located without off-farm migration. Land reform is needed but even if it were executed, a significant population shift away from the minifundio areas to the areas where larger size units exist would be necessary.
- (b) Poor land quality - the small farmers are located in the mountainous regions where erosion, climatic extremes, and poor soils are common.
- (c) Limited access to capital - the small farmers usually require additional capital to obtain more command over land as well as other resources. Many are not able to obtain credit through institutional sources and must rely on private money lenders, friends and relatives.
- (d) Limited access to other services - new technology often does not reach the small farmer, or if so, it is in a form which he cannot use. This results from research not being geared to his needs. As an example, ICA corn experiments have shown it is possible to significantly increase yields over traditional methods by using new varieties. But the new varieties assume a monoculture and small farmers often plant corn and beans together which requires a strong corn stalk, not a characteristic of the new variety. Thus, the new variety does not meet the needs of the small farmer and it is rejected. Too, other inputs are not readily available to the small farmer in many areas.
- (e) Marketing is difficult - the mountainous terrain increases the problems of transporting and marketing farm products and the problems of purchasing inputs. Local prices are highly sensitive to changes in supply.

- (f) Little political voice - small farmers and other low-income families are not well organized and are therefore poorly represented in the political process.
- (g) High risk - small farmers have incomes at or near the subsistence level. Thus, high variability of income is a high cost to them and efforts are made to stabilize income even at the expense of higher income over time. New technologies often require that the small farmer assume the associated risk which is in conflict with his need for risk aversion.

## 2. Role of Credit

Obviously, credit cannot and should not be expected to solve these many small farmer problems. In fact, the Caja program has only solved, to some extent, the problem of access to institutional credit. Even so, only a limited number of the small farmers have been able to participate in the program. It can also be said that the Caja supply stores have made some inputs more readily available to the small farmers. On the other hand, the Caja credit has not helped to solve the other small farmer problems.

Even though it has not done so, the credit program could be instrumental in providing some relief to the other problems. For example, a greater shift of new loans to small farmers could, if used correctly, increase capital formation among small farmers. If this continued for a number of years, it would likely increase the demand for land resources by small farmers. This policy, along with direct loans to small farmers for land purchases could significantly reallocate land resources over time, thereby re-enforcing on-going land reform efforts. In like manner, directly tying small farmer credit to input use could stimulate improved coordination among the extension technicians, the suppliers of inputs and the Caja.

## 3. Credit and New Technology

### (a) Triggering small farmer development

Institutional credit is necessary if small farmers are to adopt new, and usually more costly, technologies which are required to raise productivity and thus income levels. However, even though it is necessary, institutional credit is by no means a sufficient condition for small farmer development. In fact, the limited success that we have seen around the world can be attributed to the erroneous assumption that credit is a sufficient condition for small farmer development.

Small farmer development implies increasing farm family income levels. Welfare payments will provide some increase but this is not a viable, long-term alternative. Small farmer incomes can increase through (1) recombining existing resources (Schultz argues that little potential exists for doing this and the author agrees), (2) obtaining command over more resources (buy or rent land, labor, or capital), or by (3) applying new, more profitable factors of production (technological advance). Of course, reducing

Input costs, increasing product prices, or doing both will increase incomes under all three alternatives. Price policies are important but are not sufficient when isolated from the other policies.

The provision of new factors of production holds the greatest promise for triggering small farmer development. Since the new factors are normally provided off the farm, the need for credit should be obvious. But, credit will be ineffective until that new technology is made available to and is profitable for the small farmer. Again, as mentioned previously, the adoption of the new inputs will depend on their profitability and their associated risk. In areas where the technology is already known, high priority must be placed on making the inputs available and in providing credit for their purchase. In most areas, first priority needs to be placed on providing the new technology.

#### (b) Sustaining small farmer development

New technology has been identified as the key for triggering small farmer development. Continual development will not be possible unless this technological "injection" takes place year after year. This implies two things: (1) investment in research focusing on small farmer problems must continue over time, and (2) additional credit will be required to finance the increasing use of non-farm inputs. In essence, it is assumed that institutional credit will still be a limiting factor on the small farmer's ability to continue to purchase new inputs. However, as levels of living increase, internal savings should also increase, thereby reducing somewhat the necessity for external financing.

In addition, once new inputs are applied and increased productivity takes place, other policies then become crucial. Governmental price and marketing policies, transportation and communication investments, land tenure patterns, and educational policies will seriously influence the distributive effects of the adoption of new technology by farmers. Even if new inputs and credit are made available to the small farmers, we cannot assume development will automatically take place since the other policies then become significant.

#### 4. Conditions for Success or Failure

Criteria for measuring success will differ from country to country and person to person. A credit program can be very successful from a banking viewpoint (low cost per loan, high repayment, a large number of loans, wide coverage, etc.) but be a failure in terms of borrower improvement (net worth, productivity, income, level of living, etc.) or vice versa. It should be obvious that these two viewpoints are not necessarily in conflict. Ideally, one would hope that a credit program could reach both objectives--an efficient banking operation which significantly improves the well-being of its borrowers over time. Nevertheless, in a

development context, it can be strongly argued that the borrower's development should be the main criteria for measuring success, even at the expense of efficient banking. High loan repayment completely ignores the question of how the farmer in fact was able to repay the loan--by borrowing elsewhere, by selling off some assets, by dipping into past savings, or through an increase in income during the loan period as a result of some change in his operation. We should be interested in focusing our attention on the last item.

At the risk of being criticized for over-simplifying a complex process, the following conditions for the success of a credit program by order of priority are presented:

- (1) A profitable new input must exist, be available and in a form acceptable to the small farmer;
- (2) The new technology must not involve more risk or uncertainty for the farmer or, if so, that risk must be partially or totally covered by someone other than the individual farmer;
- (3) Credit must be available to the farmer to purchase the new input at a price which still makes the input profitable (probably institutional credit);
- (4) A market and a reasonably stable price must exist for the increased production to insure that the continual use of the new input is still profitable;
- (5) The lending agency must be operated efficiently, and the credit program must be self-supporting (sufficiently high interest rates to cover operating costs and inflation).

A number of implicit assumptions are incorporated in these conditions. For example, item (1) implies a research effort focusing on small farmer needs; a distribution system to get the input to the farmer; and, if necessary, an extension service to explain and educate the farmer on the use of the new input. These conditions are temporal in nature: if credit, item (3), is made available before conditions (1) or (2) are met, then it will be largely ineffective in helping the small farmer. In like manner, emphasizing marketing coops or lending agency efficiency before the previous conditions are met will not bring about the desired result. Obviously, if resources permit, all conditions could be attacked at once but few developing countries are able to do everything at once.

In summary, the Caja Agraria could be considered highly successful from a banking perspective. The loaning procedures are well organized, excessive loan delays are not the rule, and loan repayment rates are relatively high. However, no data are available to measure its success from the borrower's perspective. Although for small farmers, one would doubt that the credit program has brought about any significant changes in income or productivity. Nevertheless, the credit may have been significant for the small potato

producers and for the small farmers in the more heterogeneous farm size areas where new technology has become available not only to the larger units but to the smaller farmers as well.

#### 5. How Could the Program be Improved

The author was not able to observe the operations of the Caja for a very long period of time, and as a consequence, it is difficult to make specific recommendations on how the program might be improved. However, in the interest of contributing to a continual improvement of the Caja's operation, and recognizing the above limitations, the following general recommendations are made:

(1) The recent shift from a traditional banking program to a program more oriented towards development should be continued. However, this does not mean that the Caja should use the "development umbrella" as a convenient way for justifying portfolio erosion, high delinquency rates, yearly losses, and inefficiency as done by "development banks" in other parts of Latin America. Rather, the present banking standards should be maintained while trying to improve the effect of the total Caja operation on small farmer development.

(2) More Caja resources should be shifted towards the small borrowers. High priority should be placed on extending credit to those small farmers who are able to obtain technical assistance (privately or through ICA), thereby increasing the probability the credit will be effective in raising income levels.

(3) In areas where new technical inputs and recommendations are available, and are profitable, the use of these inputs should be a condition for granting a loan.

(4) Minimum base data on present levels of production, income, net worth, and on the farmer's general level of living should be collected for all new clients.

(5) Periodic random sample surveys should be made to measure the borrower's progress in terms of the criteria identified in (4), as a result of receiving credit. The findings should then be used to modify lending policies.

(6) Further coordination is desirable between the Input and Credit Divisions of the Caja. The Caja should seriously consider reducing its supply activities in the densely populated areas where private suppliers are adequately meeting farmer input needs and shift its resources to the outlying areas where inputs are not readily available to the farmers through the private sector.

(7) The extent of small farmer savings in the Caja should be studied to determine its importance and to identify ways to further mobilize rural savings.

(8) Loan data collection needs to be further standardized to ensure similar information is provided periodically so that discernable trends can be recognized. The past yearly reports have included loan data but it is difficult to study trends since the data are tabulated differently each year or every few years.

#### IV. ROLE OF TECHNICAL ASSISTANCE

##### A. A.I.D. Inputs

AID has not directly supported the Caja Agraria activities until very recently. In 1971, Loan 064 was signed which provided \$28 million to the agricultural sector of Colombia. About \$1 million of this was earmarked for the ICA-Caja projects. In 1972, a second agricultural sector loan (Loan 067) was signed. This loan provided a total of 600 million pesos (about \$30 million) of which \$19 million was earmarked for small farmer credit through the Caja, principally for the ICA-Caja and INCORA programs. No other direct assistance has been provided the Caja but AID has directly supported the INCORA supervised credit program in the past. The Caja is responsible for maintaining the loan accounts and for disbursing and collecting the loans in the INCORA program.

##### B. Other Donor Inputs

The Inter-American Development Bank (IDB) has provided some capital assistance to the Caja. A \$12.2 million farm mechanization loan was made in 1967. To the author's knowledge, the IDB has not provided any technical assistance to the Caja.

The World Bank Group has provided the following loans: \$5 million in 1954 for agricultural mechanization (large farmers); \$16.7 million in 1966 for livestock production (large farmers); and \$18.3 million in 1969, also for livestock activities. Four technical advisors in livestock were also provided with the 1966 loan. Two advisors accompanied the 1969 loan.

##### C. Effects

The effect of the outside assistance on the small farmer credit activities in the Caja has been negligible.

1/9

## BIBLIOGRAPHY

1. ALARCON, J., et al., "Evaluacion Economica Del Credito Dirigido y Extension en una Region de Colombia," Centro Inter-americano de Desarrollo Rural y Reforma Agraria, Mimeografiado 126, Bogota, 1969.
2. ANDREW, CHRIS, Improving Performance of the Production-Distribution System for Potatoes in Colombia, ICA, 1969.
3. ASOCIACION BANCARIA DE COLOMBIA, Informacion Financiera, No. 104, Bogota, Diciembre 1971.
4. ATKINSON, J., "Changes in Agricultural Production in Colombia," FAER No. 52, USDA, Washington, D.C.
5. BANCO DE LA REPUBLICA, Revista del Banco de la Republica, various monthly issues.
6. BERRY, R. ALBERT, "Development of the Agricultural Sector in Colombia," Yale University, Yale Economic Center, draft paper, 1972.
7. BERRY, R. ALBERT, Farm Size Distribution, Income Distribution and the Efficiency of Agricultural Production, draft, 1972.
8. CAJA DE CREDITO AGRARIO, INDUSTRIAL Y MINERO, "Agrarian Credit Bank," Department of Economic Research, Bogota, (No date - about 1960). On file USAID.
9. \_\_\_\_\_, Almanaque Creditario, Bogota, various years.
10. \_\_\_\_\_, "Análisis del Patrimonio Bruto del Pequeno Empresario Rural," Departamento de Investigaciones Economicas, Bogota, Mayo de 1972.
11. \_\_\_\_\_, Carta Agraria, Departamento de Relaciones Publicas, various issues.
12. \_\_\_\_\_, Carta Agraria, No. 257, Febrero 1972.
13. \_\_\_\_\_, "Circular Reglamentaria, No. 64/69," Bogota, Diciembre 26 de 1969. (On file USAID)
14. \_\_\_\_\_, "Clasificacion Cartera Vigente en Diciembre 31/69, Segun el Origen de los Recursos y el Activo Bruto de los Usuarios," Subgerencia de Credito C-24/70, Bogota, no date.
15. \_\_\_\_\_, "Clasificacion Cartera Vigente en Diciembre 31 de 1970, Segun el Origen de los Recursos y el Activo Bruto de los Usuarios," Sugerencia de Credito, C-142/70, Bogota, no date.
16. \_\_\_\_\_, "Composicion del Patrimonio de los Usuarios del Credito de la Caja Agraria," Departamento de Investigaciones Economicas, Bogota, Setiembre de 1971.

17. \_\_\_\_\_, "Credito Agricola Supervisado I, Curso para Supervisores - Plan del Curso para Supervisores Tipo 'A' (Ingenieros Agronomos); Plan del Curso para Supervisores Tipo 'B' (No Ingenieros Agronomos)" Bogota, Agosto de 1959.
18. \_\_\_\_\_, "Cuadros Comparativos de Cartera Vigente y Vencida por Garantias en Noviembre 9 de 1971," Subgerencia de Credito, Bogota, no date.
19. \_\_\_\_\_, "El Credito a Traves de la Caja de Credito Agrario," Botota, Noviembre de 1961. 223 p.
20. \_\_\_\_\_, "Estudio Tecnico de Algunos Aspectos del Credito Agricola de la Caja," Departamento de Investigaciones Economicas, Bogota, 1968.
21. \_\_\_\_\_, "Informe de Gerencia," years 1932-1972, Bogota.
22. \_\_\_\_\_, Informe Financiero Semanal, Departamento de Investigaciones Economicas.
23. \_\_\_\_\_, "Informe sobre el Programa de Credito Industrial Dirigido," Departamento de Investigaciones Economicas, Cuerpo de Paz, Bogota, Febrero de 1969.
24. \_\_\_\_\_, "Ingresos y costos reales de las Actividades de la Caja: II-Credito," Departamento de Investigaciones Economicas, Agosto 1969.
25. \_\_\_\_\_, "Los Problemas del Credito Agropecuario y el Desarrollo Economico en Colombia," paper presented at the Latin American Seminar on Rural Credit in El Salvador, Bogota, 1968. 185 p.
26. \_\_\_\_\_, "Manual de Cartera," Subgerencia de Credito, 1969.
27. \_\_\_\_\_, Manual de Credito, Sub-gerencia de Credito, Diciembre de 1971.
28. \_\_\_\_\_, Manual General de Organizacion y Funciones, Bogota, 1965. 347 p.
29. \_\_\_\_\_, Memoria del Seminario de Credito Agricola para Dirigentes de America Latina - Bogota, 3 a 9 de Diciembre de 1961, Bogota, 1962. 563 p.
30. \_\_\_\_\_, Reglamento de Credito, 1963, Bogota, 1963, 248 p.
31. \_\_\_\_\_, Su Origen, Organizacion, Obra, Bogota, Septiembre, 1967.
32. CARDONA, A.F., La Estructura de Credito Agricola en Colombia, Servicio Tecnico Agricola Colombiano Americano (STACA), Bogota, 1962.
33. CARTER, R.D. and BAILEY, R.A., "An Analysis of Agricultural Credit Operations of Selected Branches of the Caja de Credito Agrario, Industrial y Minero in Colombia," Agricultural Finance Center Research Publication 116, The Ohio State University, December 1967.

34. CUELLAR, GUILLERMO, "El Credito y Asistencia Tecnica en el Desarrollo Economico," Division de Ciencias Sociales y Economicas, Universidad del Valle, no date.
35. DEPARTAMENTO ADMINISTRATIVO NACIONAL DE ESTADISTICA (DANE), Debate Agrario-Documentos, Bogota, Agosto de 1971.
36. \_\_\_\_\_, Boletin Mensual de Estadistica, No. 245-46, 1971-1972.
37. DEPARTAMENTO NACIONAL DE PLANEACION, "Informe sobre la Produccion y Consumo de Fertilizantes en Colombia," 1968.
38. \_\_\_\_\_, "Informe sobre la Produccion y Consumo de Semillas Mejoradas en Colombia," 1969.
39. FRANCO, ALBERTO, "Aplicacion y Efectos Socio-Economicos del Credito Agricola en Caldas, Colombia," mimeografiado No. 65, IICA-CIRA, Octubre 1966.
40. HOERGER, WILLIAM G., "Colombian Agricultural Credit--1965: The Caja Agraria, INCORA and the Banking System," Agricultural Finance Center Research Publication 110, The Ohio State University, August 1966.
41. I.B.R.D., I.D.A., Economic Growth of Colombia: Problems and Prospects, Agriculture, Fisheries and Forestry, Vol. V, South American Department, November 1, 1970.
42. MERCON, "Formulacion de un Programa de Credito Rural," Seminario sobre Credito IICA-CIRA, Bogota, 1969. 105 pp.
43. MINISTERIO DE AGRICULTURA, "Aspectos del Credito Agropecuario Institucional en Colombia," Serie: Instrumentos de Politica Agraria, No. 1, Bogota, 1968.
44. \_\_\_\_\_, El Cuatrenio de la Transformacion Rural 1966-1970, "Memoria Julio de 1969 a Julio de 1970," Bogota.
45. \_\_\_\_\_, "Fuentes Internas de Financiamiento a Entidades Crediticias del Sector Agropecuario," Serie: Instrumentos de Politica Agraria, No. 2, Bogota, Julio de 1968.
46. \_\_\_\_\_, "La Asistencia Tecnica Agricola Como Instrumento de Desarrollo," Instituto Colombiano Agropecuario, Julio de 1972.
47. \_\_\_\_\_, Memoria 1967-1968, Bogota, Julio 1970.
48. \_\_\_\_\_, Memoria 1970-1971, Bogota, 1971.
49. MONTERO, LUIS EDUARDO, "Bibliografia Sobre Credito Agricola Supervisado en Colombia," IICA-CIRA, Bogota, mimeografiado No. 9, 1965.
50. OHIO STATE UNIVERSITY, "Ohio State University Agricultural Research Project in Colombia - A Preliminary Report," Agricultural Finance Center, Columbus, Ohio, March 1966.

51. PLUMMER, JAMES L., "Preliminary Analysis of a Potential Mechanism for Reforming the Operation of Commercial Bank Savings Sections," working paper, U.S. Embassy, Bogota.
52. RAMON, JESUS M., "La Extension Rural en Colombia," ICA, Junio 22, 1972.
53. REPUBLIC OF COLOMBIA, Plan de Desarrollo, Tercera Parte: Agricultura, Departamento Nacional de Planeacion, Bogota, 1971.
54. SAMPER, ARMANDO, Politica de Transformacion Rural, Serie de Planeamiento No. 6, Ministerio de Agricultura, Bogota.
55. SCHENCK, MARLI, "Agricultural Credit in Colombia," Yale University, mimeographed paper, 1966.
56. SOLES, ROGER E., "Rural Land Invasions in Colombia: A Study of the Macro- and Micro-Conditions and Forces Leading to Peasant Unrest," unpublished Ph.D. dissertation, University of Wisconsin, 1972.
57. SUAREZ, G.A. and MARTINEZ, A.D., Fuentes de Credito Agropecuario in Colombia: Analisis y Proyecciones, Facultad de Ciencias Humanas, Universidad Nacional de Colombia, Bogota, Junio de 1970.
58. SUPERITENDECIA BANCARIA, "Informe al Senor Presidente de la Republica del Grupo de Estudios de las Instituciones Financieras," 30 de Junio de 1971, Revista Superintendencia Bancaria No. 363, Agosto de 1971.
59. TERNENT, JAMES A. and ALFONSO VERGARA SAMUDIO, "Problemas del Pequeno Agricultor en Climas Calidos del Tolima," Monographia No. 9, Centro de Estudios sobre Desarrollo Economico, Universidad de los Andes, Agosto de 1960.
60. UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID), "Agricultural Sector Analysis Paper," on file USAID, April 22, 1972, Bogota.
61. VAN TEUTEM, ONNO, "Sintesis del Proyecto de Credito Agricola Supervisado en el Departamento de Caldas - Colombia," IICA-CIRA, Bogota, mimeografiado No. 30, 1968.
62. VAZ, JORGE MARQUEZ, et al., "Programa de Credito Agricola Para Reforma Agraria," IICA-CIRA, Bogota, mimeo, 1970.
63. VEGA FRANCO, EDUARDO, "Consecuencias Financieras de la Capitalizacion de la Caja," Carta Agraria, No. 257, Febrero 1972.
64. VELEZ HERNANDEZ, JAIME, "Credito Rural," mimeographed paper.
65. \_\_\_\_\_, "Politica de Credito de la Caja Agraria," en Carta Agraria, No. 241, Agosto 1970.

## LIST OF APPENDIX TABLES

- Table A. Historical development of Caja Agraria's field offices, loan portfolio and savings
- Table B. Yearly exchange rates used for converting pesos to dollars
- Table C. Loans outstanding in the Caja Agraria by activity for selected years
- Table D. Loans outstanding in the Caja Agraria by activity for selected years (in dollars)
- Table E. Caja Agraria fertilizer sales by nutrient, 1965-1971
- Table F. Caja Agraria seed sales of potatoes, wheat, and corn, 1965-1971
- Table G. Number of delinquent borrowers and value of due loans as a percent of the Department total, by borrower size and Department, November 9, 1971
- Table H. Distribution of small farmer loans: number of borrowers, value of loans outstanding and value of loans due, by Department and zone, November 9, 1971

191

Table A. Historical development of Caja Agraria's field offices, loan portfolio and savings<sup>a</sup>

Year	Credit Offices	Loan Portfolio	Savings Deposits	Paid Capital <sup>b</sup>	Turnover
		A	B	C	$\frac{A}{B + C}$
		(\$000)	(\$000)	(\$000)	
1935	23	1,329	1,123	702	.72
1940	27	6,130	2,748	1,297	1.52
1945	97	11,615	16,286	3,624	.58
1950	127	32,831	24,130	12,238	.90
1955	230	104,406	46,507	34,321	1.29
1960	424	110,627	48,223	34,204	1.34
1965	600	106,355	40,174	26,160	1.60
1970	661	230,211	89,358	29,222	1.94
1971	680	263,665	99,042	27,167	2.09

<sup>a</sup>See Table B for the exchange rates used for converting pesos to dollars. The 1935 - 1950 figures were converted at the 1950 rate. These are non-deflated figures and include non-agricultural loans.

<sup>b</sup>Authorized capital is \$30 million at 1971 rate (600 million pesos).

SOURCE: Caja, yearly reports.

Table B. Yearly exchange rates used for converting pesos to dollars

Year	Exchange rates: Colombian Pesos/U.S. Dollar
1950	3.70
1955	4.16
1960	7.33
1961	8.82
1962	11.11
1963	9.99
1964	12.82
1965	18.29
1966	16.30
1967	14.73
1968	16.38
1969	17.36
1970	18.48
1971	20.00
1972	21.00

SOURCE: USAID, Bogota and United Nations, Monthly Bulletin of Statistics.

Table C. Loans outstanding in the Caja Agraria by activity for selected years. Amount of loans outstanding as of June 30 of the year indicated.

Activity	1950	1960	1965	1966	1967	1968	1969	1970	1971
(In millions of pesos)									
<b>Agriculture</b>									
Cotton	1.3	17.3	28.6	49.1	46.4	69.5	88.2	179.8	181.4
Rice	1.6	14.2	75.5	108.3	100.3	166.2	222.9	227.4	280.6
Banana	.1	3.1	4.0	3.9	28.2	35.6	30.1	32.8	45.3
Coffee	20.3	69.3	123.1	137.4	152.5	181.7	218.7	219.7	272.9
Sugar Cane	2.1	13.3	46.4	52.3	54.7	63.5	70.7	73.7	83.9
Vegetables	.4	3.8	15.0	21.8	7.6	13.3	41.5	51.0	33.5
Corn	1.2	9.8	64.5	84.3	93.2	115.2	159.6	189.7	253.5
Potatoes	4.7	12.4	39.4	48.8	60.1	93.3	84.9	103.7	132.7
Other crops	12.4	45.6	118.1	160.2	197.8	243.8	261.4	281.2	402.0
Machinery	4.5	60.4	102.3	128.4	149.2	138.7	119.6	248.7	229.8
Land (crop)	1.2	52.5	72.4	62.2	101.8	108.4	211.9	156.6	186.3
Coops	1.1	1.1	.3	.1	1.1	8.9	1.4	4.5	48.8
Other	7.5	29.7	79.2	81.3	110.1	106.1	76.0	87.9	101.0
Sub-Total	58.4	332.5	768.8	938.1	1,103.0	1,344.2	1,586.9	1,856.7	2,251.7
<b>Livestock</b>									
Cattle Breeding	28.1	236.0	524.8	534.6	570.5	790.6	851.6	1,140.2	944.3
Dairy	3.9	25.3	55.0	65.1	73.7	112.0	155.0	170.6	196.2
Other cattle	26.3	34.7	61.1	58.5	61.6	82.6	132.8	128.8	151.0
Pasture	-	39.4	72.4	67.8	58.3	91.3	133.6	105.2	77.9
Land	.1	16.3	22.0	19.3	35.7	32.9	80.4	37.0	51.1
Machinery	.1	2.7	-	13.0	8.9	11.5	69.4	10.9	13.1
Other	4.0	29.1	114.4	123.8	142.8	169.9	287.2	181.3	305.4
Sub-Total	62.5	383.5	849.7	882.1	951.5	1,290.8	1,710.0	1,774.0	1,739.0
<b>Other</b>									
Housing	-	45.9	106.9	116.3	86.5	113.4	187.3	154.3	176.5
Industry-mining	.6	2.5	99.4	109.6	143.4	126.7	153.8	124.0	150.5
Other	-	46.5	120.4	95.5	141.5	140.0	330.5	345.3	271.5
Sub-Total	.6	94.9	326.7	321.4	371.4	380.1	671.6	623.6	598.5
TOTAL	121.5	810.9	1,945.2	2,141.6	2,425.9	3,015.1	3,968.5	4,254.3	4,589.2

SOURCE: Caja yearly reports.

194

Table D. Loans outstanding in the Caja Agraria by activity for selected years. Amount of loans outstanding as of June 30 of the year indicated.

Activity	1950	1960	1965	1966	1967	1968	1969	1970	1971
(In millions of dollars)									
<b>Agriculture</b>									
Cotton	.35	2.36	1.56	3.01	3.15	4.24	5.08	9.73	9.07
Rice	.43	1.94	4.13	6.64	6.81	10.15	12.84	12.31	14.03
Banana	.03	.42	.22	.24	1.91	2.17	1.73	1.77	2.27
Coffee	5.49	9.45	6.73	8.43	10.35	11.09	12.60	11.89	13.64
Sugar Cane	.57	1.81	2.54	3.21	3.71	3.88	4.07	3.99	4.20
Vegetables	.11	.52	.82	1.34	.52	.81	2.39	2.76	1.68
Corn	.32	1.34	3.52	5.17	6.33	7.03	9.19	10.27	12.67
Potatoes	1.27	1.69	2.15	2.99	4.08	5.69	4.89	5.61	6.63
Other crops	3.35	6.22	6.46	9.83	13.43	14.88	15.06	15.22	20.10
Machinery	1.22	8.23	5.59	7.88	10.13	8.47	6.89	13.46	11.49
Land (crop)	.32	7.16	3.96	3.81	6.91	6.62	12.21	8.47	9.32
Coops	.30	.15	.02	.01	.07	.54	.08	.24	2.44
Other	2.02	4.05	4.33	4.99	7.48	6.49	4.38	4.75	5.05
Sub-Total	<u>15.78</u>	<u>45.36</u>	<u>42.03</u>	<u>57.55</u>	<u>74.88</u>	<u>82.06</u>	<u>91.41</u>	<u>100.47</u>	<u>112.59</u>
<b>Livestock</b>									
Cattle Breeding	7.59	32.20	28.69	32.80	38.74	48.27	49.06	61.71	47.21
Dairy	1.05	3.45	3.01	3.99	5.00	6.84	8.93	9.23	9.81
Other cattle	7.11	4.73	3.34	3.59	4.18	5.04	7.65	6.97	7.55
Pasture	-	5.38	3.96	4.16	3.96	5.57	7.70	5.69	3.90
Land	.03	2.22	1.20	1.18	2.42	2.01	4.63	2.00	2.55
Machinery	.03	.36	-	.80	.60	.70	3.99	.59	.66
Other	1.08	3.98	6.25	7.60	9.70	10.37	16.54	9.81	15.27
Sub-Total	<u>16.89</u>	<u>52.32</u>	<u>46.46</u>	<u>54.12</u>	<u>64.60</u>	<u>78.80</u>	<u>98.50</u>	<u>95.00</u>	<u>86.95</u>
<b>Other</b>									
Housing	-	6.26	5.84	7.13	5.87	6.92	10.79	8.35	8.83
Industry-mining	.16	.34	5.43	6.72	9.74	7.74	8.86	6.71	7.52
Other	-	6.35	6.59	5.86	9.60	8.55	19.04	18.68	13.57
Sub-Total	<u>.16</u>	<u>12.95</u>	<u>17.86</u>	<u>19.72</u>	<u>25.21</u>	<u>23.21</u>	<u>38.69</u>	<u>33.74</u>	<u>29.92</u>
<b>TOTAL</b>	<u><u>32.83</u></u>	<u><u>110.63</u></u>	<u><u>106.35</u></u>	<u><u>131.39</u></u>	<u><u>164.69</u></u>	<u><u>184.07</u></u>	<u><u>228.60</u></u>	<u><u>230.21</u></u>	<u><u>229.46</u></u>

SOURCE: Caja yearly reports.

192

Table E. Caja Agraria fertilizer sales by nutrient, 1965-71

Year	Nutrients				Total Value	
	N	P <sub>2</sub> O <sub>2</sub>	K <sub>2</sub> O	Total	Current	US\$ <sup>a</sup>
	Metric tons				thousands	
1965	5,459.5	18,350.7	8,099.3	31,909.5	84,280	4,608
1966	5,962.5	19,262.9	8,774.0	33,999.4	98,439	6,039
1967	11,370.2	23,857.6	11,068.5	46,296.3	157,253	10,676
1968	9,743.8	25,608.8	11,404.9	46,757.5	175,047	10,687
1969	9,049.0	22,775.0	10,646.0	42,470.0	164,892	9,498
1970	15,274.0	27,578.0	13,402.2	54,254.2	220,949	11,956
1971	16,134.0	29,276.2	12,895.9	58,306.1	244,226	12,211

<sup>a</sup>Current pesos converted to dollars using the free exchange rates shown in Table B.

196.

Table F. Caja Agraria seed sales of potatoes, wheat, and corn, 1965-1971

Year	Potatoes		Wheat		Corn	
	Metric tons	Value <sup>a</sup>	Metric tons	Value	Metric tons	Value
1965	-	-	2,984	489	1,297	319
1966	-	-	3,113	604	1,428	394
1967	244	732	3,676	749	2,197	671
1968	373	68	4,494	823	1,732	476
1969	1,085	188	2,773	559	2,010	695
1970	1,397	227	1,654	313	1,655	537
1971	735	110	1,639	287	1,833	556

<sup>a</sup>Converted to dollars using the exchange rates shown in Table B.

SOURCE: Caja, Cresemillas records.

197.

Table G. Number of delinquent borrowers and value of due loans as a percent of the Department total, by borrower size and Department, November 9, 1971,

Zone and Department	Rates of delinquency <sup>b</sup>					
	Percentage of borrowers			Percentage of loan value		
	S <sup>a</sup>	M	L	S	M	L
	(percent)					
<b>Caribbean Zone</b>						
Atlántico	37.0	41.5	44.0	26.3	45.0	41.7
Bolívar	31.2	39.1	46.7	29.0	34.0	38.6
Cesar	38.2	44.1	60.9	44.0	33.8	33.6
Córdoba	34.6	22.7	26.9	30.9	21.0	17.6
Gujira	40.4	38.3	45.5	43.1	33.8	41.5
Magdalena	33.9	26.2	23.0	33.4	27.3	26.8
Sucre	30.7	10.7	14.0	25.4	14.5	11.7
Total	33.9	32.1	47.5	32.5	30.5	31.8
<b>Andean Zone</b>						
Antioquia	10.8	11.3	7.1	12.9	12.5	5.1
Boyaca	8.1	5.8	9.3	8.2	14.0	17.5
Caldas	4.9	5.9	18.9	5.3	8.6	16.8
Caqueta	18.5	17.9	-	19.5	20.0	-
Cauca	12.3	17.6	20.5	21.2	18.8	39.8
Cundinamarca	8.1	17.5	42.0	15.0	17.5	9.0
Choco	28.6	-	-	16.0	6.2	-
Hulla	7.0	8.7	5.7	6.3	11.5	11.4
Meta	24.9	19.8	19.6	30.3	20.8	13.2
Nariño	13.9	17.0	9.9	14.2	14.8	11.4
N. Santander	7.5	9.3	15.2	9.7	11.7	5.1
Quindío	5.5	6.2	26.3	4.4	4.9	19.2
Risaralda	7.6	4.6	-	6.4	3.6	-
Santander	11.7	17.5	18.6	13.0	22.6	20.3
Tolima	11.8	9.0	4.2	12.0	11.1	4.4
Valle	8.5	12.1	15.8	9.6	10.8	9.3
Territorios	26.2	8.1	33.3	26.7	15.3	16.3
Total	10.8	11.8	20.5	12.8	13.7	10.3
Country Total	16.1	17.5	31.9	17.6	18.7	17.5

<sup>a</sup>S = small borrower; M = medium size borrower; and L = large borrower. All figures are in terms of the loans outstanding for the date indicated.

<sup>b</sup>All percentages are in terms of the Department total.

SOURCE: Summary of unpublished Caja data.

Table H. Distribution of Caja small farmer loans: number of borrowers, value of loans outstanding and value of loans due, by Department and Zone, November 9, 1971.

Zone and Department	Loans Outstanding				Loans Due					
	Number of Borrowers	Percent of Total <sup>a</sup>	Value (\$000)	Percent of Total <sup>a</sup>	Number of Borrowers	Percent delinquent <sup>b</sup>	Percent of Total <sup>a</sup>	Value (\$000)	Percent delinquent <sup>c</sup>	Percent of Total <sup>a</sup>
<b>Caribbean Zone</b>										
Atlantico	9,602	2.5	3,924	2.6	3,555	37.0	5.7	1,051	26.3	4.0
Bolivar	18,560	4.8	6,105	4.0	5,798	31.2	9.4	1,769	29.0	6.7
Cesar	7,613	2.0	4,727	3.2	2,905	38.2	4.7	2,078	44.0	7.9
Cordoba	19,805	5.1	7,099	4.8	6,847	34.6	11.0	2,196	30.9	8.4
Guajira	4,590	1.2	3,911	2.6	1,855	40.4	3.0	1,684	43.1	6.4
Magdalena	9,984	2.6	4,562	3.1	3,380	33.9	5.5	1,526	33.4	5.8
Sucre	18,762	4.9	5,932	4.0	5,765	30.7	9.3	1,510	25.4	5.7
Sub-total	88,916	23.1	36,260	24.3	30,105	33.9	48.6	11,794	32.5	44.9
<b>Andean Zone</b>										
Antioquia	28,830	7.5	9,608	6.4	3,109	10.8	5.0	1,237	12.9	4.7
Boyaca	40,385	10.6	12,191	8.2	3,281	8.1	5.3	1,000	8.2	3.8
Caldas	11,051	2.9	5,526	3.7	538	4.9	.9	295	5.3	1.1
Caqueta	5,766	1.5	2,448	1.6	1,067	18.5	1.7	477	19.5	1.8
Cauca	20,452	5.3	5,555	3.7	2,506	12.3	4.0	1,179	21.2	4.5
Cundinamarca	34,882	9.1	13,705	9.2	2,814	8.1	4.5	2,058	15.0	7.8
Choco	2,172	.6	671	.4	621	28.6	1.0	108	16.0	.4
Hulla	16,649	4.3	7,657	5.1	1,169	7.0	1.9	482	6.3	1.8
Meta	7,868	2.0	4,758	3.2	1,962	24.9	3.2	1,442	30.3	5.5
Narino	26,311	6.8	10,359	6.9	3,664	13.9	5.9	1,468	14.2	5.6
N. Santander	14,155	3.7	5,071	3.4	1,060	7.5	1.7	489	9.7	1.9
Quindio	3,703	1.0	2,637	1.8	205	5.5	.3	117	4.4	.4
Risaralda	6,841	1.8	3,104	2.1	519	7.6	.8	197	6.4	.7
Santander	35,187	9.1	10,485	7.0	4,126	11.7	6.7	1,362	13.0	5.2
Tolima	24,802	6.4	10,989	7.4	2,929	11.8	4.7	1,321	12.0	5.0
Valle	11,631	3.0	5,643	3.8	986	8.5	1.6	539	9.6	2.1
Territorios	5,143	1.3	2,718	1.8	1,346	26.2	2.2	727	26.7	2.8
Sub-Total	295,828	76.9	113,125	75.7	31,902	10.8	51.4	14,498	12.8	55.1
Country Total	384,744	100.0	149,385	100.0	62,007	16.1	100.0	26,292	17.6	100.0

<sup>a</sup>Percent of the total country portfolio.

<sup>b</sup>Percentage of number of small borrowers in Department.

<sup>c</sup>Percentage of value of outstanding loans in Department.

SOURCE: Summary of unpublished Caja data.

### Sources of Data and Other References

The sources for the data used in the paper have been indicated when discussed in the paper. Generally speaking, this paper has been based on data gathered in the Caja since few outside studies of the Caja activities have been made. The nature of the data presented in the paper has also been discussed in the text when appropriate but perhaps a general assessment of the data used is in order.

1. The tables and discussion relating to "numbers" of borrowers should be analyzed with care. Given the existing data collection procedures in the Caja, it is very difficult for the bank to know the exact number of "individual" borrowers. Many farmers have more than one loan, or they may borrow from more than one office, both of which can distort any number figure unless a central file is maintained where each individual is identified with a unique identification number and the data classified on that basis. In other words, the "number of borrowers" discussed in this paper is only a proxy for the true number of borrowers.
2. The classification of borrowers by value of total assets may also lead to some errors if farmers underestimate their assets, especially if they wish to be classified in a lower group to take advantage of the special exemptions (this holds for the small borrower classification, for example). More farmers may show up in the small farmer group than actually exist. The sub-groups near the edges of the ranges will most likely be affected by this bias.
3. No outside studies are available to check the accuracy of the Caja data (this report has been based largely on Caja data). It is likely farmers use the credit for purposes other than as indicated in the yearly statistics but it is unknown how much difference there is between actual use and indicated use. The data classification by type of collateral used should be accurate.
4. The repayment rates are only indicators of the true rates as discussed in footnote 15. Again, no sample survey data are available to show how closely the published data conform to the real rates. The figures provided by the Caja are thought to be accurate. However, to calculate true repayment rates additional data must be collected and such data are usually difficult to collect by hand.
5. The tentative conclusions and observations presented in the paper are the result of (1) interviews with Caja officials, international lending agencies, and with other governmental personnel, (2) analyzing the data provided by the Caja, (3) analyzing other related data gathered from other sources, and (4) personal research experience in Colombia for two years (1963-1964).

200.