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STAFF APPRAISAL REPORT

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

June 6, 1979

Regional Projects Department
Latin America and Caribbean Regional Office

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CURRENCY EQUIVALENTS

(average for year 1978 and used in this report)

Currency Unit = Colombian Peso (Col\$)
US\$1 = Col\$ 39.3

WEIGHTS AND MEASURES

Metric System

GLOSSARY OF ABBREVIATIONS

(see next page)

GOVERNMENT OF COLOMBIA

FISCAL YEAR

January 1 to December 31

THIRD AGRICULTURAL CREDIT PROJECT - INCORAGlossary of Abbreviations

BG	Banco Ganadero - Livestock Bank
BOR	Banco de la Republica - Bank of the Republic (Central Bank)
CAJA	Caja de Credito Agrario, Industrial y Minero - Agricultural, Industrial and Mining Credit Bank
CECORA	Central de Cooperativas de la Reforma Agraria - Union of Agrarian Reform Cooperatives
DAFO	Division de Auditoria Financiera y Operativa (Contraloria General) - Financial and Operative Audit Division
FEDECAFE	Federacion Nacional de Cafeteros de Colombia - National Federation of Coffee Growers of Colombia
FFAP	Fondo Financiero Agropecuario - Agricultural Financing Fund
ICA	Instituto Colombiano Agropecuario - Colombian Agricultural Institute
IDB	Banco Inter-Americano de Desarrollo - Inter-American Development Bank
IDEMA	Instituto de Mercadeo Agropecuario - Institute of Agricultural Marketing
INCORA	Instituto Colombiano de la Reforma Agraria - Colombian Institute for Agrarian Reform
IRDP	Programa de Desarrollo Rural Integrado - Integrated Rural Development Program
MB	Junta Monetaria - Monetary Board
PAN	Plan Nacional de Alimentacion y Nutricion - National Food and Nutrition Plan
PMEU	Unidad de Monitoria y Evaluacion del Proyecto - Project Monitoring and Evaluation Unit
SAC	Subgerencia de Asentamientos Campesinos (INCORA) - Division of Agrarian Settlements
SENA	Servicio Nacional de Aprendizaje - National Apprenticeship Service

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This report is based on the findings of an appraisal mission which visited Colombia during November/December 1978. The mission comprised Messrs. G. Rioseco (Mission Leader), F. Portilla, J. Yaron, J. Intrator, and Ms. D. Babelon (Bank), and R. Gallagher (Consultant).

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MAP

IBRD 14212 - Project Areas

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

I. BACKGROUND

A. The Agricultural Sector

Agriculture in the Economy

1.01 Over the last five years (1973-77), total GDP (in 1970 prices) increased at an annual average rate of 5.4%, whereas growth of the agricultural sector, highly erratic, averaged an annual rate of 4.0% in the same period. Performance during this period was somewhat improved compared with the 1960-70 period, in which the sector's GDP grew at an average of 3.5% per annum and total GDP by 5.2% per annum. The agricultural sector share of GDP has decreased from about 34% in 1960 to an average of 28% in the 1975-77 period, with 14% contributed by the crop subsector, 10% by the livestock subsector, and 4% by the fishing, hunting and forestry subsectors (Annex 3, Table 1). Of an estimated population of about 25.0 million in 1977, nearly 9 million, or 37%, live in rural areas, and 30% of the economically active labor force is engaged in the agricultural sector. Average GDP per capita in Colombia is about US\$710 (1977), disguising a skewed income distribution and important differences between urban and rural areas.

1.02 Considerable efforts have been made in Colombia to diversify exports, and non-traditional exports have grown continuously, representing an average of 44% of total merchandise exports during the 1975-77 period compared with 27% in 1967. During the 1975-77 period, agricultural sector exports averaged about \$1.340 million, representing 73% of the total merchandise exports of Colombia. Export performance, however, is highly influenced by increases in coffee prices, and, although the volume of coffee exports decreased by about 46% between 1975 and 1977, the value of coffee exports more than doubled, accounting for nearly all of the increase of value of exports of the economy. In addition to coffee, representing 76% of the sector's total exports, main exports in order of importance are: cotton, bananas and plantain, livestock (beef and cattle), sugar, rice, flowers and tobacco. The agricultural sector has a highly favorable balance of trade, with total food imports averaging about 11% of total exports. Apart from wheat, representing 32% of total food imports, and temperate fruits, main imports which could be replaced by domestic production are vegetable oils, feed and food grains and milk.

1.03 Aggregate domestic demand for food products in Colombia has grown rapidly (3.8% p.a. during 1970-75), and in recent years has nearly equaled the growth in output of the sector. However, considering the export demand, the agricultural sector has not been able to produce adequate supplies at stable consumer prices, which has led to rapid increases in food prices relative to non-food items since 1970. Given the fact that almost half of the consumer's total expenditures are for food, these food price increases have been the major inflationary factor in the country.

Land Resources and Uses

1.04 An exceptional regional diversity in altitudes (from sea level to 5,800 m), soils and climates (from tropical to alpine) enables Colombia to produce a wide range of agricultural commodities. Out of a total area of 114 million ha, the agricultural census of 1970/71 showed that only 31 million ha, or 27% of the total, were occupied by the existing 1.2 million farm units -- about 5.0 million ha were cropped; 17.5 million ha were in pastures; and 8.5 million ha were fallow or unused.

1.05 There are six main farming systems in Colombia:

- (a) large-scale extensive ranching on the lowlands of the Caribbean Andean valleys; 80% of the 22.5 million head of cattle in 1974 were found in those regions;
- (b) medium- and large-scale mechanized farming in the inter-Andean valleys; this type has been expanding steadily and mainly produces cotton, soybeans, oil palm and sugarcane;
- (c) small- and medium-scale farming in the inter-Andean valleys; this type has also been expanding steadily and produces mainly cotton, with coffee as the main cash crop;
- (d) farming by organized settlements of small farmers on land acquired and reclaimed by the Government, mainly in the Caribbean lowlands, but also in the Amazon basin;
- (e) farming by spontaneous colonization settlers on up to 1 million ha a year in tropical rainforests or in the Eastern Plains; and
- (f) high-altitude, small-scale farming (less than 20 ha) in the Andean highlands. In these densely populated areas, the average farm size is 4 ha. These farms are often on poor soils and steep slopes and produce mostly for family subsistence, although surpluses are marketed.

Land Tenure and Rural Incomes

1.06 Colombian regions are extremely heterogeneous in terms of altitude, climate and soils. The diversity of conditions of the Andean highlands, the lowlands and valleys provides Colombia with a wide range of agricultural production possibilities, which has led to diverse types of farms. According to the 1970/71 census, small-scale farms of less than 10 ha accounted for 13% of a total 1.2 million farm units and 7% of the 31 million ha in farms; overall, some 83% of all farmers had less than 20 ha and operated only 13% of the farmland. In addition, 200,000 rural families dependent on agriculture were landless. Income distribution in the sector is closely related

to the distribution of land. In 1976, 55% of the rural population had incomes below the relative poverty income level as defined by the Bank (US\$153 per capita in 1977 dollars). Given the high rural-urban migration rates over the last years and the increase in real wages in rural areas, rural unemployment has decreased to an estimated 15% for 1977.

1.07 Since 1961, the Colombian Institute for Agrarian Reform (INCORA) has been involved in programs of distribution of public land (4.9 million ha as of June 1978) and redistribution of unused private land (0.7 million ha) benefitting a total of about 200,000 families. INCORA's activities are associated, to varying degrees, with investments in land reclamation and infrastructure and the provision of supervised credit and technical assistance. However, most of the land distributed so far has been assigned to families already occupying the land. INCORA's land titling activities are limited mostly to distributing titles to small-scale farmers on public land in colonization areas. In recent years INCORA, and particularly its land acquisition program, has been subject to considerable criticism and political resistance. As a result land acquisition through both the expropriation of land and termination of private ownership has been at a standstill since 1974. Beneficiaries of INCORA constitute the target group of the proposed project.

Production and Support Services

1.08 Marketing. Marketing of agricultural products is one of the main bottlenecks for agricultural development. The public sector role in marketing primarily involves: (a) control and direct intervention, and (b) planning and regulating. The main institutions that intervene in the marketplace are the Institute of Agricultural Marketing (IDEMA) and the Agricultural, Industrial and Mining Credit Bank (CAJA). IDEMA intervention takes the form of purchases through price support schemes, sales, imports and maintenance of regulatory stocks of basic foods, while CAJA intervenes in the sale of farm inputs. The National Price Superintendency controls retail prices of selected products. In the area of planning and regulating, the Government has created, or assisted in the creation of, several mixed economy companies. Among these are the Union of Agrarian Reform Cooperatives (CECORA), wholesale and farmers markets, and other enterprises marketing perishables and non-perishable agricultural products, all of which work in the area of credit, information, storage and distribution, information, training, and the like to reduce costs and improve the marketing system. Because of IDEMA's weak performance, however, the Government's market stabilization policies have only a marginal impact and agricultural prices undergo wide fluctuations, with marketing margins remaining at relatively high levels.

1.09 Research, Extension and Technical Assistance. The main institutions responsible for research and technical assistance are the Colombian Agricultural Institute (ICA) and the National Institute for Natural Renewable Resources and the Environment. Other institutions involved in technical assistance or farmers' training are INCORA, the National Federation of Coffee Growers of Colombia (FEDECAFE), the National Apprenticeship Service (SENA) and the

Departmental Secretariats of Agriculture. This multiplicity of entities involved in extension work and the lack of coordination among them has seriously limited efficiency, but recent efforts, particularly under the Integrated Rural Development Program (IRDP), partially financed by the Canadian International Development Agency, Inter-American Development Bank (IDB) and the Bank (Loan 1352-CO), has led to substantial improvement.

1.10 Current agricultural credit legislation requires adequate provision of technical assistance to sub-borrowers; consequently, there is a high demand for agricultural extension services. Total professional and technical staff of the various Government and private institutions providing technical assistance was about 4,100 in 1976. Besides INCORA, ICA is the largest extension agency in the country, providing most of the technical assistance to small farmers (under 10 ha). It is also responsible for registering and monitoring the technical assistance provided by about 3,000 private agricultural extension agents. In the banking sector, CAJA and the Livestock Bank (BG) maintain their own staffs to provide technical assistance to their borrowers, with CAJA also relying on extension services provided by INCORA and ICA. Among the producer associations in the agricultural sector, FEDECAFE employs the largest number of extension staff. Rice and cotton growers also receive considerable help from their federations, which extend new technology to their members.

Government Development Strategy

1.11 The main objectives of Colombia's development strategy, as stated in the 1975-78 National Development Plan, are to raise the incomes and standards of living of the marginal sectors of the society, particularly by reducing the income gap between urban and rural areas and by improving nutrition, and to secure higher export earnings. In line with the above objectives, top priority has been given to the development of the agricultural sector and to investments in rural infrastructure. Productivity, employment and incomes of the existing small farmers would be increased through the implementation of integrated rural development programs, including the provision of minimum technology packages, supporting services and basic rural infrastructure. Land redistribution would be carried out only in response to local circumstances in areas with both a high pressure on land and unequal distribution, but it is not regarded as the primary means for reducing rural poverty. The modern agricultural sector receives attention in two respects -- as the main source of foreign exchange earnings and as a source of foodstuff not produced by the traditional sector but essential to the implementation of the National Food and Nutrition Plan (PAN). Additional credit resources and export incentives would be directed at products in which Colombia is believed to have a comparative advantage on international markets. The proposed project would fit closely into these development objectives by promoting increases in production, employment, and rural incomes, and by integrating small-scale farmers into modern production systems.

1.12 PAN is implemented through two programs. One is the Nutrition Program, which includes a set of integrated and mutually reinforcing actions in the field of processing, consumption and improved biological use of nutritive foods. This program is being implemented with assistance from UNDP,

USAID and the Bank (Integrated Nutritional Improvement Project Loan 1583-CO) and indirectly through the Second Agricultural Credit Project (Loan 1357-CO), which finances the production of food required for the Nutrition Program. The other program is the IRDP, a comprehensive integrated program of assistance focused on actual and perceived needs in specific regions where rural poverty is widespread. Priority is given to developing small-scale farmer production-oriented programs, associated with improvements to supporting and social services and infrastructure, and to establishing a coordinated institutional structure to provide assistance to the target population.

1.13 A new Government took office in August 1978 and, while the National Development Plan objectives remain valid, indications are that more emphasis is being placed on production aspects to serve as a solution to social problems, which are perceived especially in terms of employment creation. Growth of the industrial sector and rural development are considered to be complementary, with a considerable emphasis on agro-industries. Especially with a view to reducing rural/urban migration, the new Government confirmed the importance it attaches to IRDP and PAN and to providing assistance through INCORA to existing beneficiaries of the agrarian reform/colonization programs. The proposed project has been approved by the National Council for Economic Social Policy and it is scheduled for the second semester of 1979.

B. The Banking System and Agricultural Credit

1.14 Monetary and banking policy is determined by the Monetary Board (MB), chaired by the Minister of Finance and Public Credit, which regulates loans and deposits, compulsory investment, and rediscounting. The Minister of Agriculture and the General Manager of the Bank of the Republic (BOR) are members of MB.

1.15 The policies of MB are implemented by BOR, which, in addition to performing the functions of a Central Bank, administers the special funds that have been established by the Government with both internal and external resources through which credit can be channeled to specific sectors according to Government priorities. Of particular importance to the agricultural and agro-industry sectors are Agricultural Financing Fund (FFAP), Fund for Private Investment, and Industrial Financing Fund. The FFAP is managed by BOR's Agricultural Credit Department. Recently, BOR has established a new fund, Guarantee Fund for Agricultural Credit, with proceeds realized from recovery of loans granted with USAID assistance. The fund, expected to be operational before mid-1979, will provide a partial guarantee to banking institutions for loans to small farmers.

1.16 The major financial intermediaries in the private sector are 28 commercial banks and an increasing number of development finance companies, the latter specializing in medium- and long-term loans and equity financing. Institutions of mixed ownership are responsible for agricultural credit: CAJA, which provides the largest share of the country's total credit for crop and

livestock production; the Agricultural Development and Export Finance Corporation, which finances agricultural development, processing and exports; BG, which is engaged principally in livestock finance, and the Banco Cafetero. Although not a bank, INCORA has, since 1963, been a significant agent in channeling credit to agriculture, particularly to small farmers.

1.17 During the 1975-77 period, total institutional credit (new loans) to the agricultural sector increased, in nominal terms, by 80%, from US\$368 million in 1975 to US\$662 million in 1977. Total outstanding portfolio to the agricultural sector was about US\$360 million at the end of 1977, representing about 20% of the total outstanding credit. Main sources of agricultural credit are FFAP resources, through various financial intermediaries (39%), and CAJA (33%) (Annex 3, Table 1).

1.18 Recent developments in the financial sector have been dominated by an accumulation of international reserves induced by higher coffee prices on world markets. Monetary policy has been directed at attempting to curb the rate of domestic credit expansion so as to neutralize the potential inflationary impact of sharply increased earnings. Although the credit policy pursued by BOR offsets a significant part of the increase in coffee export earnings, it was not sufficient to prevent a rapid expansion of the currency issue over the past years. This brought about relatively high rates of inflation, and rates of interest from the main sources of institutional credit to the agricultural sector lagged behind the general price increases, which resulted in an overall shortage of funds for the sector and credit rationing by the financial intermediaries. To adjust for this situation, BOR decided (in December 1978) to increase FFAP lending rates, and a similar action was taken recently by CAJA (April 1979). The current nominal on-lending rates of interest from the main sources of credit to the agricultural sector are as follows:

	<u>Short Term</u> %	<u>Medium and Long Term</u> %
<u>FFAP</u>		
General Agriculture	18	18
Subsistence Crops <u>/a</u>	12	-
General Livestock	18	18
Cattle for Fattening	21	-
Dairy Cattle	-	15-17
<u>CAJA</u>		
Ordinary Resources	16-22 <u>/b</u>	16-22 <u>/b</u>
Second Window	27	-
IRDP (Loan 1352-CO)	14-18 <u>/b</u>	14-18 <u>/b</u>
Development Loan Fund (USAID) <u>/c</u>	14-18 <u>/b</u>	14-18 <u>/b</u>
To INCORA Beneficiaries	14	14
<u>BG</u>		
Own Resources (IDB/USAID) <u>/c</u>	-	13
Revolving Fund (BG/INCORA) <u>/c</u>	-	15
<u>INCORA</u>		
Supervised Credit (USAID) <u>/c</u>	13	12
Planned Credit (IDB) <u>/c</u>	15	15
Caqueta (Loan 1118-CO)	15	20
Cordoba (Loan 1163-CO)	16	16
Land Sales to Beneficiaries	-	2-4

/a To increase production priority of food crops contemplated under the PAN Program (para 1.11). All farmers borrowing FFAP resources for industrial crop production are required to plant varying amounts of subsistence crops.

/b Depending on the value of total assets.

/c Roll-over funds from previous projects or programs.

1.19 As can be seen on the table, nominal interest rates for the agricultural sector range from 12% per annum to 27% per annum, depending on the type of institution, sub-borrower, and activities financed. However, effective interest rates differ further due to the method of calculation and collection. Current interest rates on FFAP resources are collected at the beginning of each quarter unless the term of the loan includes a grace period, in which case it is collected at the end of each quarter throughout the term of the loan. Similar procedures are utilized in CAJA's lending to medium- and large-scale farmers and private financial intermediaries. On all agricultural loans, individual borrowers are required to pay an annual amount equivalent to 1% of their outstanding loan balance for life insurance while large agricultural borrowers (assets, including land, in excess of Col\$500,000) have to pay an additional levy of 1% per annum on their outstanding loan balance toward a national Small Farmer Technical Assistance Fund handled by ICA.

C. Performance Under the On-Going INCORA Projects

1.20 Since 1966, the Bank has made 10 loans, totaling US\$230.6 million to Colombia for agricultural development. INCORA has been the executing agency for six: Atlantico I Irrigation (Loan 502-CO); First Agricultural Credit (Loan 624-CO); Caqueta Land Colonization - Phase I (Loan 739-CO); Second Atlantico Development (Loan 849-CO); Caqueta II - Rural Settlement (Loan 1118-CO); and Cordoba II - Agricultural Development (Loan 1163-CO).

1.21 Loans 502-CO, 624-CO and 739-CO, totaling US\$34.1 million, have been completed, and the rest, totaling US\$42.7 million, are on-going. PPARs have been prepared for Loans 502-CO and 624-CO and a PCR for Loan 739-CO. Overall performance of INCORA as executing agency has been satisfactory (Annex 1).

Second Atlantico Development Project (Loan 849-CO)

1.22 The project, which became effective in November 1972, comprises the second stage of INCORA's agrarian reform and development program in the Atlantico Department initiated under Loan 502-CO. The loan, originally for US\$5 million, was reduced to US\$2.2 million in January 1977, with readjusted total project costs being US\$4.3 million. The project would assist in the completion of INCORA's flood control and drainage program in the project area, a total of 12,400 ha for crop production and 4,600 ha for dairy production. The project consists of the design and construction of three main drains and associated subsidiary drains, 52 km of roads and project buildings; purchase equipment; acquisition, preparation and allocation of land to about 1,800 farmers; and provision of seasonal and long-term credit to dairy farmers and agricultural research, training and extension.

1.23 The project performance has been disappointing and little progress has been made. Recently on February 29, 1979, INCORA, with Government support has indicated that it will allocate the necessary resources to this project.

Caqueta II - Rural Settlement Project (Loan 1118-CO)

1.24 This project, which is the continuation of the completed Caqueta I Land Colonization Project (Loan 739-CO), became effective in April 1976. Total Bank financing is US\$19.5 million, out of US\$44.7 million total project costs. The project, which is helping small-scale farmers who live under hardship conditions, includes: (a) a credit program of about 3,200 long-term subloans for livestock purchase by settlers and 800 medium-term subloans for cattle fattening; and (b) an infrastructure component including construction of about 200 km of penetration roads and maintenance during implementation of about 1,000 km in the project area; construction of 30 primary schools, two health centers and 10 health posts; improvement of water and sewerage systems; and a forestry and erosion control component. The project infrastructure is expected to benefit about 12,000 settlers in the area.

1.25 Execution of the works undertaken is very good, but overall implementation is slow because INCORA has permanent liquidity problems. A revised implementation schedule prepared by INCORA indicates that, provided adequate

local counterpart funds are made available, project funds would be committed by the end of 1980. However, due to delays in implementation and unexpectedly high rates of inflation, about US\$7.6 million in additional counterpart funds will be required to complete the productive and social infrastructure components envisaged at appraisal.

Cordoba Second Agricultural Development Project (Loan 1163-CO)

1.26 Effective since March 1976, the Bank loan finances US\$21 million out of a total of US\$35.7 million in project cost. The project includes the rehabilitation and completion of a 40,000-ha drainage system, on-farm development on 20,000 ha; medium- and long-term credit to small farmers for on-farm development, and purchases of machinery and livestock; and a program to improve infrastructure for education, health services, village water supply and electrification. The project would benefit about 3,800 rural families.

1.27 Initial implementation problems due to the reorganization of INCORA and the transfer of the civil works to HIMAT have been resolved and satisfactory progress has been made during 1978 in the implementation of the works for drainage, flood protection, roads and bridges. According to HIMAT, the remaining civil works should be completed by the end of 1980; however, a continued escalation of construction costs is causing cost overruns of about 60% of the original estimates. With the exception of rural electrification, which has been completed, progress in the implementation of the remaining social infrastructure components (education, health and water supply) has been slow. The main reason for the poor performance of these components is the precarious financial situation of INCORA. Also, the absence of sufficient counterpart funds is seriously affecting the credit component of the project: during 1978 INCORA approved subloan applications equivalent to 35% of the total amount programmed for that year.

Summary and Conclusions

1.28 On balance, INCORA's performance during the implementation of the previous Bank projects (Annex 1) was satisfactory; however, during recent years (1976-78), INCORA's capabilities as executing agency for Bank-financed projects have deteriorated steadily and the institution has been unable to implement on-going projects on time or to comply with important loan conditions. The underlying reason for INCORA's problems is the lack of political commitment by the previous administration; also, INCORA's activities have been subject to a great deal of political debate and criticism during recent years. The past administration was not able, or willing, to identify clearly which activities should continue and which should be stopped and thus obtain political decisions on INCORA's future. Therefore, INCORA has been unable to adjust efficiently from land reform activities, which apparently no longer carry any political priority, to activities which are not politically contentious, such as the consolidation of past efforts in land reform and continuation of its colonization program. The new Government which took office in August 1978 gives better support to INCORA's activities than the previous one, but much remains to be done.

1.29 From the institutional point of view, the main problems that have persistently affected on-going projects are related to the weaknesses of project management, INCORA's financial situation, and a shortage of Government counterpart funds for the projects. Although all on-going projects are experiencing delays in implementation, the shortage of counterpart funds in the credit components, whether included in the project (Loans 1118-CO and 1163-CO) or to be provided through INCORA's credit lines (Loan 849-CO), is critically affecting beneficiaries and the materialization of the on-going projects' expected benefits. To improve the negative impact of the above problems, the proposed project, oriented exclusively to the adequate provision of credit to the existing INCORA beneficiaries, requires: (a) the appointment of a project coordinator, with a rank equivalent to assistant to the General Manager of INCORA, to be responsible for implementation of the proposed and on-going Bank projects (para 4.01); (b) the establishment of an adequately funded revolving fund for the operation of the lending component of the project (para 4.05); (c) important changes in INCORA's financial and management information system (paras 4.13 to 4.17); and (d) the timely provision of adequate counterpart funds, which would increase INCORA's equity (para 6.08).

II. THE PROJECT AREAS AND THE EXECUTING AGENCY

A. The Project Areas

2.01 There are about 200,000 small-scale farmers throughout Colombia who have received land from INCORA or have benefitted from the titling activities of this agency. However, total potential beneficiaries of technical assistance and credit, defined as land reform/colonization farmers that can be assisted effectively by INCORA with its existing organization, staff and infrastructure in the 20 INCORA administrative regions (Annex 3, Table 2), is currently estimated at about 52,000 farm families.

2.02 Project activities would be concentrated initially in 12 of the 20 INCORA administrative regions (Annex 3, Tables 3 and 4). Selection was based on the availability of basic infrastructure, the potential productivity and satisfactory degree of stability-mobility of target families living in the areas, and presence of adequate facilities for the delivery of technical assistance. Areas were excluded partially or totally if they were:

- (a) currently benefitting from on-going projects such as Atlantico, Caqueta, Cordoba and IRDP areas (Loans 849-CO, 1118-CO, 1163-CO and 1352-CO), or were areas for which specific projects were being prepared such as Arauca (IDB) and El Retorno Land Settlement (IBRD);
- (b) adequately financed with roll-over funds from completed projects or that could be assisted satisfactorily with INCORA's own resources;

- (c) required relatively small amount of resources and could be assisted by either INCORA resources or through IRDP, CAJA and BG;
- (d) colonization areas which could not be developed effectively without relatively large investments in infrastructure, requiring specific development projects; or
- (e) inhabited by farmers with large amounts in arrears and persistently bad repayment records.

2.03 On the basis of the criteria described in the previous paragraph, a total of about 15,000 families, with a total land area of 447,000 ha, were selected as potential beneficiaries under the proposed project (Annex 3, Table 5). Of this total, 12,500 families are agrarian reform beneficiaries including 5,500 families operating in 537 collective farming operations (empresas comunitarias), 7,000 individual farmers, and 2,500 settlers (colonos). Out of the total farm land (447,000 ha) in the selected project area, 423,000 ha are suitable for agricultural production. Of these, 63% are currently being utilized for livestock grazing, 15% is under crops, and 22% is fallow.

2.04 Mixed farming with emphasis in extensive livestock operations and the production for subsistence purposes of both crops and minor species (mainly pigs and poultry) predominates among the proposed project beneficiaries. Productivity is generally low because of poor soils and little or no use of improved inputs. By definition, most of the land reform/colonization beneficiaries are relatively new farmers, with limited managerial experience and without an adequate productive base other than land. Therefore, their demand for investment credit, including short-term seasonal credit and technical assistance, is relatively high compared to other farming subsectors. The absence of sufficient investment resources, in addition to reducing the impact of an otherwise adequate level of technical assistance from INCORA, does not allow for the sustained development of the intended project beneficiaries. As an average, during the 1975-77 period, lending through INCORA in the 12 project areas totalled US\$8 million, benefitting 6,000 families, representing only 40% of the total potential INCORA beneficiaries in the areas. Average subloan size per beneficiary was US\$1,300, or US\$43 per ha. Medium- and long-term investments, however (60% of the total), are equivalent to about US\$26 per ha.

2.05 Although situated in the tropics, the project areas present a wide range of eco-climatic conditions which allow the development of almost all types of crops. Temperatures range from annual averages of 14°C to 28°C and rainfall, from 600 mm to 2,500 mm. Soils in the project areas are mainly of volcanic origin, with various degrees of erosion, and the rest of the soils are of marine origin. In general, except for Meta and Casanare, the areas selected for the project have a good basic infrastructure. Farms are well served by all-weather dirt roads linked to main paved roads leading to nearby markets. There is also an adequate marketing infrastructure and supply of agricultural inputs throughout the project areas.

B. The Executing Agency

Background

2.06 The Colombian Institute for Agrarian Reform (INCORA) would be the executing agency of the proposed project. INCORA is an autonomous government institution established under Agrarian Reform Law 135 of 1961 to reform the agrarian social structure of Colombia. In pursuit of its objectives, INCORA initially concentrated its efforts on land reform. However, because complementary investments were not being provided by other institutions and, in the later years, because of strong political resistance to its land reform activities, INCORA was induced to diversify its operations considerably. The broad range of activities undertaken involves: (a) land acquisition on behalf of the National Agrarian Fund through the various processes of purchase and expropriation; (b) issuance of titles and land distribution to beneficiaries; (c) land settlement projects; (d) land and water development projects, including provision of physical (irrigation, drainage, road works) and social (houses, schools, health centers, rural electrification and potable water) infrastructure; (e) supervised credit operations for agrarian reform beneficiaries and other small farmers; (f) technical assistance and extension services; (g) promotion and management of cooperatives; and (h) promotion of and support of empresas comunitarias.

2.07 INCORA's performance has been mixed and this institution has been unable to significantly alter land ownership patterns. Purchase and expropriation of good farming land, while never at a high level, has declined substantially in recent years. However, as of March 1978, INCORA had distributed about 640,000 ha of expropriated land benefitting 30,740 families, transferred 4.9 million ha of public land to 176,000 families, and issued 5,000 titles to sharecroppers and tenants for a total of 70,000 ha. In addition, INCORA has assisted the establishment of 20 small-scale farmer cooperatives with a total of 17,710 members, and 1,270 empresas comunitarias with a membership of 12,400 families cultivating 250,000 ha. INCORA's land reform and titling activities as of March 1978, are summarized below:

	<u>No.</u>	<u>Ha</u>
<u>Status of Land Distributed</u>		
<u>by INCORA 1962-78</u>		
Definite titles	15,201	359,602
Assignment contracts	8,976	160,813
Beneficiaries in process of legalization	<u>6,563</u>	<u>122,073</u>
Subtotal	30,740	642,488
<u>State Land Distribution</u>	<u>176,200</u>	<u>4,901,000</u>
Total	<u>206,940</u>	<u>5,543,488</u>

2.08 INCORA's activities have never been free of controversy (para 1.28) and in recent years it has been subject to severe budgetary constraints, and, therefore, INCORA's land acquisition through both the expropriation of land and elimination of private ownership have come to a standstill since 1974.

Operations, Management and Financial Situation

2.09 INCORA's Board, chaired by the Minister of Agriculture, is made up of 17 members including: the General Manager of CAJA; representatives of farmers' federations; the Army; the Church; the Congress; the House of Representatives; and agricultural institutions. The General Manager of INCORA is appointed by the President of the Republic. INCORA is organized along functional lines and divided into four main departments: Administration, Land Settlement, Legal, and Planning, all of them reporting directly to the General Manager. There are 20 regional offices (Projectos) responsible for executing INCORA's programs at regional level and all have identical organizational structure, including the three operational departments: Administrative, Land Settlement and Legal. However, most of the decision-making and planning is concentrated in INCORA's office in Bogota. INCORA staff, as of September 30, 1978, totalled 3,242 employees 620 (19%) of whom were located at the head office and the balance at the 20 regional offices.

2.10 INCORA's equity on December 31, 1977 was about Col\$4,100 million equivalent to 57% of its total liabilities and equity (Annex 3, Table 6). Due to its financial structure, the overall weighted average cost of capital was only 2.4% to 4.0% of total liabilities and equity during the last three years. As of December 31, 1977, the nominal rate of interest on its lending was between 12% and 15% p.a., but because of a serious arrears problems and cash basis accounting, interest collected has never exceeded 9% to 10% per annum on its average loan portfolio.

2.11 Arrears are one of the main problems affecting INCORA performance. Total arrears as of December 1977 according to INCORA accounts were equivalent to 17% of its total loan portfolio (Col\$1,899 million). However, a corrected arrears rate, comparing arrears of 1977 with repayment of principal scheduled to be repaid during the same year, gives an arrears ratio of no less than 24% per annum. Provision for doubtful debts reached 5.2% (Col\$ 99.0 million) of total loan portfolio on December 31, 1977, but whether or not this will be adequate will be answered by the review and analysis of the arrears situation scheduled to take place in 1979. This exercise will include the analysis of debts that can be rescheduled and collected in the future and those to be written off as unrecoverable.

2.12 Government allocations represented about 80% of INCORA's income in 1977, the balance being interest earned on loan portfolio and on Government bonds. Administrative costs, mainly payroll (Col\$ 550 million in 1977), constituted by far the largest expenditure item, averaging about 50% of total INCORA cost over the last three years. The high administrative costs are due mainly to a relatively small average amount of loans, agricultural extension activities, and the legal and administrative work related to

the settlement and redistribution of land. In each of the last three years, INCORA has suffered deficits, at least some of which occurred as a result of Government failure to transfer the funds allocated in its budget to INCORA.

2.13 Gross return on INCORA's assets (Col\$ 7,130 million), excluding Government's budgetary allocations, over the last three years, ranged between 3.6% per annum and 3.9% per annum. However, more than 45% (Col\$ 3,100 million) of INCORA's assets do not currently generate any income and the investments in roads and social infrastructure such as hospitals, health posts and schools never will. Other investments, representing 25% of its total assets, such as Col\$ 1,500 million invested in development of irrigation and drainage districts, and Col\$ 300 million of land sales to agrarian reform beneficiaries is not being collected by INCORA (Annex 2).

2.14 INCORA, being a development agency transferring government resources to small-scale farmers, cannot be expected to be financially viable, and government budgetary allocations are required permanently to cover INCORA's operational deficits. However, INCORA's financial situation and developmental activities can benefit greatly from improvements on its financial management and accounting system. Details of the required improvements and recommendations are given in paragraphs 4.13 to 4.17 and in Annex 2.

INCORA Credit Activities

2.15 Most of INCORA's beneficiaries have access to no other credit facilities than those provided through INCORA. In addition to the difficulties normally associated with lending to small-scale farmers, access of INCORA beneficiaries to other lending institutions is restricted as a consequence of their legal status and socio-economic condition, neither of which correspond to the requirements or provide the guarantees normally required by the banking sector.

2.16 According to existing banking operational policies, INCORA beneficiaries without a definite title to the land are considered temporary occupants only, with cultivation rights to the land. Therefore, they are entitled to obtain only short-term credit (mainly from CAJA), which, due to the relatively small amount of credit on a per ha basis, normally has to be supplemented by INCORA. On the other hand, INCORA titles are not considered clear titles due to the restrictions attached (land cannot be rented, mortgaged or sold without INCORA's authorization); therefore, holders have limited access to long-term credit. In addition, agrarian reform beneficiaries and settlers more rich in terms of assets than income have insufficient resources to make their required cash contribution to investments.

2.17 INCORA is not a financial institution and thus it has no credit access to refinancing facilities; its lending activities are financed mainly through the recuperation of previous loans under projects partially financed by IDB, IBRD, and USAID, and, to a small extent, with Government budgetary allocations. Currently, INCORA's own resources are handled through four lines of credit: two are roll-over funds from completed projects - supervised (USAID) and planned (IBRD); the Livestock Revolving Fund (INCORA/BG); and

resources of the ongoing Caqueta and Cordoba projects. Since INCORA is not a bank, its resources, with the exception of the Livestock Revolving Fund, are handled through a fideicomiso agreement by CAJA, which acts as a disbursement agent and receives a commission of 1% per annum on outstanding portfolio. The Livestock Revolving Fund, financed by BG and INCORA, is utilized exclusively for long-term livestock lending to INCORA beneficiaries. BG operates without the guarantee of INCORA and is responsible for selection of beneficiaries and provision of technical assistance and supervision. BG pays 9% per annum on INCORA's share of outstanding portfolio. Additional funds are channelled to INCORA beneficiaries through CAJA, which lends its own resources under INCORA's guarantee.

2.18 The credit and technical assistance activities of INCORA are handled by the manager in charge of the Department of Land Settlement (Subgerencia de Asentamientos Campesinos). Staff of this department totals 1,350 persons, 1,270 of whom are located in INCORA's 20 regional offices; total staff in the proposed project areas is 534, 429 of whom are professionals and mid-level technicians. INCORA is experienced in handling its credit programs, considering that (a) it engages in the provision of credit only to small farmers at the initial stage of their development; and (b) it assumes much of the burden of providing technical assistance to participants in both its own and guaranteed credit programs.

2.19 During the 1975-77 period, total credit to INCORA beneficiaries averaged about Col\$ 610 million (US\$15.5 million), benefitting 9,770 families with an average subloan size of US\$1,600 per family (Annex 3, Table 7); 68% of total lending was provided by INCORA and the balance, 32%, by CAJA with INCORA's guarantee. On balance, total credit to INCORA beneficiaries in nominal terms has increased slightly over the period but in real terms, credit availability has decreased by 25%. As of June 30, 1978, total outstanding portfolio was Col\$ 2,060 million (US\$52.4 million), benefitting a total of 36,876 families.

III. THE PROJECT

A. Introduction

3.01 The Government of Colombia has requested the Bank to help finance an increase in INCORA's lending activities to its land reform/colonization beneficiaries. The proposed project is based on a report which was prepared by INCORA with the assistance of the FAO/Bank Cooperative Program and submitted to the Bank in November 1978. Appraisal was in November/December 1978.

B. Brief Description

3.02 The main objective of the project would be to increase income and employment of about 7,620 land reform/colonization families (Annex 3, Table 5) through the provision of credit and technical assistance and supervision.

The project would concentrate initially on 12 of the 20 INCORA regions (para 2.02). The main thrust of the project would be directed at assisting INCORA's beneficiaries 1/ in developing their farms to a point at which they would become self-sustaining viable farmers who will eventually "graduate" from INCORA assistance, thereby making it possible for INCORA to extend its assistance to other beneficiaries.

3.03 To accomplish its objectives, the project would provide supervised credit for on-farm development, including short-term incremental working capital; the development of small agroindustries; and technical assistance, including consultant services, training programs for INCORA field staff and beneficiaries, and vehicles and equipment for staff providing assistance and for the monitoring and evaluation unit.

3.04 The proposed project would be committed over a four-year period. Subloans would be disbursed by INCORA over a period of five years, with Bank disbursements extending over five and one-half years. The proposed loan would be made to INCORA, with the guarantee of the Government of Colombia, which would also assume the foreign exchange risk. The executing agency would be INCORA. Total project costs, including price contingencies, are estimated to be US\$50.0 million, the imported component of which is estimated to be US\$17.5 million, or 35% of the total investment.

C. Detailed Features

On-farm Development

3.05 The project would finance technically and financially viable farm investment plans. Any farm activities, including subsistence production, with the exception of the development of coffee and cattle fattening operations for which there are resources available elsewhere, would be eligible for financing under the project. Farm investment models, representing the best approximation to farm activities within the widely scattered project areas, have been prepared but financing would not be restricted to the activities presented as they should be considered only illustrative.

3.06 Investments in crop production are likely to be for the development of both commercial and subsistence crops ("pancoger"), while investments in livestock would be mainly for the development of dual-purpose cattle, and, to a lesser extent, for the development of beef breeding operations. Specifically, to accomplish project objectives, it is envisaged that the project would finance: (a) on-farm irrigation, drainage and land leveling works (9,000 ha); (b) plantation of cocoa and sugarcane for the production of non-centrifuged sugar

1/ The term "INCORA beneficiaries" will be utilized hereafter to identify the small-scale farmer subsector that represents INCORA's first service responsibility. This subsector includes agrarian reform beneficiaries, settlers (spontaneous or assisted) and small farmers, regardless of whether or not they have received land or have been settled by INCORA.

(13,000 ha); (c) the purchase of tractors and equipment (90 units), combines (25 units) and irrigation equipment (45 units); (d) the purchase of beef and dual-purpose cattle (20,000 animal units) and minor species such as pigs and poultry; (e) the improvement and development of new pastures (163,000 ha); (f) the development of annual crops such as irrigated rice, corn, sorghum and cassava (34,600 ha); and (g) seasonal inputs such as improved seeds, fertilizers, pesticides and herbicides and hired labor.

3.07 About 4,900 subloans to individual or collective farm operations would be committed over a four-year period, benefitting a total of approximately 7,600 farm families. The table on page 36 summarizes average investment per beneficiary.

Small Agroindustries

3.08 INCORA jointly with the Interamerican Institute of Agricultural Science has identified about 60 empresas comunitarias that have already reached a level of development, in terms of production and management, that would allow them to readily implement small agroindustries engaged in grain storage and drying, vegetable freezing and dehydration facilities, rice milling, processing of non-centrifugated sugar, milk collection points and cheese-making plants. In addition, it is envisaged that the increases of production generated by the project would create additional needs for investments in agroindustries. Therefore, a total of US\$2.2 million has been allocated for these purposes. The specific investments to be financed under this category would be reviewed by the Bank on a case-by-case basis, provided, however, that adequate technical assistance and supervision were available through INCORA or under contract with other institutions.

Technical Assistance

3.09 The project would include financing for consultant services and foreign training for local technicians. It is estimated that about 24 man-months of consultant services would be provided over the five-year implementation period to assist in establishing and operating an evaluation and monitoring system to assess project impact and to provide training to INCORA technicians (para 4.20). The total cost of consulting services has been estimated at US\$116,000, or an average gross cost per man-month of about US\$4,800. Additional funds would be provided to finance short-term overseas training for about 12 professionals and local short study tours and on-the-job training of about 340 technicians and project beneficiaries. Finally, the project would finance the vehicles and equipment required to provide technical assistance to project beneficiaries and for the monitoring and evaluation unit. Details of investments in technical assistance are given in Annex 3, Table 8.

D. Project Costs

3.10 Total project costs, including price contingencies, are estimated at US\$50 million, of which the proposed Bank loan would finance 40%, or US\$20 million, net of import duties and taxes. Project baseline costs have been estimated on the basis of prices in November/December 1978. Price contingencies are based on the phasing of investments over a five-year period (Annex 3, Table 9) and on the assumption that commitments would start in October 1979. Price increases for the imported component are expected to be 6% per annum during the implementation period of the project, while annual domestic price increases would be about 16% for 1979, 14% for 1980 and 12% thereafter. Project costs by component are summarized in the following table:

	<u>Local</u>	<u>Foreign</u>	<u>Total</u>	<u>Foreign</u>	<u>Baseline</u>
	<u>(US\$'000) /a</u>			<u>Exchange</u>	<u>Costs</u>
				<u>Component</u>	
				<u>(%)</u>	
<u>On-farm Development</u>					
Medium- and long-term investments	14,990	8,800	23,790	37	57
Incremental working capital	9,990	3,150	13,140	24	32
Sub-total	24,980	11,950	36,930	32	89
<u>Small Agroindustries</u>					
Sub-total lending	1,220	1,000	2,220	45	5
<u>Technical Assistance</u>					
Technical assistance and training	690	1,300	1,990	65	5
Project administration	100	20	120	14	-
Monitoring and evaluation	70	140	210	64	-
Sub-total	860	1,460	2,320	63	6
Total baseline cost	27,060	14,410	41,470	35	100
Price contingencies	5,460	3,070	8,530	36	21
Total project costs	32,520	17,480	50,000	35	121

/a US\$1 = Col\$ 39.3 (for conversion to Col\$).

Note: Figures in this table have been rounded.

E. Financing

3.11 Financing of the project would be shared in the following amounts and proportions:

<u>Project Components</u>	(US\$ million)							
	<u>Sub-borrowers</u>		<u>INCORA</u>		<u>Bank</u>		<u>Total Investment</u>	
	<u>Amount</u>	<u>%</u>	<u>Amount</u>	<u>%</u>	<u>Amount</u>	<u>%</u>	<u>Amount</u>	<u>%</u>
On-farm development	4.9	13	17.4	47	14.6	40	36.9	100
Small agroindustries	<u>0.3</u>	<u>15</u>	<u>0.9</u>	<u>41</u>	<u>1.0</u>	<u>45</u>	<u>2.2</u>	<u>100</u>
Sub-total	5.2	13	18.3	47	15.6	40	39.1	100
Technical assistance	<u>-</u>	<u>-</u>	<u>0.9</u>	<u>37</u>	<u>1.4</u>	<u>63</u>	<u>2.3</u>	<u>100</u>
Total baseline cost	5.2	13	19.2	46	17.0	41	41.4	100
Price contingencies	<u>0.2</u>	<u>2</u>	<u>5.4</u>	<u>63</u>	<u>3.0</u>	<u>35</u>	<u>8.6</u>	<u>100</u>
Total project cost	<u>5.4</u>	<u>11</u>	<u>24.6</u>	<u>49</u>	<u>20.0</u>	<u>40</u>	<u>50.0</u>	<u>100</u>

3.12 The proposed Bank loan of US\$20 million would finance the 35% foreign exchange cost of the project (US\$17.5 million) and a further 5% for local currency expenditures (US\$2.5 million), net of import duties and taxes. Local currency financing is recommended because of the relatively low foreign exchange content of the project and also in order to bring Bank financing under the proposed project more in line with other on-going Bank projects for agricultural development in Colombia. ^{1/} Furthermore, the proposed financing scheme would give the Bank more meaningful participation in project implementation, emphasize the importance attached by the Bank to an adequate level of assistance to INCORA's beneficiaries, and assist in achieving important institutional objectives of the project.

3.13 Project beneficiaries would finance US\$5.4 million, representing about 11% of the total project cost, and an estimated US\$24.6 million, equivalent to 49% of total project cost, would be financed by the Government through INCORA. Therefore, the project would require Government to increase its budgetary allocations by Col\$ 747.4 million, exclusive of contingencies, to INCORA, as indicated in paragraph 6.08. The annual cost to INCORA after completion of the project would continue at about the Year 5 level (US\$110,000 per year). Assurances on the above financing arrangements were obtained during negotiations.

^{1/} Bank's share of total financing under on-going projects is as follows; Atlantico (Loan 849-CO), 47%; Caqueta (Loan 1118-CO), 53%; Cordoba (Loan 1163-CO), 59%; Integrated Rural Development (Loan 1352-CO), 40%; and Second Agricultural Credit (Loan 1357-CO), 39%.

(US\$ million)

	<u>INCORA</u>		<u>Bank</u>		<u>Total Lending</u>	
	<u>Amount</u>	<u>%</u>	<u>Amount</u>	<u>%</u>	<u>Amount</u>	<u>%</u>
On-farm development	17.4	54	14.6	46	32.0	100
Small agroindustries	<u>0.9</u>	<u>47</u>	<u>1.0</u>	<u>53</u>	<u>1.9</u>	<u>100</u>
Total baseline cost	<u>18.3</u>	<u>54</u>	<u>15.6</u>	<u>46</u>	<u>33.9</u>	<u>100</u>

3.14 The Bank loan would be made to INCORA at the Bank lending rate prevailing at the time of loan approval, for a term of 17 years, including four years of grace. The Government of Colombia would guarantee the loan and it would also bear the foreign exchange risk. Counterpart funds, US\$19.2 million (or US\$24.6 million, including price contingencies) would be provided by the Government to INCORA (para 6.08). Funds for on-farm lending would be disbursed by INCORA through a revolving fund to be established as a separate bank account by INCORA (para 4.05). Funds for technical assistance would be disbursed directly by INCORA.

F. Procurement

3.15 The purchase of on-farm investment items required under the proposed project would be procured over a five-year period by about 7,600 small-scale farmers. Inputs, small equipment, tools, machinery and tractors and small on-farm civil works, would be varied and not suitable for procurement through local or international competitive bidding. Therefore, sub-borrowers would purchase their requirements through local established commercial channels, including rural and farmers' cooperatives, representing a broad spectrum of international suppliers.

3.16 Vehicles required for technical assistance (US\$1.6 million) would be procured in group orders over a two-year period under international competitive bidding according to Bank procedures. The remaining expenditures under the technical assistance component of the project (US\$180,000) are not suitable for competitive bidding: consultant and training expenditures (US\$175,000 equivalent) would be financed on terms and conditions acceptable to the Bank; equipment for the monitoring unit (US\$5,000 equivalent) would be procured through local shopping. Foreign firms are adequately represented in Colombia and there is a good network of competitive suppliers of agricultural inputs; facilities for maintenance of machinery and equipment are also adequate. All inputs and most machinery and equipment for the proposed investments are exempt from the 6% sales tax and subject, on a selective basis, to a maximum of 30% import duty. There are no import restrictions that could affect purchases through existing local channels. Assurances were obtained during negotiations that the above procurement procedures would be followed.

G. Disbursements

3.17 The Bank would disburse over a period of five and one-half years:

- (a) 46% of the amounts disbursed for farm development sub-loans, for a total value of US\$15.6 million;
- (b) 46% of the amounts disbursed for agroindustry subloans, for a total value of US\$1.1 million;
- (c) 100% of the total cost of consultant services and overseas training, for a total value of US\$300,000; and
- (d) 100% of foreign expenditures for vehicles and equipment required by the project, or 76% of local expenditures if locally procured, for a total of US\$1.5 million.

The above values include US\$1.5 million of the US\$3.0 million price contingencies; the balance of US\$1.5 million would initially be unallocated.

3.18 The Bank would reimburse, through a revolving fund (para 4.05), for subloans against statements of expenditures, which would be certified by INCORA. Supporting documentation for these expenditures would not be submitted to the Bank, but would be retained by INCORA for review during the course of Bank supervision missions. All other disbursements would be supported by standard documentation. The specific disbursement procedures and reporting requirements were agreed upon with the borrower during negotiations.

3.19 The estimated schedule of Bank disbursements, assuming that the date of effectiveness of the proposed loan would be no later than August 1979, would be as follows:

		(US\$ million)										
<u>Bank FY</u>		<u>1980</u>		<u>1981</u>		<u>1982</u>		<u>1983</u>		<u>1984</u>		<u>1985</u>
<u>FY semester</u>		<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>1</u>
Disbursements												
during												
semester		0.8	2.0	2.2	2.2	3.0	3.0	2.9	2.9	0.4	0.3	0.3
Cumulative		0.8	2.8	5.0	7.2	10.2	13.2	16.1	19.0	19.4	19.7	20.0

IV. PROJECT IMPLEMENTATION

A. Organization and Management

4.01 INCORA would be the borrower and executing agency, with its General Manager serving as official representative in dealing with the Bank in all technical and financial matters related to the project. Responsibility for overall project implementation, coordination and supervision would be borne by a qualified professional to be appointed by INCORA on a full-time basis as project coordinator with a rank equivalent to assistant to the General Manager. The project coordinator would also, within six months of project effectiveness, assume full responsibility for the coordination and supervision of the implementation of on-going Bank projects under Loans 849-CO, 1118-CO and 1163-CO. The appointment of the project coordinator was a condition of presentation of the proposed project to the Loan Committee. The specific duties and responsibilities of the project coordinator were discussed with the borrower during negotiations and an assurance was obtained that, during the implementation period of the project, these functions, duties and responsibilities would not be changed without prior Bank approval.

4.02 While the main duty of the project coordinator would be to assist in implementing operational policies and procedures required for the execution of both the proposed project and the ongoing Bank projects, he would also collaborate and assist the manager of the Division of Agrarian Settlements (SAC) in the development and preparation of training programs for INCORA field staff and project beneficiaries; prepare terms of reference for the consultant for the Project Monitoring and Evaluation Unit (PMEU) (para 4.20); assist in the design of the system to be utilized for monitoring and evaluation of the project's progress and impact; standardize procedures; centralize processing of on-going monitoring efforts (Loans 849-CO, 1118-CO and 1163-CO); and secure, through INCORA's management, whatever additional resources are required for effective implementation of the on-going Bank projects. Finally, he would be directly responsible for preparation of periodic reports on the project's financial and physical progress for timely submission to INCORA's General Manager and to the Bank. Assurances on the above were obtained during negotiations.

Project Execution

4.03 Field implementation of the project would be the joint responsibility of the project coordinator and the manager of the SAC division through INCORA's regional offices in the 12 project areas (Map IBRD 14212). Technical assistance, including selection of sub-borrowers, preparation of farm investment plans, and supervision of the investments would be provided by INCORA field staff in the project areas (Annex 3, Table 10). In general, INCORA field technicians have a thorough knowledge of beneficiaries' needs and requirements and their overall experience and expertise in crop and livestock production is satisfactory. Nevertheless, INCORA would prepare and carry out a selective training program for technicians to allow them to: (a) become

more familiar with ICA's technological packages for the different types of agriculture and livestock operations practiced in the project areas; and (b) update farm management techniques and thus be able to provide production-oriented assistance more in line with the current situation and financial needs of INCORA beneficiaries. It is estimated that by Year 5 of the project, assuming that each technician can provide adequate technical assistance and supervision to about 10 empresas comunitarias and cooperatives or to 40 individual farmers, 145 out of INCORA's 429 field technicians would be working full time with project beneficiaries. Therefore, the staff is considered adequate to cover present INCORA activities and the incremental activities generated by the project. However, INCORA would assign, during Year 1 of the project, four agricultural engineers to reinforce the technical assistance and supervision capabilities of mid-level technicians in the project areas. Assurances were obtained during negotiations that: (a) the maximum ratio of technicians to individual subloans, calculated on a per project area basis, would not exceed the ratio of 1:40 during the implementation period of the project; and (b) upon completion of the project, INCORA would maintain an adequate level of technical assistance to project sub-borrowers.

4.04 The proceeds of the loan and the local counterpart funds for the lending program, US\$33.9 million (Col\$1,332.3 million), would be channeled to beneficiaries through CAJA's branch offices in the project areas (Map IBRD 14212). Since 1965, most of INCORA's lending to agrarian reform/colonization beneficiaries has been implemented through fideicomiso or guarantee agreements with CAJA (para 2.17); therefore, no coordination problems are anticipated. INCORA and CAJA would enter into a specific subsidiary agreement for lending under the project, whereby CAJA would act as the banking agent for the project, being responsible for disbursements, subloan collections and the general administration of the project funds and accounts, while INCORA, in addition to providing technical assistance and supervision, would be responsible for subloan approvals and for bearing the credit risk. However, to encourage CAJA to take a more active role in collecting subloans than it presently does, the system of paying a flat commission of 1% per annum on outstanding balances to CAJA would be reviewed and possibly modified to give CAJA a commission based partly on outstanding portfolio and partly on subloan collections. Similarly, in order to improve project implementation, the coordination and flow of information between CAJA and INCORA at both the project area and the central office levels would be reviewed. Signing of a subsidiary agreement between INCORA and CAJA, on terms and conditions satisfactory to the Bank, would be a condition of effectiveness of the proposed loan.

4.05 Project funds for the lending program would be managed by INCORA through a revolving fund that it would establish as a separate bank account. The revolving fund would be utilized exclusively in the implementation of the project lending program; therefore, the inflow of the project would consist of counterpart resources, and the proceeds of the Bank loan. The revolving fund would start up with an initial amount of US\$2.0 million (Col\$78.6 million), estimated to cover the needs of the lending program during the first three to four months of the five-year implementation period of the project. INCORA's initial contribution would be US\$1,080,000 equivalent. The Bank contribution to the lending program would be disbursed as follows:

- (a) the first Bank disbursement, a contribution to the start-up of the lending program, US\$920,000 equivalent, would be made upon receipt of adequate documentation indicating that the revolving fund, with INCORA's initial contribution (US\$1,080,000 equivalent), had been established;
- (b) subsequent Bank disbursements to the revolving fund would be made against certified statements of expenditures indicating that the counterpart funds, 54% of total disbursements, will be transferred by the Government to INCORA and deposited in the revolving fund within 30 days of the receipt of the reimbursement request; and
- (c) during the latter stages of the implementation period of the project, the Bank contribution to the revolving fund would be reduced to adjust disbursements until project completion.

As disbursements are made from the revolving fund, INCORA would make periodic reimbursement requests to the Government and to the Bank. In any event, requests for reimbursement would be made by INCORA before the revolving fund reaches a level equivalent to US\$400,000. INCORA would, until completion of the project, maintain a separate account and use all amounts received from project beneficiaries, which are not needed for repayment of principal, payment of interest and other charges under the loan, for additional lending for agricultural and agroindustrial development. It would be a condition of loan effectiveness that a revolving fund, on terms and conditions satisfactory to the Bank, had been established and that an initial amount, acceptable to the Bank (US\$1,080,000 equivalent), had been deposited by INCORA. In addition, assurances were obtained during negotiations that the procedures, terms and conditions of the operation of the revolving fund would not be changed or waived without prior Bank approval. However, at the request of the borrower, the Government or the Bank, policies and procedures of the revolving fund would be reviewed to adjust its operation and/or size to the needs of the project.

4.06 CAJA's geographical coverage is considered adequate for project needs, and the existing operational agreements between INCORA and CAJA have been proven satisfactory. However, in the framework of facilitating the future access of INCORA beneficiaries to banks other than CAJA, consideration would be given to allowing other banks to participate in project lending operations should they so desire. Terms and conditions of such other bank participation in the project would be subject to specific agreements between INCORA and the intended banks, which would require prior approval by the Bank before becoming effective. An assurance on the above was obtained during negotiations.

Technical Assistance and Training

4.07 One expert on monitoring and evaluation would be hired to serve in INCORA on a full-time basis during the first year and on a part-time basis from Years 2 to 5, for a total of 24 man/months (Annex 3, Table 8). The expert would be responsible for establishing monitoring and evaluation procedures, and for initial operation of the system (para 4.21) as well as

for training INCORA staff in monitoring and evaluation techniques. In addition, the project would provide for short-term overseas training and study tours for the directors of the 12 project areas included in the project. The presentation to the Bank of a specific overseas training program would be conditions for disbursement of the Bank funds for these purposes.

4.08 It is envisaged that about 122 agronomists and veterinarians and 168 economists, sociologists and other mid-level technicians would attend to short-term seminars in their respective fields of expertise, including training in agricultural planning, transfer of technology, and rural development. Short-term courses and extended assistance would also be provided to project beneficiaries. For the above purposes, INCORA would enter into or update operating agreements with ICA for training of university-level technicians; with SENA for training mid-level technicians and project beneficiaries; and with CECORA for managerial and specialized technical assistance and training to empresas comunitarias and cooperatives. Assurances on the above were obtained during negotiations.

B. Lending Policies and Procedures

4.09 The proposed project would channel credit to INCORA's beneficiaries, namely, agrarian reform beneficiaries, operating either as individual farmers or as members of some form of collective farming operation (empresas comunitarias, cooperativas, and the like), with no limits in terms of land area per family or value of assets, and to settlers (colonos), with farm size of less than 200 ha. No project subloans would be made to: (a) agrarian reform/colonization beneficiaries who have subloans in arrears with CAJA, INCORA or any other institution; or (b) a farmer with a total indebtedness exceeding Col\$500,000 (US\$12,700), including previous subloans and the intended subloan under the project, but excluding INCORA subloans for the purchase of land and infrastructure (house, irrigation and drainage). Maximum lending per beneficiary under the project would be Col\$500,000; thus, maximum lending for collective farming operations would be equal to the above amount times the number of beneficiaries of the collective. Subloans amounting to less than Col\$500,000 would be approved by Loan Committees in the project areas, while those between Col\$500,000 and Col\$1,000,000 (US\$25,000) would require approval by the Loan Committee at the Bogota office. Subloans exceeding Col\$1,000,000 would require approval by INCORA's Executive Committee, and subloans exceeding Col\$4,000,000 (US\$100,000) would be submitted to the Bank for approval. To accommodate the project lending program, INCORA would need to raise its existing subloan approval ceilings at the project area level, Col\$200,000, to Col\$500,000. Assurances were obtained at negotiations that the above approval procedures would be applied and that lending limits would be enforced.

4.10 Subloans to project beneficiaries, made on the basis of technically and financially sound farm investment plans would finance up to 90% of the total medium- and long-term requirements of the investment plan. As in the on-going Bank loan for small farmer's credit in Colombia (Loan 1352-CO),

short-term credit required to finance seasonal costs related to the investment plan would be financed in the following maximum percentages: (a) first-time sub-borrowers under the project, 95%; (b) second-time sub-borrowers under the project, 90%; and (c) third-time sub-borrowers under the project, 85%. Beneficiaries' contribution to investments would be financed in the form of family labor and/or cash. No financing under the project would be permitted for cattle fattening operations or coffee plantations. Total lending for beef cattle and/or milking would not exceed 75% of the total investment plan, and the maximum number of cattle financed under the project would not exceed 25 cows and one bull (or its equivalent in animal units) per-beneficiary. Furthermore, the total number of cattle financed on a per-beneficiary (family) basis would be limited so as not to exceed, including existing cattle owned by beneficiaries, a total of 25 cows per family. Subloans for the development of small agroindustries would be made on the basis of feasibility studies, which the Bank would review, prior to their approval.

4.11 Subloan repayment terms would reflect the capacity of the sub-borrowers to repay, as estimated in the cash flow projections of the investment plans. Subloans for crop investments would be for a maximum period of 10 years, including a grace period of up to three years. Subloans for livestock development would be for a maximum period of 13 years, including a grace period of up to four years. Short-term seasonal credit would be repaid within one year of subloan disbursement. Interest on the outstanding balances would be payable at the end of each period, at a rate of not less than 16% per annum, plus 1% per annum for life insurance. It is envisaged that, over the five-year disbursement period of the project, the proposed lending rate would be positive. Domestic inflation in Colombia increased from 20% p.a. in 1976/77 to 35% p.a. in 1977/78, decreasing to 17% p.a. in 1978/79. Inflation is projected to increase at an annual rate of 16% for 1979, 14% for 1980 and 12% thereafter. The above lending rate would be consistent and generally in line with the lending rates currently utilized for similar purposes and beneficiaries by CAJA and under Loan 1352-CO (para 1.18). Assurances were obtained during negotiations that: (a) the terms and conditions specified in this and the preceding paragraph would be implemented by INCORA; and (b) by September 1, 1979, INCORA would submit to the Bank for comments a revised credit manual of INCORA's supervised credit line, incorporating the operational policies and procedures to be utilized for lending under the proposed project as specified above.

4.12 In order to bring some coherence to the interest rate structure between essentially similar farmer categories and to prevent future differences between the rate of interest paid by INCORA's beneficiaries and farmers assisted by other institutions and/or credit lines, a link would be established between the interest rate utilized in INCORA's lending and those utilized by the main sources of credit for the agricultural sector in Colombia (FFAP and CAJA). In line with the above, the interest rate to be utilized under the project would be maintained with a difference not more than two percentage points to the average nominal rate of interest utilized by FFAP for medium- and long-term credit for agriculture (currently 18% per annum), provided, however, that the resulting rates would be no higher than CAJA's average lending rates for small-scale farmers (currently 16%). Through the

years, INCORA has developed various credit schemes utilizing local and foreign resources, and these have caused unwarranted differences in interest rates and lending conditions for INCORA beneficiaries, in turn leading to unnecessary complexity in lending procedures and in the accounting system. To correct this situation, assurances were obtained during negotiations that: (a) the rate of interest to be utilized under the project would be linked to the rates utilized for comparable purposes and beneficiaries by FFAP; and (b) by July 1, 1980 the rates of interest and lending conditions for INCORA's own resources would be standardized to those to be utilized under the proposed project and that such standardization would be extended to the rates utilized under Loans 1118-CO and 1163-CO.

C. Accounting and Auditing

4.13 INCORA continues to have serious problems in its accounting and financial administration. The main problems are that: (a) the comptroller's function is not centralized but dispersed among INCORA's various organizational units; (b) the managerial accounting and reporting system is inadequate, with reports for decision-making purposes being ill-designed or not in existence at all; (c) the application of "Generally Accepted Accounting Principles" is far from satisfactory, especially in regard to profit and loss measurement, presentation of assets and liabilities, classification of the accounting system, and failure to utilize the same codes for accounting and budgetary purposes.

4.14 As an autonomous public entity, INCORA is required to maintain the accounting procedures prescribed by the Contraloria General where the main emphasis is placed on authorizations to spend, procedures and observance of budget appropriation limits. Thus, while complying with the Contraloria General's requirements, the system differs from the classification utilized in the INCORA budget; also, neither the budget nor the financial statements provide an adequate separation between capital and operational costs. In addition, INCORA's cash accounting system does not permit sound analysis of INCORA's operational results. In summary, the accounting system registers and reports according to official standards but it has no flexibility to report according to the objective managerial needs of INCORA. Indicative of the above problems is the failure of INCORA to present to the Bank separate project accounts for on-going Bank projects, Loans 849-CO, 1118-CO and 1163-CO.

4.15 A by-product of the problems described in the preceding paragraphs is that, in the absence of a single reliable source of information, the various INCORA organizational units, in their search for measurements of their activities, products and cost, initiate and carry out quantified reports. These, however, are often unreliable, contradict other reports, and do not necessarily agree with information provided by the accounting system on the same subject. Also, the flow of information from the computer unit to the top management is insufficient and managerial reports are inadequate. Therefore, for the proposed project implementation purposes as well as for the rest of INCORA's activities, a substantial reorganization of INCORA's accounting and management information system would be required. For these purposes, INCORA would hire

the consultants on financial aspects and management information systems provided for under the Cordoba Second Land Development Project (Loan 1163-CO). It was a condition of presentation of the proposed project to the Loan Committee that the consultants had been selected and approved by the Bank. Specific emphasis would be placed on the adequate utilization of INCORA's existing computer facilities, and the consultants should be able, in a relatively short period of time, to centralize all INCORA's accounts and statistical information in the computer system. Given the wide geographical coverage and the nature of the proposed project, and, therefore, the amount of information required for adequate control, supervision and monitoring of the activities financed under the project, all financial and statistical data related to project implementation would be handled through the computer.

4.16 INCORA would present, for Bank consideration, not later than January 1, 1980, a report containing a detailed timetable of activities and priorities of the study to be undertaken by the financial and management consultants. Similarly, INCORA would submit for Bank consideration: (a) not later than January 1, 1980, the computer system to be utilized under the project; and (b) every six months, a progress report of the consultants' activities and the timetable for implementing the consultants recommendations. Assurances on the above points were obtained at negotiations.

4.17 Some immediate changes in the accounting system of INCORA would be made without waiting for the consultants' conclusions (Annex 2). The purpose of these changes is to overcome the basic disadvantages of the current accounting classification and to provide INCORA's management, as well as outside analysts, with a clearer picture of INCORA's financial situation. The receipt of objective evidence by the Bank that action had been taken by INCORA to modify its accounting procedures and financial statements was a condition of presentation of the proposed project to the Loan Committee. An assurance that these procedures would be maintained during the implementation period of the project were obtained during negotiations.

4.18 INCORA would maintain separate project accounts, along the lines of the accounts recently established for the on-going projects (Loans 1118-CO, and 1163-CO), in accordance with sound accounting principles consistently applied. Records and documentation relating to all financial transactions under the project would be kept by INCORA and be made available for inspection by the Bank during the course of supervision missions. The project accounts and related financial statements would be audited annually in accordance with generally accepted auditing standards by independent auditors acceptable to the Bank. As required by current legislation, the Financial and Operative Audit Division (DAFO) of the Comptroller General of the Republic is responsible for the external auditing of INCORA.

4.19 The audit requirements for the project accounts, including the auditing of a sample of statements of expenditures and of subloans, would be determined after consultations between the Bank, INCORA and DAFO. Audited comparative financial statements and notes prepared from the project accounting records of INCORA would include the balance sheet, a statement of income and expenses, and a statement of the source and application of funds, together with the opinion of the DAFO. Supplementary data on operations, financial position

and scope of work carried out by the auditors and such other additional information as the Bank might from time to time request would also be provided. All audit reports and statements would be submitted to the Bank not later than four months after the end of each fiscal year. Assurances on this point and those in the preceding paragraph were obtained at negotiations. A condition of presentation of the proposed project to the Loan Committee was that INCORA had sent, for Bank consideration, separate project accounts for Loans 1118-CO and 1163-CO.

D. Progress Reporting, Monitoring and Evaluation

4.20 INCORA, through the project coordinator, would establish and maintain a system for monitoring the progress of the project and to evaluate the impact of both on-farm investments and technical services provided to sub-borrowers. For this purpose, a Project Monitoring and Evaluation Unit (PMEU) (partially financed with Bank funds), directly responsible to the project coordinator, would be established within INCORA. In addition, INCORA would appoint one officer at each of the 12 regional offices to be responsible part time for monitoring and evaluation activities at the field level. The field officers would collect, on a continuing basis, production, marketing and financial data, including information on sub-borrowers' performance in credit use and recovery and extension, all of which would be sent to the PMEU, where it would be assembled and analyzed and a consolidated report prepared for submission periodically to INCORA's management and field officers and on an annual basis to the Bank. In addition, an annual selective impact evaluation survey of the project would be carried out, starting in Year 2 of the project. These surveys would provide an assessment of the overall social and economic impact of components with respect to project targets and to the effectiveness of achieving the basic objectives of the components.

4.21 Under this system, adequate records of on-farm investments, purchases of inputs, sales, inputs and outputs, prices, and employment would be kept to provide detailed information on operational, administrative and management costs of the project. It would also make possible an assessment of the progress of activities compared to planned schedules, including the area in production, yield data, technology utilized and any other external events which might affect yields or progress of the project. Assurances were obtained at negotiations that: (a) a consultant in monitoring and evaluation techniques would be hired, on terms and conditions satisfactory to the Bank, not later than December 1, 1979; (b) an adequately staffed Project Monitoring and Evaluation Unit would be maintained; (c) the monitoring and evaluation procedures outlined would be carried out; (d) annual reports on monitoring would be sent to the Bank within two months of the end of each 12-month period; (e) quarterly progress reports on the project's financial implementation would be sent to the Bank within two months of the end of each quarter; and (f) a draft project completion report would be prepared by INCORA no later than four months after the project investments have been completed.

V. ILLUSTRATIVE INVESTMENT MODELS: SPECIFICATIONS AND ASSUMPTIONS

A. General

5.01 Investments under the project would take place over a large geographical area involving differences in soils, climate, markets, supply of inputs and communication infrastructure, and, thus, a wide range of production patterns. As a result, actual and projected crop yields and technical coefficients for livestock production would vary greatly in the 12 project areas. For the purpose of project budgeting and calculation of possible rates of return, farm activity budgets, representing the most frequent productive activities to be developed by potential beneficiaries, were prepared. Afterwards, the activity budgets were transformed into illustrative farm investment models to account for the fact that most of the farmers under the project would borrow only for the development of their commercial activities, while continuing with varying combinations of crops and livestock for subsistence purposes, as is currently practiced by INCORA's beneficiaries in the project areas (Annex 3, Tables 11 to 32).

5.02 Overall, the production coefficients utilized in the illustrative farm models reflect a rather conservative approach to increases of productivity and to changes in cropping patterns of INCORA's beneficiaries. It is envisaged that production increases would come mainly through gradual introduction of proven mid-technology packages, adequate technical assistance and timely provision of credit. Production patterns are envisaged to change as a gradually increasing emphasis is placed on production for commercial purposes and on crop activities rather than on extensive livestock operations as practiced now. In livestock enterprises, emphasis would be on dual-purpose cattle and milk production. Also, livestock farmers would be encouraged to introduce minor species and crops to their farming activities.

B. Production Coefficients

5.03 Yields and other technical assumptions utilized in the illustrative farm investment models are based on the current situation and productivity on comparable farms, both before and after development, of INCORA beneficiaries in the project areas. Current and projected production coefficients utilized in the analysis, together with comparative data at national and regional levels, are as follows:

	National Yields		Yields Utilized in the Models		
	Average (1976/78)	Traditional Sector (1976)	Commercial Sector (1976)	Without Project	With Project At Full Development /a
	----- (m ton/ha) -----				
<u>Crops</u>					
Corn	1.3	0.7	2.9	1.4	2.1
Cassava	9.1	2.5	15.0	7.0	10.0
Rice (paddy)	4.2 /b	1.5 /b	5.3 /b	6.0 /c	9.1 /d
Sugar, non- centrifuged (panela)	4.7	n.a.	n.a.	4.0	4.8
Sorghum	2.2	1.6	2.8	2.0	2.6
Cocoa	0.5	0.3	0.8	-	0.8
Plantains	5.2	4.7	10.0	-	5.0

	Dual-Purpose Cattle		Beef Cattle	
	Without Project	With Project At Full Development	Without Project	With Project At Full Development
<u>Livestock</u>				
Stocking rate (AU/ha)	0.9	1.1	0.7	0.8
Calving rate (%)	58.0	62.0	58.0	62.0
Adult mortality (%)	2.7	2.2	3.1	2.3
Cows milked as % of cows calving (%)	40.0	70.0	15.0	16.0

/a Year 2 for plantain; Year 3 for rice and sorghum; Year 4 for corn, cassava and panela; and Year 7 for cocoa.

/b National averages do not differentiate between irrigated and dry land rice.

/c Irrigated, one crop per year.

/d Irrigated double cropping.

C. Illustrative Investment Models

Investment Model No. 1: Individual farm, 21 ha (one family)

5.04 This model is representative of an individual farm, with a total agricultural area of 21 ha. Before development, there are 9 ha under crops, 5 ha under pastures, 6 ha idle, and 1 ha reserved for subsistence crops grown for family consumption. Under the project, this farm would intensify cultivation of its existing 9 ha of crops and would develop 3 out of the 6 ha currently not utilized. Due to the increased costs and risks involved in the adoption of new production techniques, the improvements in land preparation and use of

inputs such as certified seed, fertilizers, and pesticides would be introduced gradually, and the development of the farm would take place over a three-year period.

5.05 The crops to be developed in the model are corn (8 ha), cassava (2 ha), and sugarcane for non-centrifuged sugar-panela (5 ha). Rented machinery would be utilized for land preparation for cassava and corn. However, since planting and harvesting of sugarcane is done all year round, land preparation for sugarcane is assumed to be done with oxen. The old plantation would be renewed during the first year, and from the fifth year onward, one-fifth of the area under sugarcane would be renewed annually. Main investments under this model would be a small sugarcane mill and to finance seasonal operating costs. Every two neighboring farms would be served by one mill housed in a small (100 m²), inexpensive building made of locally manufactured clay bricks with no lateral walls and a shade overhead. Milling capacity would be 2 m tons per eight-hour shift. Purchased equipment, in addition to the mill, would include one 16-hp diesel motor, copper pans, and one burner for baggasse. Average yields per ha are expected to stabilize as follows: corn, 2.4 m ton/ha by Year 3; cassava, 10.0 m ton/ha by Year 7; and panela, 4.8 m ton/ha by Year 5. Total investment costs would be US\$4,700 (Col\$184,500), or US\$313 per ha.

Investment Model No. 2: Empresa Comunitaria, 210 ha (10 families)

5.06 This model is representative of an empresa comunitaria with predominant crop orientation, holding an agricultural area of 210 ha, of which 150 ha is under crops, 50 ha under pastures (with dual-purpose cattle) and 10 ha in individual plots for family subsistence. Under the project, this empresa would develop: 50 ha of irrigated rice (double cropping); 10 ha of cocoa; and 90 ha of sorghum. Rice and sorghum are already grown on the farm, and cocoa would be planted in land currently not utilized. Main investments include land leveling and drainage and irrigation canals, a pump with a capacity of 120 gallons per minute and a motor (one for two neighboring empresas), a warehouse, one 70- to 75-hp tractor for each empresa, and a combine for each four empresas. Investments also include the cost of establishing cocoa, wooden boxes for fermenting cocoa, and a cement platform for drying cocoa beans in each empresa. Total investment cost (Years 1 and 2) would be about US\$66,600 (Col\$2.6 million) per empresa, equivalent to US\$6,600 per family.

Investment Model No. 3: Empresa Comunitaria, 142 ha (five families)

5.07 This model illustrates the average situation of five families, either as individuals or as part of an empresa, in the better climatic and soil areas and with access to rural markets. This farm, predominantly oriented toward dual-purpose cattle operations, includes 127 ha under pastures and 15 ha under crops (both commercial and subsistence). Under the project, this farm would develop its existing dual-purpose herd and additional minor species (one sow, nine hens and one hive per family). On a per-family basis, this farm would also be representative of a 30-ha individual farm, with 25 ha under pastures for dual-purpose cattle and 5 ha under crops. About 40% of the cows calving each year are milked to provide milk for family consumption and cash

income. Due to a shortage of financial resources, the farm is 14% understocked and 30% of the weaners are sold during the year to meet cash obligations.

5.08 Investments over a two-year period would include purchase of some breeding animals; development of 2 ha of improved pasture, using part of the presently unproductive area; fencing; the improvement of existing pastures; and installations such as water points, lick troughs and corrals. To facilitate the introduction of proven technology and ease the cash flow situation, the long-term loan would include resources to finance the total costs of veterinary products, including those for existing cattle. Minor species, mainly pigs and poultry, plus their initial feed and veterinary requirements, would also be financed. Minor species production would make a small but very important contribution to the family's diet and liquidity position. Total investments would be about US\$8,000 (Col\$316,000), or US\$1,600 per family.

Investment Model No. 4: Empresa Comunitaria, 320 ha (eight families)

5.09 This model, predominantly oriented toward extensive beef livestock raising, is representative of farms either isolated from markets or located on lands suitable only for extensive cattle raising. Of its total area, 300 ha are devoted to beef cattle raising and the remaining 20 ha to subsistence crops and minor species. To provide milk for family consumption and some cash income, about 15% of the cows calving each year are milked. Due to forced sales of young stock to meet cash requirements, the farm is about 8% understocked and not more than 50% of the steer crop is fattened.

5.10 Investment over a two-year period would include the purchase of some 12 head of cattle; however, main emphasis would be placed on developing and upgrading the existing beef cattle herd. In addition, the project would finance the improvement of pasture, fencing, and existing installations such as water points, lick troughs and corrals, and the total cost of veterinary products. To provide beneficiaries with immediate additional income, which would help them meet cash requirements and be able to make interest payments on the subloan, minor species, including their initial feed and veterinary requirements, would also be financed.

VI. PRODUCTION, MARKETS AND FINANCIAL ANALYSIS

A. Production

6.01 At full development, incremental production from the project would be approximately as follows:

	<u>Total Production</u>		<u>Total Incremental Production at Full Development</u>			
	<u>In Project Areas (1977)^{a/}</u> (000' m. ton)	<u>National (1978)</u>	<u>Total</u> (000' m ton)	<u>As % of Project Areas</u> (%)	<u>National Production</u>	<u>Year of Full Development</u>
<u>Crops</u>						
Rice (paddy)	693.4	1,627.0	12.2	2.0	0.7	5
Corn	697.1	861.0	18.5	3.0	2.1	6
Sorghum	193.3	461.6	13.8	7.0	3.0	6
<u>Root crops:</u>						
Cassava	1,072.7	1,960.1				
Potatoes	693.6	1,525.8	28.6	2.0	0.8	7
Non-centrifugal sugar (panela)	509.5	893.8	35.2	7.0	3.9	6
Plantain	843.6	2,192.0	2.0	0.2	0.1	2
Cocoa	15.4	31.0	0.7	5.0	2.3	10
<u>Livestock</u>						
Beef (liveweight)	342.2 ^{b/}	863.3 ^{b/}	2.6	1.0	0.3	10
Pork (liveweight)	46.2 ^{b/}	99.9 ^{b/}	0.3	1.0	0.3	4
Poultry (liveweight)	n.a.	89.3	* ^{c/}	-	-	5
Honey	1.2	2.2 ^{b/}	* ^{d/}	1.0	0.4	4
Milk (million liters)	1.0	1.8	5.1	0.5	0.3	7
Eggs (million units)	n.a.	3.3	0.7	-	0.2	4

- ^{a/} Production in the 12 administrative departments
^{b/} Registered slaughter
^{c/} 30 m. ton.
^{d/} 8 m. ton.

At full development and using the 1978 farmgate prices utilized in the financial analysis (Annex 3, Table 33), the annual total value of the incremental output generated by the project would be about US\$20.7 million, excluding plantains (US\$6.0 million), which would be eliminated by Year 5.

B. Markets, Marketing and Prices

6.02 Total incremental production generated by the project at full development (1986) would be relatively small as compared with current production in the project areas and at a national level (para 6.01). It is expected that most of the incremental production would be utilized within the project areas and would not be sufficient to have any negative impact on market prices. However, it would contribute to meeting the increase in aggregate demand for food in Colombia, which is estimated to increase at a rate of about 3.8% per annum, thus assisting in checking the rise of consumer prices.

6.03 None of the project's commodities appears to face demand or marketing constraints. Incremental production of beef and rice would directly or indirectly lead to increases in exports, while production of non-centrifugal sugar (panela) is considered to be for the domestic market; however, since Colombia is a net exporter of sugar, it is envisaged that the incremental production of panela would release equivalent amounts of sugar for exports elsewhere in the economy. Overall grain marketing outlets within the project areas are considered to be adequate, and IDEMA maintains agencies throughout the project area. As a result of inadequate supply, the price situation for project commodities would be favorable and prices in the domestic market would continue to be high. The international price and demand situation for the project commodities currently exported by Colombia is expected to be as follows (US\$ 1978): beef world imports are expected to grow at 4.1% p.a. and prices are projected to increase from US\$870/m ton in 1978 to US\$1,120 m/ton by 1985; rice world imports are expected to grow at 2.0% p.a. with prices increasing from US\$368/m ton in 1978 to US\$424 m/ton by 1985; and world imports of sugar should grow at 1.4% p.a., with prices recovering from US\$7.8 cents/lb in 1978 to US\$14.1 cents/lb by 1990.

C. Producers' Benefits and Financial Rates of Return

6.04 Using the financial assumptions regarding investments, operating costs and income, the illustrative farm investment models were analyzed to assess producer benefits and financial rates of return. The principal results are summarized on page 36.

6.05 The financial rates of return, estimated at constant 1978 prices indicate that it would be financially rewarding to undertake the investments envisaged in the illustrative farm models. This is particularly true when the incremental investment is relatively small and full returns to the investments materialize in a relatively short period of time, as in the case of rainfed crops. The financial rate of return of the pure beef cattle operation, 12%, is indicative of the importance for INCORA beneficiaries to mix, whenever possible, pure beef cattle operations with minor species and/or crops. The introduction of relatively small amounts of minor species in the beef cattle operations, in addition to improving substantially the cash flow of the model and the income situation of the farmer, would increase the financial rate of return from 12% to 54%. Similarly, when applying to the 1978 financial prices the future trend in real prices (in 1978 constant dollars) as projected by the Bank Commodities and Export Projections Division, the financial rate of return of the pure beef cattle illustrative model would increase from 12% to 18%. Similarly, the financial rates of return would also increase for the other illustrative models, given the projected increase of world prices for the rest of the commodities, except for cocoa (Annex 3, Table 33). However, the projected increases in rice and sorghum prices would more than compensate in model 2 (para 5.06) for the negative impact of the projected decrease in world cocoa prices. At full development, per capita income to beneficiaries would range from US\$360 (or US\$420 including minor species) for beef cattle to US\$760 for partially irrigated crops, as compared with a national average per capita income, which was about US\$710 in

	Main activities to be developed			
	Beef cattle (320 ha)	Dual-purpose cattle (142 ha)	Crops--partly irrigated (210 ha)	Crops--rainfed (21 ha)
Type of farm	Empresas Comunitarias			Individual farm
No of families per farm	8	5	10	1
Average area per family	40	28	21	21
	----- (US\$) -----			
<u>Investment per family</u> ^{a/}	1,354	1,872	6,623	4,695
<u>Annual income before debt service</u> ^{b/}				
(a) Without project				
- Remuneration of family labor	1,240	1,080	1,139	1,120
- Cash surplus	392	633	1,263	888
- On-farm consumption	<u>280</u>	<u>297</u>	<u>323</u>	<u>325</u>
Total	1,882	2,010	2,725	2,333
(b) <u>With project at full development</u> ^{c/}				
- Remuneration of family labor	1,346	1,214	1,438	1,430
- Cash surplus	763	1,165	3,000	2,550
- On-farm consumption	<u>318</u>	<u>333</u>	<u>325</u>	<u>325</u>
Total	2,427	2,712	4,763	4,305
<u>Average debt service</u>				
- on project subloans	229	338	1,272	980
- on previous subloans	<u>190</u>	<u>159</u>	<u>117</u>	<u>135</u>
Total	419	497	1,389	1,115
<u>Net income after debt service</u>				
(a) Without project	1,692	1,851	2,608	2,198
(b) With project:				
- during debt repayment	2,008	2,215	3,374	3,190
- after full debt repayment ^{d/}	<u>2,427</u>	<u>2,712</u>	<u>3,528</u>	<u>4,048</u>
<u>Income per capita</u> ^{e/}				
- without project	282	308	435	366
- with project at full development ^{a/}	404	452	588	675
<u>Financial Rate of Return</u> ^{f/}	12%	22%	21%	45%

^{a/} When minor species were included, main indicators changed as follows:

	Beef cattle	Dual-purpose cattle
Investment per family (US\$)	1,522	2,139
Income per capita at full development (US\$)	420	452
Financial rate of return (%)	54%	66%

^{b/} After debt service on short term subloans.

^{c/} Year 7 for beef cattle, Year 6 for dual-purpose cattle, Year 7 for partly irrigated crops, and Year 5 for rainfed crops.

^{d/} Year 14 for beef cattle, Year 11 for dual-purpose cattle, Year 11 for partly irrigated crops, and Year 9 for rainfed crops.

^{e/} Assuming six members per family.

^{f/} In constant prices.

1977. On the average, the project would increase beneficiaries' income, in constant terms, by about 25% during the subloan repayment period and by about 50% after full repayment of the loan.

D. Financial Projections

Project Cash Flow

6.06 The estimated project cash flow to be handled by INCORA is given in Annex 3, Table 34. The cash inflow would be derived from the Government's counterpart funds in the form of equity contribution to INCORA, withdrawals from the Bank loan, and repayment of principal and interest by project beneficiaries. Withdrawals from the Bank loan would be made over five and one-half years; withdrawals in the last semester of Year 5 represent a four-month time lag between actual expenditures and reimbursement from the Bank loan. The cash outflow consists of subloans to project beneficiaries, expenditures for technical assistance, payment of commission to CAJA for its banking services, reserves for life insurance, and debt service on the Bank loan.

6.07 Given the Bank loan at 7.9% per annum ^{1/} and the Government equity contribution to INCORA, the average cost of funds for the project lending program would be about 3.5% per annum. The initial lending interest rate to sub-borrowers, excluding the 1% per annum life insurance charge, would be 16% per annum (paras 4.11 and 4.12), leaving a gross margin to INCORA of 12.5% per annum, or 11.5% per annum after payment of the 1% per annum commission to CAJA. Since the incremental administrative and technical assistance costs would be relatively small and totally financed under the project through additional budgetary allocations to INCORA, it is considered that the 11.5% would more than adequately cover any additional overhead costs and the lending risk. The cash flow projections indicate that the 11.5% per annum gross margin to INCORA would amount to a total cumulative surplus of US\$49.3 million (Col\$1,930 million) by Year 18 of the project (Annex 3, Table 34).

Fiscal Impact

6.08 Government's financial commitment to the project would amount to about US\$19.2 million (or US\$24.6 million, with price contingencies included). As an average, during the five-year implementation period of the project, the Government's equity contribution would amount to US\$3.8 million (Col\$150.0 million) per annum. This amount, compared with the annual average budgetary allocation to INCORA during the period 1975-77, would be equivalent to increasing INCORA's budget at an annual rate of 27% during the next five years. The counterpart funds required by the project would be as follows:

^{1/} Rate in effect from April to June 1979.

	-----Project Years-----					Total
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	
	----- (US\$ million) -----					
For the lending program	2.2	4.1	5.8	5.4	0.8	18.3
Other incremental costs	<u>0.3</u>	<u>0.3</u>	<u>0.1</u>	<u>0.1</u>	<u>0.1</u>	<u>0.9</u>
Total	<u>2.5</u>	<u>4.4</u>	<u>5.9</u>	<u>5.5</u>	<u>0.9</u>	<u>19.2</u>
Total (Col\$ million)	<u>99.1</u>	<u>168.6</u>	<u>233.8</u>	<u>212.5</u>	<u>33.9</u>	<u>747.4</u>

An assurance was obtained during negotiations that the project counterpart funds would be made available as equity to INCORA as specified above.

Project Cost Recovery

6.09 Project beneficiaries would contribute with an average of 11% of their investment plans. INCORA's lending, amounting to 89% of the investments to be financed under the project, is expected to be fully recovered. In line with Government's policy on the small-scale farming sector, technical assistance to beneficiaries would be provided by INCORA free of charge.

VII. ECONOMIC BENEFITS AND JUSTIFICATION

A. Benefits and Justification

7.01 The main benefits of the proposed project would be to increase productive efficiency, employment and incomes of land reform/colonization beneficiaries from currently unsatisfactory levels. At country level, the proposed project would help the agricultural sector to continue to play a leading role as one of the main providers of foreign exchange savings. The incremental production of rice and beef should lead to higher exports, and incremental production of corn, cocoa and milk would reduce import requirements as these commodities are currently imported. The net foreign exchange savings of the project at full development, valued at 1979 prices, would be about US\$13.5 million. The other products are mainly for domestic consumption, though panela production would substitute sugar, which, in turn, is being exported. At full development, the total value of incremental production generated by the project would be about US\$20.7 million, representing from Year 6 onward a net economic benefit to the country of about US\$11.3 million per annum.

7.02 The direct beneficiaries of the project would be about 7,600 small-scale farmers, with an average farm size to be developed under the project of about 25 ha per beneficiary, representing about 45,700 persons.

Employment effects, which are accounted for in the economic rate of return, would be substantial through the increased opportunities for work provided by the project. The project contribution to employment would come mainly from regular job opportunities generated at the farm level. At full development, the project would require, annually, an additional 1.5 million man-days of permanent and part-time labor, equivalent to 6,450 full-time jobs. About 25% of this total (1,600 man-years) would be provided by family labor, thus reducing substantially the underemployment of beneficiaries.

7.03 The proposed project has some important non-quantifiable benefits. In particular, it would assist the development of small-scale farming activities of land reform/colonization beneficiaries, who, up to now, have received only limited assistance, to a point where they would become self-sustaining viable farmers who would eventually "graduate" from INCORA assistance, thereby making it possible for the agency to extend its assistance to other beneficiaries. The project would also contribute to better land utilization by bringing currently unutilized land into production and by shifting to higher value farming activities such as commercial crops and dual-purpose cattle. Moreover, the most important of the non-quantifiable benefits of the proposed project would be the strengthening of INCORA's capabilities as a developing agency. The institutional building aspect carries very important policy implications in relation to the future of INCORA and assistance to a rather large number of small-scale farmers, who, given the current institutional and administrative structure of the Public Agricultural sector in Colombia, can be assisted only through INCORA's organization. Therefore, it is envisaged that the successful implementation of the proposed project could bring about some long due policy decisions on this institution.

B. Economic Rate of Return and Sensitivity Analysis

7.04 The rate of return to the economy has been calculated for each component, excluding the small agroindustry component and for the project as a whole, on the basis of the illustrative investment models, including the cost of technical support, monitoring and evaluation. The small agroindustries component, representing about 5% of total investment costs, has been excluded from the analysis because the specific type of agroindustries, and, therefore, its costs and benefits, are not yet defined. The investments in agroindustries would require a feasibility study, and these would be reviewed by the Bank on a case-by-case basis. Key assumptions and adjustments utilized in the economic analysis were as follows:

- (a) Efficiency wage rate, unskilled labor. In estimating the efficiency wages of unskilled labor, the following formula has been used:
$$EWR = \frac{lr (pWr)}{Wr}$$

factor to express in border prices the marginal product of labor foregone in rural areas (0.93); p represents the probability of

hiring a formerly employed worker (0.89, considering that the average rate of unemployment in rural areas is 11%); and W_r is the average agricultural wage rate in the project areas (Col\$120 per man-day), assumed to reflect the marginal product of labor of the employed rural worker. The resulting conversion factor for labor is 0.83. The values of l_r and p parameters are taken from the set of shadow prices for Colombia provided by the Programs Department. Countrywide averages are considered justified by the wide range of geographical locations and activities of project beneficiaries' and by the fact that implementation of project activities would follow a pattern similar to the existing agricultural activities in the 12 project areas.

- (b) Taxes. Taxes on cattle sales have been excluded from livestock production costs.
- (c) Border price ratios. To correct for distortions from import duties and internal sales taxes, all cost items have been border-priced by using the following conversion factors:

4-wheel drive vehicles	0.85
Motorcycles	0.49
Inputs:	
Fertilizers	0.98
Animal feed	0.90
Veterinary products	0.79
Other inputs	0.86
Agricultural machinery	0.97
Irrigation equipment (pumps and pipes)	0.70
Fencing materials	0.62
Civil works (construction sector)	0.87
Vehicles operating costs	1.85
Other (agricultural sector)	0.93

7.05 Efficiency prices have been calculated for project output on the following basis:

- (a) Milk, cassava, plantain and minor species have been considered as non-traded goods. Their financial prices, multiplied by the General Conversion factor for the Agricultural Sector (0.93), have been estimated to represent their economic value. For cassava, and plantain, occasional but minimal exports or imports occur to or from neighboring countries, but no data are available on CIF or FOB prices and no projections of future trends exist. No control exists on their prices or trade flows. Regarding milk and minor species, the very small incremental production is expected to be sold on the rural market of the producing areas, or consumed on the farm. Milk is expected to be consumed fresh (non pasteurized), on the farm and in its immediate vicinity. Prices of all above-mentioned commodities have been assumed to remain constant in real terms at their 1978 level; and

- (b) Rice, sorghum, cocoa, beef and panela have been treated as traded-goods. Efficiency prices for rice, sorghum, cocoa and beef have been estimated for 1978 based on: (i) available CIF or FOB price data at the Colombian border adjusted for internal transportation costs (at their economic value), and (ii) differences in quality between imported commodities and project expected output. An efficiency price for panela has been calculated on the basis of the efficiency price for sugar, after deducting the cost of industrial processing and adding back the economic value of molasses. Prices for future years have been estimated by applying the appropriate rates of change in constant prices, as projected by the Bank Commodities and Export Projections Division. The economic and financial prices used in the analysis are shown in Annex 3, Table 32.

7.06 Based on these assumptions, the economic rate of return of the project over 20 years is estimated at about 38%, including more than 50% for rainfed crops; 24% for irrigated crops; 29% for dual-purpose cattle; 20% for beef cattle breeding; and more than 50% in minor species. The economic rate of return for each component and for the project as a whole is given on page 42. The result of the analysis based on four sets of assumptions are summarized as follows:

	<u>Economic Rate of Return</u> %
(a) At financial prices, excluding transfer payments	24
(b) As (a) above, with efficiency pricing of output	29
(c) As (b) above and including shadow-pricing of labor	34
(d) As (c) above and applying border price ratios to costs (best estimate)	38

7.07 The relatively high level of the economic rate of return is determined mainly by the large proportion of project funds that would finance improvements in the cultivation of traditional rainfed crops, which require a relatively small investment and yield quick returns. In addition, the substantial increases in international prices projected for the project-traded outputs (except for cocoa) result in a quite substantial difference between the rate of return with and without efficiency pricing.

7.08 The rate of return of the project shows a higher degree of sensitivity to changes of output prices than to changes in costs. The sensitivity analysis indicates that bringing the economic rate of return to the level of the estimated opportunity cost of capital in Colombia (11%) would require either one of the following cases: (a) 60% increase in operating costs; (b) 50% decrease in benefits; or (c) 20% increase in costs and 20% decrease in benefits. These

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THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Economic Rate of Return

Summary of Calculation

(Col\$ million)

	----- Project Year -----										Economic Rate of Return (%)
	1	2	3	4	5	6	7	8	9	10-20	
<u>Net Increment Benefits</u>											
On-Farm Development:											
Crops, rainfed	-54.8	-73.9	-74.9	12.6	289.1	336.5	332.5	293.7	275.1	234.5	+50
Crops, partly irrigated	-34.6	-39.6	-39.7	-32.2	47.4	54.4	54.8	57.9	60.0	59.4	24
Dual-purpose cattle	-8.6	-22.5	-26.3	-23.5	3.0	34.7	41.9	45.7	47.0	47.3	29
Beef cattle breeding	-7.3	-18.0	-26.5	-28.1	-5.5	9.3	22.4	27.4	30.1	32.9	20
Minor species	<u>0.6</u>	<u>2.3</u>	<u>5.4</u>	<u>11.4</u>	<u>15.4</u>	<u>16.0</u>	<u>17.6</u>	<u>14.4</u>	<u>14.4</u>	<u>14.4</u>	<u>+50</u>
Subtotal	-105.3	-151.5	-162.0	-59.8	318.6	451.0	469.2	439.1	426.6	388.5	-
Technical support	<u>-39.1</u>	<u>-28.9</u>	<u>-7.5</u>	<u>-5.5</u>	<u>-5.5</u>	<u>-5.5</u>	<u>-5.5</u>	<u>-5.5</u>	<u>-5.5</u>	<u>-5.5</u>	<u>-</u>
Total project net incremental benefits	<u>-144.4</u>	<u>-180.4</u>	<u>-169.5</u>	<u>-65.3</u>	<u>313.1</u>	<u>445.5</u>	<u>463.7</u>	<u>433.6</u>	<u>421.1</u>	<u>383.0</u>	<u>38</u>

Source: Mission

May 15, 1979

events are unlikely to occur, however, given the expected price situation for both traded and non-traded goods and the conservative assumptions utilized in the illustrative farm models.

C. Project Risks

7.09 The project faces no major risks in terms of farmers' willingness to make changes and to adopt improved technology. This has been satisfactorily demonstrated in on-going INCORA programs and there is a strong demand for investment funds from INCORA's beneficiaries. Successful implementation of the project will depend largely on the Government's continuous support of INCORA's activities and, to a lesser extent, to overcoming some of INCORA's institutional weaknesses. Nevertheless, the risk is reasonable, particularly since the new administration is interested in strengthening INCORA, and INCORA has agreed to make the necessary changes in financial management and procedures. In addition, provision for high level and strongly centralized management is included in the project.

D. Environmental Impact

7.10 No long-term adverse environmental effects are expected as a consequence of the execution of the project. Fertilizers and chemicals to be utilized under the project are expected to have little effect on the local ecology, assuming that normal precautions are taken in their application and considering the relatively small area which would be covered by each farm participating in the project.

VIII. SUMMARY OF AGREEMENTS REACHED AND RECOMMENDATION

8.01 Assurances were obtained from the Government during negotiations that:

- (a) the project would be financed as specified in paragraph 3.13;
- (b) procurement procedures specified in paragraphs 3.15 and 3.16 would be followed;
- (c) the functions, duties and responsibilities of the project coordinator would not be changed during the implementation period of the project without prior Bank approval (para 4.01);
- (d) the project coordinator's duties and responsibilities would be as specified in paragraph 4.02;
- (e) the ratio of technicians to individual subloans would not exceed a ratio of 1:40 during the implementation period of the project and an adequate level of technical assistance would be maintained after project completion (para 4.03);

- (f) the procedures, terms, and conditions of the operation of the revolving fund would not be changed or waived without prior Bank approval (para 4.05);
- (g) the terms and conditions of participation by banks other than CAJA in the project would be subject to specific agreements acceptable to the Bank (para 4.06);
- (h) INCORA would enter into and update operating agreements with agencies specified in paragraph 4.08 under which they would carry out training courses and provide extended assistance;
- (i) approval procedures and lending limits specified in paragraph 4.09 would be applied and enforced;
- (j) lending terms and conditions specified in paragraphs 4.10 and 4.11 would be implemented by INCORA, and, by September 1, 1979, INCORA would submit to the Bank for comments the revised credit manual to be utilized for lending under the project (para 4.11);
- (k) the rate of interest to be utilized under the project would be linked to the rates utilized for comparable purposes and beneficiaries by FFAP, and, by July 1, 1980 the rates of interest and lending conditions of INCORA's own resources would be standardized to those to be utilized under the project and be extended to the rates utilized under Loans 1118-CO and 1163-CO (para 4.12);
- (l) not later than January 1, 1980 INCORA would submit to the Bank for comments, a report containing a detailed timetable and priorities of the study to be undertaken by the financial and management consultants and the computer system to be utilized under the project, and every six months progress reports of the consultants' activities and timetable for implementing the consultants' recommendations (para 4.16);
- (m) modified accounting procedures and financial statements would be maintained during the implementation period of the project (para 4.17);
- (n) accounting and auditing procedures specified in paragraphs 4.18 and 4.19 would be carried out;

- (o) a consultant on monitoring and evaluation techniques would be hired, on terms and conditions satisfactory to the Bank, not later than December 1, 1979; an adequately staffed Project Monitoring and Evaluation Unit would be maintained; monitoring and evaluation procedures would be carried out as outlined; annual reports on monitoring would be sent to the Bank within two months of the end of each 12-month period; quarterly progress reports of the project's financial implementation would be sent to the Bank within two months of the end of each quarter; and a draft project completion report would be prepared by INCORA no later than four months after the proposed project investments have been completed (para 4.21); and
- (p) counterpart funds would be made available as equity to INCORA as specified in paragraph 6.08.

8.02 Conditions of loan effectiveness would be that a subsidiary agreement, on terms and conditions satisfactory to the Bank, had been signed between INCORA and CAJA (para 4.04), and that a revolving fund for lending under the project, on terms and conditions satisfactory to the Bank, had been established by INCORA and that an initial amount equivalent to US\$1,080,000 had been deposited by INCORA (para 4.05).

8.03 It would be a condition of disbursement of the overseas training component that the Bank had been presented with a specific overseas training program (para 4.07).

8.04 With the above assurances, the proposed project would constitute a suitable basis for a Bank loan to the Colombian Institute for Agrarian Reform for the equivalent of US\$20 million. The loan would have a term of 17 years, including four years of grace, with interest at the rate prevailing at the time of the loan approval.

June 6, 1979

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Bank Lending to the Agricultural Sector in Colombia

1. Since 1966, the Bank has made 10 loans to Colombia for a total of US\$230.6 million; INCORA has been the executing agency for six of these loans. Performance under the on-going INCORA projects is described in paragraphs 1.20 to 1.27 of the main report. A summary of performance under completed INCORA projects (Loans 502-CO, 624-CO, and 739-CO), and other on-going agricultural credit projects for the agricultural sector in Colombia (Loans 1352-CO and 1357-CO) is given below.

A. Completed INCORA Projects

Atlantico I Irrigation (Loan 502-CO)

2. The loan totaling US\$9 million out of US\$15.7 million total project cost, became effective in November 1967. The project would finance the construction of flood protection works, irrigation and drainage systems, road, pumping plants, and agricultural supporting services for extension, research, and credit for farming operations and inputs, benefitting about 2,000 landless families to be settled by INCORA in the project area. The project as planned met all the criteria for integrating land reform with land development to improve agricultural production and family incomes and living standards in the rural sector; it was the first project of this type to be undertaken by INCORA.

3. During implementation, the project encountered serious problems which delayed completion of the infrastructure about four years beyond the original date. Technical problems were mainly to blame: most of the soils to be irrigated proved to be saline and/or alkaline, so that the intensive cropping pattern for export-bound production could not be implemented; thus, traditional crops are being produced under irrigation, bound for the internal market. The settlement program also fell short of its targets and only 840 families were settled in the area.

4. The PPAR indicates that full production from the project would be about 25% of that projected at appraisal but the increase in production value under these conditions would still provide family incomes well above the subsistence level. As a result of both the delay in implementing the project and the impossibility of implementing the intensive cropping pattern envisaged at appraisal, the project's economic rate of return was estimated to be below

5%. In addition to agricultural development, the improvements in social services benefited directly or indirectly about 50,000 inhabitants in the region. Also, the project had a strong influence on the organizational development of INCORA during the early years. This was the first integrated development project to be undertaken by INCORA and many of the procedures and methodology developed and used in the project became standard for other projects. Performance of INCORA as an executing agency was satisfactory; project design was the main reason that the results envisaged at appraisal could not be achieved.

First Agricultural Credit (Loan 624-CO)

5. The loan for US\$17 million, out of US\$431 total project costs, became effective in November 1969 and was completed in June 1975. The project area was initially confined to two regions (Valle and Tolima), and lending from 1970 to 1972 was limited to farmers with 10 to 100 ha. Farmers received credit for short-term seasonal production costs, machinery, and on-farm improvements, mainly for irrigation and drainage, and machinery contractors received subloans for machinery purchase.

6. During the first three years (1970-72), progress was slow. However, in early 1973, INCORA agreed to increase its field staff and give full support to the project in general; the Government provided funds and the Bank agreed to enlarge the project area and include farmers with less than 10 ha as project beneficiaries. As a result, activity speeded up and remaining funds (US\$14 million) were disbursed in 18 months.

7. The PPAR indicates that INCORA, after an unsatisfactory start, developed an effective organization for delivery and supervision of production and development credit, the target group of farmers, and total beneficiaries was about 15% larger than originally envisaged. The farm activity also proved to be a profitable undertaking for the country. The project's rate of return was reestimated at 25% or the same as estimated at appraisal. However, the project lending was dominated by short-term financing. This has been taken into account under the proposed project and short-term financing would be provided to project sub-borrowers only as a complement to medium- and long-term investments. In view of the project's concern with all farmers, many of whom were not land reform beneficiaries, the PPAR questioned the use of INCORA as an executing agency. The proposed project, however, deals exclusively with farmers who have benefited from the land reform program. By virtue of their land tenure status (their land is already mortgaged to INCORA), they lack access to long-term credit, which, by law, requires a land mortgage, and they have limited access to medium-term subloans, which, in practice, requires the guarantee of INCORA.

Caqueta Land Colonization (Loan 739-CO)

8. The loan of US\$8.1 million, out of US\$21.6 million of total project cost, became effective in October 1971. The project would provide about 4,500 settlers with farm development credit; land titles and technical assistance to about 8,000 families; and construction of 380 km of roads, 90 schools and six health centers. However, halfway through the project investment period,

it became obvious that the project could not achieve its objectives as expected at the appraisal. It had proved impossible to develop the project as fast as planned because of the difficulties of the location and with building up the technical and support services. In September 1973, project targets were reduced from 4,500 to 1,600 subloans for farm development and 300 subloans for cattle fattening; from 380 km to 200 km of roads; from 90 to 60 schools; and, four health centers and one hospital. The revised goals were satisfactorily met at completion of the project although 23 months behind schedule.

9. The PCR estimates that the economic rate of return of the project, 17%, was equivalent to the rate of return envisaged at appraisal. The agricultural and social impact of the project, however, proved to be difficult to measure due to a shortage of adequate information on project impact. Nevertheless, the project demonstrated that squatters in the Amazon forests can be settled and encouraged to develop farms, which provide a reasonable living for themselves and their families. The project also proved the feasibility of productive land use in the Amazon basin, and it has provided valuable experience for planning further rural development activities in the area.

B. Other On-going Agricultural Credit Projects

Integrated Rural Development (Loan 1352-CO)

10. The loan, US\$52 million for a project with total costs of US\$131 million, became effective in August 1977. The project provides an integrated delivery of supervised credit with technical advice on farm production and marketing, to small-scale farmers in three geographic areas of marked rural poverty. Improvements are also being made to physical infrastructure and social services which will benefit all inhabitants of the selected area. The project is under the overall control of a special unit in the National Planning Department and part of a US\$250 million national program also supported by IDB (US\$65 million) and the Canadian International Development Agency (CIDA) (US\$13 million) which in five years should benefit about one quarter of all the low-income target groups in rural Colombia. The administering agency of the project is Caja Agraria which handles on-lending for farm production and marketing and is responsible for the coordination of the other agencies involved in the execution of project components.

11. The project now in its second year of operation is progressing satisfactorily. The initial delays due to difficulties associated with coordinating activities of the 11 institutions working in the program have been largely solved. Agricultural credit is expected to continue its increasing trend supported by the additional ICA staff recruited at the beginning of the current year and by a restructuring of CAJA's organization. Cooperation among the institutions continues to improve. A special report has been prepared on the present status and future work program for this component. CAJA's monitoring of the project's activities has improved considerably, and a consultant firm has been hired by DNP's evaluation group to define evaluation methodology and procedures.

12. Disbursements as of March 31, 1979 were US\$6.3 million. The loan is expected to be fully disbursed by the end of 1982.

Second Agricultural Credit (Loan 1357-CO)

13. The loan which became effective in September 1977 finances the foreign exchange component of US\$64 million of a US\$74.1 million project. The loan is to finance medium- and long-term credit for crops and livestock, machinery contractors and agroindustries. A total of US\$14 million is reserved for small commercial farmers. The Bank of the Republic (BOR) is responsible for overall administration of the project. Funds are relent by BOR to participating institutions through its rediscounting facilities. BOR departments in charge of project management are the FFAP and Departamento de Credito de Fomento.

14. To the end of October 1978, almost 85% of the funds to other than small commercial farmers and to machinery contractors were committed and the rest is expected to be committed shortly. On the other hand, only 2% of the amount reserved for small commercial farmers was committed. The failure by FFAP to reach small farmers appears to be mainly due to: (a) poor adaptation of the FFAP credit system to small farmers' needs, particularly with respect to technical assistance requirements; (b) restrictive regulations regarding guarantees; and (c) the lack of counterpart funds specifically reserved for small farmers. To solve the above problems, a concerted effort is being made by BOR and the key institutions dealing with the agricultural sector and, on April 1979, important modifications were introduced to the system which would speed up commitments of funds allocated to the small commercial farmers. The loan is expected to be fully disbursed by June 1981.

June 6, 1979

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

INCORA's Accounting and Financial Management

A. INCORA's Accounting: Observations and Recommendations

1. Main observations and recommendations, based on the analysis of INCORA and of the Audited Financial Statements (AFS) of INCORA, are summarized below. These recommendations were discussed during appraisal with INCORA's management and with the staff of the Financial and Operative Auditing Division of the Comptroller General and preliminary agreements were reached for implementing the recommendations during preparation of INCORA's Audited Financial Statement for 1978.

Current Assets

2. Land for Distribution. Col\$ 633.4 million - Note 8 of the AFS states that: this land is available for distribution to beneficiaries. This statement is inaccurate; therefore, the amount mentioned above should not be included under current assets.

3. Subloans. All short-term loans and the current maturities of all long-term loans should be shown. It is apparent, however, that the amount of Col\$ 587.9 million (page 89, para (iv), AFS) includes all overdues, amounting to Col\$ 327.4 million, 75% of which has been overdue between one and five years. Therefore, these amounts can hardly be classified as current assets.

Long-Term Assets

4. Receivables. About 75% of the amount included under long-term assets (Col\$ 435.0 million) is made up of loans to beneficiaries of investments made in irrigation districts ("Valorizaciones"). These loans should be transferred to the long-term loan portfolio and be processed in the same manner as any other loan. Also, urgent action should be taken to recuperate the amounts of principal and interest due for collection. The amount included in the budget to be collected during 1979 from this portfolio is only Col\$ 1.0 million, indicating that little or no action is being taken to recuperate these loans (para 14).

5. Investments in Agricultural Development. At least 50% of the Col\$ 228.0 million under this category cannot be regarded as an asset. The individual accounts require reviewing, and these investments, which have decreased in value, should be shown at their real worth; the balance that cannot be recuperated should be written off.

6. Assets classified as unserviceable should be written off.

7. Depreciation should be calculated according to generally applied percentages, and reserves for reduction in value of assets should be created whenever necessary.

8. Memorandum accounts should be included in the Balance Sheet, including the following:

- (a) total amount of outstanding guarantees given by INCORA. Table on page 38 of the AFS is unclear and does not include Col\$ 179.0 million of guarantees issued by INCORA during 1977; similarly, there is no indication as to whether the amounts included under "amortizaciones" are payments made by INCORA or guarantees which were cancelled due to payments by beneficiaries;
- (b) all accrued interest on loans to be collected in the future. The existing system of interest collection is such that a control account is absolutely necessary; this would also provide information to management on the amount of this important "hidden reserve";
- (c) amounts of loan written off;
- (d) amounts of loan approved but not yet disbursed to beneficiaries;
- (e) future obligations to contractors, suppliers, and the like; and
- (f) any other memorandum account, as required, to reflect future obligations or commitments of INCORA.

9. Long-Term Investments. The long-term investments portfolio, totaling Col\$ 2,650.0 million (US\$67.4 million), should be divided into two parts: (a) investments which would be recuperated from beneficiaries, and (b) investments in roads and social investments carried out by INCORA, such as schools, hospitals, and health posts which would not be recuperated from beneficiaries.

Liabilities

10. Contingent liabilities, such as the reserve mentioned in note 27 (page 39 of the AFS) - "juicios de caracter administrativo y laboral" and other contractual obligations of INCORA towards employees (social benefits, pensions, and such) cannot be listed as part of INCORA's equity. In this connection, INCORA should carry out a study to determine the amounts required for the pension fund and any other contingent liabilities and create a separate reserve for those purposes.

Income Statement

11. The total amount of interest collected during each financial year (excluding the 1% for life insurance) should be included in the income statement.

12. Government's annual budgetary allocation to INCORA should be divided into:

- (a) allocations to cover part of INCORA's current administrative and general expenses, which should be included in the income statement;
- (b) allocations to finance investments and part of INCORA's lending program. In contrast to the current INCORA procedures, administrative and other expenses involved in carrying out the lending program, such as technical assistance, training, and the like, should be excluded. The balance sheet should show the Government's budgetary allocations either as an addition to equity, if they are not to be repaid by INCORA, or as loans from the Government, whatever is applicable.

General

13. Land. INCORA has issued about 15,000 titles to land reform beneficiaries. However, the number of subloans included in the long-term loan portfolio reflects only 50% of total titles issued. According to the Agrarian Reform Law, subloans should be signed by beneficiaries at the time of obtaining the title to the land. This situation should be rectified as soon as possible.

14. Irrigation Districts ("Valorizaciones"). INCORA should indicate immediate action to prepare the necessary documentatin to recover about Col\$ 1,700 million (US\$43.2 million) invested in the development of irrigation districts. Collection procedures should be arranged through HIMAT, which should collect the irrigation portfolio, together with HIMAT's regular collection of operation and maintenance costs.

15. Overdues and New Subloans. The list of overdue subloans (AFS, para 43) should also include a breakdown of overdue interest payments. Similarly, the records for subloans approved should differentiate between subloans that were subrogated or rescheduled and new subloans granted during the year.

16. Internal Audit Department. In line with the recommendations of the Contralor General, INCORA should establish an Internal Audit Department. The periodical reports currently prepared by the Operational Control Section provide a good analysis of the implementation of the different INCORA programs at regional level; however, little or no action has been taken by management on the recommendations included in these reports.

17. Superavit. As pointed out by the Contralor General, the amounts to be recuperated from the irrigation districts ("valorizaciones") should not be included in INCORA's equity as superavit, but how it should be treated in accounting and presented in the balance sheet requires further review. In any case, collections from the irrigation districts' portfolio should be deducted from the value of the investments made by INCORA, which is repaid by the beneficiaries.

B. Recommendations on Financial Management

18. INCORA should take the necessary steps to:
- (a) Recover principal and interest on:
 - (i) subloans to land reform beneficiaries for land purchase (Col\$ 600 million), representing about 10% of INCORA's total assets. Only about 50% of this amount (Col\$ 300 million) has been documented and is in the process of collection;
 - (ii) subloans to users of irrigation projects (Col\$ 1,800 million), representing about 25% of INCORA's total assets. Only about 16% of this total (Col\$ 300 million) has been documented, but collections are not being made;
 - (b) Modify its accounting system and change its financial presentation in order to give an accurate picture of its financial situation. Modifications should be made to:
 - (i) the income statement, as follows:
 - disclose all interest collected in cash and not only about 10% as is the current practice;
 - include all the accrued interest on outstanding loans;
 - adjust provisions for doubtful debts;
 - (ii) the balance sheet, as follows:
 - include all accrued interest as an asset;
 - include all guarantees granted by INCORA which now appear as neither INCORA's liabilities nor as contingent liabilities;
 - distinguish between assets which do generate or can generate any income and those which do not and cannot;
 - (c) Improve its reporting system. The accounting department should produce timely reports for management operations and decision-making. These reports should be produced by only one source, discontinuing the current method under which organizational units within INCORA report independently on their activities;
 - (d) Modify its budget preparation and presentation. The budget should:

- (i) distinguish between current operations and investments;
 - (ii) apply a common accounting code to be used in all financial statements and the budget;
 - (iii) analyze the reasons for variances and base budget on realistic assumptions;
- (e) Improve its computer activities. The existing installation is more than sufficient to cope with the required workload. The computer should be fully utilized and become the only source for financial and statistical data;
- (f) Set up an internal audit system. The existing Operational Control Section should be strengthened and its functions widened in order to perform as an internal audit unit;
- (g) Improve its operational arrangements with CAJA. INCORA operations must be carried out efficiently and duplication of work must be avoided;
- (h) Modify its reporting system included in the financial statements to clearly distinguish between:
- (i) subloans granted during the year from subloan renewals and rescheduling;
 - (ii) subloans in arrears paid during the year; and
 - (iii) subloans repaid ahead of schedule.
- (i) Modify its arrears reporting system to include not only arrears of principal but also of interest. Review the current arrears situation and prepare a plan to collect subloans or to write them off.

19. The Government should cover foreign exchange differences on all INCORA loans in foreign currency.

June 6, 1979

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Agricultural Sector Credit and GDP

	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>Average 1975-77</u>	
				<u>Amount</u>	<u>Structure</u>
	<u>(Col\$ million)</u>			<u>(%)</u>	
<u>New Loans to the Agricultural Sector</u>					
FFAP	5,596	7,227	10,225	7,683	39
Caja Agraria	5,303	6,122	7,916	6,447	33
Other banks	3,124	5,138	7,331	5,198	26
INCORA /a	435	323	584	447	2
Total	<u>14,458</u>	<u>18,810</u>	<u>26,056</u>	<u>19,775</u>	<u>100</u>
<u>Total Outstanding Credit</u>	38,064	48,652	70,029	52,248	100
of which: Agricultural sector	7,769	9,652	14,197	10,539	20
<u>Total GDP of the Agricultural Sector</u>					
Agriculture	57,883	78,074	103,370	79,776	52
Livestock	40,020	52,690	68,549	53,753	35
Others /b	15,582	18,192	24,002	19,259	13
Total	<u>113,485</u>	<u>148,956</u>	<u>195,921</u>	<u>152,788</u>	<u>100</u>
<u>Total GDP All Sectors</u>	412,829	532,961	686,679	554,156	-
<u>Ratios</u>					
New loans to agriculture as % of GDP of the sector	12.7	12.6	13.3	12.9	-
Agricultural GDP or % of total GDP	27.5	27.9	28.5	27.8	-
Outstanding credit to the sector as % of total outstanding	20.4	19.8	20.3	20.2	-

/a Lending with INCORA's own resources.

/b Fishing, hunting and forestry.

Source: Mission

May 15, 1979

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

INCORA Regionalization

<u>Region</u>	<u>Location of Regional Offices</u>	<u>Main Areas of Activities</u>
Antioquia	Medellin	Antioquia and partially the following departments and areas; southern part of Cordoba; north of Choco; and west of Santander
Arauca	Saravena	Arauca and the neighboring municipalities of Boyaca and Santander
Atlantico	El Limon	Atlantico
Bolivar	Cartagena	Northern part of Bolivar
Caqueta	Florencia	Caqueta
Cauca	Popayan	Cauca and part of Narino
Cesar	Valledupar	Cesar and parts of Magdalena and de Guajira
Cordoba	Monteria	Cordoba excluding Montelibano
Costa Pacifico	Buenaventura	Pacific coast from Buenaventura to Ecuador
Cundinamarca #1 - Boyaca	Bogota	Cundinamarca excluding the area of Sumapaz, and central Boyaca.
Cundinamarca #2	Fusagasuga	Sumapaz
Huila	Neiva	Huila
Magdalena	Prado-Sevilla	North of Magdalena and Guajira
Meta - Casanare	Villavicencio	Meta, Casanare and part of Vaupes
Narino-Putumayo	Pasto	Andean parts of Nariño and Putumayo
Norte de Santander	Cucuta	Northern part of Santander
Santander	Bucaramanga	Santander and southern parts of Bolivar
Pereira - Valle	Pereira	Parts of Quindio, Risaralda, Caldas and of Valle
Sucre	Sincelejo	Sucre and part of Bolivar
Tolima	Ibague	Tolima excluding the Sumapaz area

Source: INCORA
May 15, 1979

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Selection of Project Areas and Beneficiaries

	<u>Agrarian Reform</u>		<u>Settlers</u>		<u>Total</u>	
	<u>No. of Families</u>	<u>Area (ha)</u>	<u>No. of Families</u>	<u>Area (ha)</u>	<u>No. of Families</u>	<u>Area (ha)</u>
Total in INCORA 20 projects	<u>35,954</u>	<u>496,982</u>	<u>16,492</u>	<u>833,046</u>	<u>52,446</u>	<u>1,330,028</u>
Total in 12 project areas	<u>24,899</u>	<u>317,325</u>	<u>9,739</u>	<u>457,480</u>	<u>34,638</u>	<u>774,805</u>
Total project potential beneficiaries in the 12 project areas:						
Antioquia	800	22,131	-	-	800	22,131
Bolivar	1,500	30,280	-	-	1,500	30,280
Cesar	1,185	48,556	-	-	1,185	48,556
Cordoba	1,807	23,434	-	-	1,807	23,434
Cundinamarca No. 1 - Boyaca	-	-	700	43,854	700	43,854
Cundinamarca No. 2	2,421	29,517	-	-	2,421	29,517
Huila	1,044	27,872	-	-	1,044	27,872
Magdalena	423	10,631	-	-	423	10,631
Meta-Casanare	1,013	61,870	1,735	100,000	2,748	161,870
Norte de Santander	1,240	22,067	-	-	1,240	22,067
Santander	1,177	27,072	-	-	1,177	27,072
Total	<u>12,610</u>	<u>303,430</u>	<u>2,435</u>	<u>143,854</u>	<u>15,045</u>	<u>447,284</u>

Note: For project implementation purposes Casanare would be administrated through Meta Regional Office.

Source: Mission

April 16, 1979

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COLOMBIATHIRD AGRICULTURAL CREDIT PROJECT - INCORADetailed Summary of Project AreasDepartments

- | | | |
|---------------------------|---|---|
| Antioquia | - | Excluding the municipalities of Apartado, Chigorodó, Puerto Berrio and Turbo. |
| Bolivar | - | Excluding the municipalities of Mahates and María la Baja. |
| Cesar | - | All of the Department. |
| Cordoba | - | Excluding the municipalities of Monteria and Cereté. |
| Boyacá | - | Including the municipalities of Nobsa, Puerto Boyacá and Sutamarchán. |
| Cundinamarca
#1 and #2 | - | Including the municipalities of Agua de Dios, Anapoima, Arbelaez, Cabrera, El Colegio, Fusagasugá, Guataquí, Jerusalén, La Mesa, Lenguaque, Nilo, Ospina Pérez, Pacho, Pandí, Pasca, Pulí, Rafael Reyes (Apulo), San Bernardo, San Francisco, Sibaté, Silvania, Subachoque, Tena, Tibacuy, Tocaíma, Viotá and Yacopí (San Antonio). |
| Huila | - | All of the Department. |
| Magdalena | - | Excluding the municipality of Ciénaga. |
| Meta-Casanare | - | Including municipalities of Villaviciencio, Acacias, San Juan de Arama, San Martín and Vista Hermosa of the Meta Department; Yopal (Marroquín) of the Casanare Department; and part of Vaupes Department, but excluding the area to benefit for the El Retorno Settlement Project. |
| Norte de Santander | - | Excluding the municipalities of Chitagá, Sardinata, Toledo and Tibú. |
| Santander | - | Excluding the municipalities of Barrancabermeja, Bolivar, Cimitarra and Simacota. |

Source: Mission

May 15, 1979.

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Project Areas: Summary of Beneficiaries, Land Use and Tenure Type

	<u>Total Area (ha)</u>	<u>No. of Families</u>	<u>Area per Family (ha)</u>
<u>Total INCORA Beneficiaries in the 20 Areas</u>			
Empresas Comunitarias (1,274)	246,107	12,350	20
Asentamientos individuales	250,875	13,604	18
Colonos	<u>833,046</u>	<u>16,492</u>	<u>50</u>
Total	<u>1,330,028</u>	<u>42,446</u>	<u>31</u>
Crops	142,643	-	3
Livestock	587,282	-	14
Fallow	212,592	-	5
Indirectly productive or unusable	<u>385,506</u>	<u>-</u>	<u>9</u>
Total	<u>1,330,028</u>	<u>42,446</u>	<u>31</u>
<u>Total Potential Project Beneficiaries in the 12 Areas</u>			
Empresas comunitarias (537)	127,468	5,519	23
Asentamientos individuales	169,936	7,038	24
Colonos	<u>149,880</u>	<u>2,488</u>	<u>60</u>
Total	<u>447,284</u>	<u>15,045</u>	<u>30</u>
Of which:			
Crops	63,402	-	4
Livestock	264,177	-	18
Fallow	95,104	-	6
Indirectly productive or unusable	<u>24,601</u>	<u>-</u>	<u>2</u>
Total	<u>447,284</u>	<u>15,045</u>	<u>30</u>

	<u>Total Area to be Developed (ha)</u>	<u>No. of Families</u>	<u>Area to be Developed per Family (ha)</u>
<u>Estimated Project Beneficiaries in the 12 Project Areas</u>			
Empresas comunitarias (300)	78,940	3,000	27
Asentamientos individuales and colonos	<u>109,470</u>	<u>4,620</u>	<u>24</u>
Total	<u>188,410</u>	<u>7,620</u>	<u>25</u>
Of which:			
Beef cattle breeding	84,000	2,240	37,5
Dual purpose cattle	57,910	2,280	25
Crops	<u>48,000</u>	<u>3,100</u>	<u>15</u>
Total	<u>188,410</u>	<u>7,620</u>	<u>25</u>

Source: Mission
April 16, 1979

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT--INCORA

INCORA Financial Statements

	<u>1975</u>	<u>1976</u>	<u>1977</u>
	(Col\$ million)		
<u>BALANCE SHEET</u>			
<u>Assets</u>			
Cash and bank accounts	253	337	216
Short-term assets including: loan portfolio; bonds; and land available for distribution	<u>1,240</u>	<u>1,736</u> ^{a/}	<u>1,716</u>
Sub-total Current Assets	1,492	2,073	1,932
Long-term financial assets including loan portfolio	2,511	1,931 ^{a/}	2,298
Investments in agricultural development	166	253	230
Fixed assets	75	88	76
Other assets including investment in infrastructure	2,304	2,423	2,499
Deferred expenses	<u>115</u>	<u>101</u>	<u>95</u>
Sub-total Long-term Assets	5,171	4,796	5,198
Total Assets	<u>6,663</u>	<u>6,869</u>	<u>7,130</u>
<u>Liabilities and Equity</u>			
<u>Liabilities</u>			
Short-term	675	756	939
Medium- and long-term	<u>2,168</u>	<u>2,098</u>	<u>2,107</u>
Sub-total Liabilities	2,843	2,854	3,046
<u>Equity</u>			
Capital	2,684	2,679	2,779
Reserves and surplus	1,310	1,433	1,770
Current year surplus (-deficit)	<u>(-174)</u>	<u>(-97)</u>	<u>(-465)</u>
Sub-total Equity	3,820	4,015	4,084
Total Liabilities and Equity	<u>6,663</u>	<u>6,869</u>	<u>7,130</u>
<u>INCOME STATEMENT</u> ^{/1}			
<u>Income</u>			
Government budgetary allocations	476	711	407 ^{c/}
Ordinary income ^{d/}	88	100	19
Financial income	<u>123</u>	<u>170</u>	<u>227</u>
Total Income	687	981	653
<u>Expenses</u>			
Administrative expenses	441	481	550
Irrigation districts	76	81	2 ^{c/}
Depreciation	19	33	46
Provision for decrease in the value of assets	48	136	177
Financial expenses	113	131	117
Exchange differences	144	117	49
Provision for legal claims	<u>-</u>	<u>21</u>	<u>29</u>
Total Expenses	841	1,000	970
Annual Surplus (-Deficit) ^{b/}	<u>-154</u>	<u>-19</u>	<u>-317</u>

a/ Loan portfolio, short-vs-long-term, was reclassified in 1976.

b/ Corrected figures. Adjustments have been to account for the fact that interest collected in cash on part of INCORA's loan portfolio (Col\$ 20.0 million in 1975, Col\$ 78.0 million in 1976, and Col\$ 148 million in 1977) was not included in the Income Statement but charged directly to the reserves in the equity.

c/ Excluding Col\$ 91.0 million which were transferred from INCORA to HIMAT in 1977.

d/ Income mainly from O & M payments of beneficiaries of the Irrigation Districts. Management and operation of Irrigation Districts was transferred to HIMAT in 1976.

Source: Mission

April 16, 1979

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

INCORA's Credit Activities 1975-77^a

	1975	1976	1977	Average 1975-77		Total Outstanding Credit
	(Col\$ million)			Amount	Structure	(June 30, 1978)
					%	(Col\$ million)
<u>INCORA's Own Resources</u>						
Supervised (INCORA/USAID)	176.1	142.5	135.6	151.4	25	1,068.8
Planned (INCORA/IBRD)	191.8	118.6	211.4	173.9	29	310.0
Livestock Revolving Fund (BG/INCORA)	0.5	4.6	119.2	41.4	7	184.8
Caqueta and Cordoba (INCORA/IBRD)	24.6	13.1	99.1	45.6	7	234.6
Sub-total	393.0	278.8	565.3	412.3	68	1,798.2
<u>With INCORA's Guarantee</u>						
Development Loan Fund (CAJA/USAID)	12.9	17.0	13.9	14.6	2	33.9
FFAP (CAJA/FFAP)	133.2	125.7	85.7	114.9	19	102.2
Asociativo (CAJA)	69.2	49.6	73.7	64.2	11	109.2
Others ^b	2.5	3.5	6.0	4.0	-	16.4
Sub-total	217.8	195.8	179.3	197.7	32	261.7
Total Production and Investment Credit	<u>610.8</u>	<u>474.6</u>	<u>744.6</u>	<u>610.0</u>	<u>100</u>	<u>2,059.9</u>
Total Beneficiaries (families)	11,413	8,866	9,034	9,771	-	36,876
Average credit per beneficiary (Col\$)	53,518	53,530	82,421	62,429	-	55,860
(US\$)	1,361	1,362	2,097	1,588	-	1,421

a/Excluding INCORA's lending for the purchase of land by beneficiaries.

b/From various institutions for marketing or purchase of inputs by INCORA's beneficiaries.

Source: Mission
April 16, 1979

Project Technical Support Costs
(Col\$ '000)

	Number	Unit Price	Year					Total	Foreign Exchange %	Foreign Exchange
			1	2	3	4	5			
Technical Assistance and Training										
<u>Vehicles</u>										
4 Wheel drive vehicles ^{a/}	130	415	33,200	20,750	-	-	-	53,950	80	43,160
Motorcycles ^{b/}	90	70	3,500	2,870	-	-	-	6,370	40	2,548
Subtotal	-	-	36,700	23,620	-	-	-	60,320	76	45,708
<u>Training of technicians</u>										
In the country ^{c/}	290	14	1,620	1,365	981	-	-	3,966	-	-
Abroad	12	200	800	800	800	-	-	2,400	100	2,400
Subtotal	-	-	2,420	2,165	1,781	-	-	6,366	38	2,400
<u>Training of beneficiaries</u>										
	n.a.	n.a.	210	210	210	-	-	630	-	-
<u>Operating cost of vehicles^{d/}</u>										
			280	790	1,020	1,020	1,020	4,130	70	2,892
<u>Incremental field staff^{e/}</u>										
	4	330	1,320	1,320	1,320	1,320	1,320	6,600	-	-
Total:	-	-	40,930	28,105	4,331	2,340	2,340	78,046	65	51,000
Administration and Management										
<u>Salaries^{f/}</u>										
Project director	1	508	508	508	508	508	508	2,540	-	-
Driver	1	105	105	105	105	105	105	525	-	-
Secretary	1	86	86	86	86	86	86	430	-	-
Subtotal	-	-	699	699	699	699	699	3,495	-	-
<u>Vehicle and equipment</u>										
One 4-wheel drive vehicle	1	415	415	-	-	-	-	415	80	332
Office equipment	-	-	60	-	-	-	-	60	45	27
Subtotal	-	-	475	-	-	-	-	475	67	359
<u>Vehicle operating costs</u>										
			50	100	100	100	100	450	70	315
<u>Per diems: Director</u>										
Driver			60	60	60	60	60	300	-	-
			30	30	30	30	30	150	-	-
Total			1,314	889	889	889	889	4,870	14	674
Monitoring and Evaluation										
<u>Salaries</u>										
Specialist	1	2,280	2,280	570	570	570	570	4,560	100	4,560
Chief of unit	1	340	340	340	340	340	340	1,700	-	-
Driver	1	105	105	105	105	105	105	525	-	-
Subtotal	-	-	2,725	1,015	1,015	1,015	1,015	6,785	67	4,560
<u>Vehicle and equipment</u>										
4-wheel drive	1	415	415	-	-	-	-	415	80	332
Programmable calculator	1	52	52	-	-	-	-	52	45	23
Office equipment	1	-	100	-	-	-	-	100	45	45
Subtotal	-	-	567	-	-	-	-	567	70	400
<u>Vehicle operating cost</u>										
			50	100	100	100	100	450	70	315
<u>Per diems</u>										
Driver			30	30	30	30	30	150	-	-
Chief of unit			50	50	50	50	50	250	-	-
Total			3,422	1,195	1,195	1,195	1,195	8,202	64	5,275
Total Cost of Technical Support			45,716	30,189	6,415	4,424	4,424	91,118	63	56,949

^{a/} Replacement of existing vehicles, 80 in year 1 and 50 in year 2.
^{b/} 50 in year 1 and 40 in year 2.
^{c/} 115 technicians in year 1, 100 in year 2 and 75 in year 3.
^{d/} Motorcycles only, other vehicles would be replacements of existing ones.
^{e/} Cost for man-year including social charges and benefits.
^{f/} Internationally recruited. Full time during year 1, and part-time during years 2-5.

Source: Mission

April 16, 1979

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Phasing of Lending and Investment

(Excluding Price Contingencies)

	Years					Total
	1	2	3	4	5	
Commitments (No. of subloans)						
Beef cattle breeding/ ^a	166	335	420	419	-	1,340
Dual-purpose cattle raising/ ^a	219	295	388	388	-	1,290
Crops	<u>315</u>	<u>520</u>	<u>725</u>	<u>730</u>	-	<u>2,290</u>
Total	700	1,150	1,533	1,537	-	4,920
Of which: Empresas comunitarias	45	70	90	95	-	300
Individual farms	655	1,080	1,443	1,442	-	4,620
Total Commitments (US\$'000)						
Medium and long term:						
Beef cattle breeding	322	644	802	810	-	2,598
Dual-purpose cattle raising	612	835	1,090	1,090	-	3,627
Crops	2,046	3,128	4,209	4,492	-	13,875
Minorspecies	16	29	44	44	-	133
Short-term, crops	<u>1,472</u>	<u>3,050</u>	<u>4,368</u>	<u>2,878</u>	-	<u>11,768</u>
Total	<u>4,468</u>	<u>7,686</u>	<u>10,513</u>	<u>9,314</u>	-	<u>31,981</u>
Disbursements of Project funds (US\$'000)						
Beef cattle breeding	207	530	745	896	289	2,578
Dual-purpose cattle raising	276	713	950	1,090	598	3,627
Crops: investment	2,002	3,113	4,194	4,477	89	13,875
working capital	1,472	3,050	4,367	2,879	-	11,768
Minor species	<u>16</u>	<u>29</u>	<u>44</u>	<u>44</u>	-	<u>133</u>
Total	<u>3,973</u>	<u>7,435</u>	<u>10,300</u>	<u>9,297</u>	<u>976</u>	<u>31,981</u>
Total Investments/^b (US\$'000)						
Beef cattle breeding	244	623	877	949	340	3,033
Dual-purpose cattle raising	325	840	1,118	1,282	703	4,268
Crops: investment	2,355	3,662	4,934	5,267	105	16,323
working capital/ ^c	1,550	3,350	4,973	3,263	-	13,136
Minor species	<u>18</u>	<u>34</u>	<u>52</u>	<u>52</u>	-	<u>156</u>
Total	<u>4,492</u>	<u>8,509</u>	<u>11,954</u>	<u>10,813</u>	<u>1,148</u>	<u>36,916</u>

^{/a} Including minor species.^{/b} Including beneficiaries' contribution.^{/c} Project-financed only.

Source: Mission

April 16, 1979.

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

INCORA's Technical and Support Staff in the Project Areas /a

<u>Category</u>	<u>Antioquia</u>	<u>Bolivar</u>	<u>Cesar</u>	<u>Cordoba</u>	<u>Cundinamarca #1 - Boyaca</u>	<u>Cundinamarca # 2</u>	<u>Huila</u>	<u>Magdalena</u>	<u>Meta- Casanare</u>	<u>North Santander</u>	<u>Santander</u>	<u>Total</u>
<u>Professionals and Managers:</u>												
Area chiefs	1	1	1	1	2	1	1	1	1	1	1	12
Zone chiefs	4	5	5	4	12	9	5	-	8	1	8	61
Group chiefs	2	2	1	2	-	2	2	1	2	1	2	17
Agriculturalists	3	5	5	3	8	6	7	7	6	4	4	58
Animal production specialists	5	6	7	5	3	6	2	2	3	3	3	45
Others	-	-	-	-	-	1	1	-	-	-	-	2
Total	<u>15</u>	<u>19</u>	<u>19</u>	<u>15</u>	<u>25</u>	<u>25</u>	<u>18</u>	<u>11</u>	<u>20</u>	<u>10</u>	<u>18</u>	<u>195</u>
<u>Mid-level technicians</u>	<u>22</u>	<u>22</u>	<u>18</u>	<u>22</u>	<u>27</u>	<u>31</u>	<u>17</u>	<u>12</u>	<u>23</u>	<u>18</u>	<u>22</u>	<u>234</u>
Total field staff	<u>37</u>	<u>41</u>	<u>37</u>	<u>37</u>	<u>52</u>	<u>56</u>	<u>35</u>	<u>23</u>	<u>43</u>	<u>28</u>	<u>40</u>	<u>429</u>
<u>Support Staff</u>												
Credit portfolio coordinators	1	1	1	1	2	1	1	1	1	1	1	12
Assistants	-	2	-	-	2	7	-	2	1	-	1	15
Secretaries	7	8	5	7	10	7	6	6	8	4	10	78
Total support staff	<u>8</u>	<u>11</u>	<u>6</u>	<u>8</u>	<u>14</u>	<u>15</u>	<u>7</u>	<u>9</u>	<u>10</u>	<u>5</u>	<u>12</u>	<u>105</u>
Total	<u>45</u>	<u>52</u>	<u>43</u>	<u>45</u>	<u>66</u>	<u>71</u>	<u>42</u>	<u>32</u>	<u>53</u>	<u>33</u>	<u>52</u>	<u>534</u>

/a As of December 10, 1978.

Source: INCORA

April 16, 1979

COLUMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Illustrative Farm Model No. 1: Non-irrigated Crops

Individual farm, 21 ha (1 family)
(Col\$)

	Without Project	Project (Years)								
		1	2	3	4	5	6	7	8	9
<u>Net cash inflow /a</u>										
Commercial crops (9 to 15 ha)	69,108	81,257	117,346	108,937	132,238	103,707	107,888	112,071	116,252	134,360
Livestock (5 ha) /b	9,800	9,800	9,800	9,800	9,800	9,800	9,800	9,800	9,800	9,800
Total inflow	78,908	91,057	127,146	118,737	142,038	113,507	117,688	121,871	126,052	144,160
<u>Debt service on previous long term loans</u>										
Land /c	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100
Other /d	5,040	5,040	5,040	5,040	5,040	5,040	-	-	-	-
Subtotal debt service	7,140	7,140	7,140	7,140	7,140	7,140	2,100	2,100	2,100	2,100
<u>Disposable cash income</u>	71,768	98,197	134,286	125,877	149,178	120,647	119,800	123,971	128,152	146,260
<u>plus: value of family consumption:</u>										
crops (commercially)	2,900	1,700	2,900	2,900	2,900	2,900	2,900	2,900	2,900	2,900
milk	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640
other (subsistence crops, minor species)	5,230	5,230	5,230	5,230	5,230	5,230	5,230	5,230	5,230	5,230
Subtotal	12,770	11,570	12,770	12,770	12,770	12,770	12,770	12,770	12,770	12,770
<u>Total Income</u>	84,538	109,767	147,056	138,647	161,948	133,417	132,570	136,741	140,922	159,030
<u>of which: remuneration of family labor:</u>										
Commercial crops	30,600	40,200	41,760	42,720	42,720	42,720	42,720	42,720	42,720	42,720
Livestock	4,600	4,600	4,600	4,600	4,600	4,600	4,600	4,600	4,600	4,600
Other	8,840	8,840	8,840	8,840	8,840	8,840	8,840	8,840	8,840	8,840
Subtotal	44,040	53,640	55,200	56,160	56,160	56,160	56,160	56,160	56,160	56,160

/a Net of debt service on short term subloans and project-financed long term subloans (not corrected for expected inflation) and net of the value of on-farm consumption.

/b Based on costs and benefits from the 127 ha dual purpose cattle activity budget (without project situation).

/c Col\$ 100 per ha per year over 15 years.

/d Col\$ 240 per ha per year over 5 years.

Source: Mission

April 16, 1979

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Illustrative Farm Model No. 2: Crops, Partly Irrigated

Empresa Comunitaria, 210 ha (10 families)
(Col\$'000)

	Without Project	1	2	3	4	5	6	7	8	9	10	11
<u>Net Cash Inflow</u> ^{/a}												
Commercial crops (150 ha)	845.5	810.8	778.7	780.0	848.1	868.4	888.7	1,024.2	1,080.4	1,134.4	1,117.4	1,160.4
Livestock (50 ha) ^{/b}	<u>98.3</u>	<u>98.3</u>	<u>98.3</u>	<u>98.3</u>	<u>98.3</u>	<u>98.3</u>	<u>98.3</u>	<u>98.3</u>	<u>98.3</u>	<u>98.3</u>	<u>98.3</u>	<u>98.3</u>
Subtotal	943.8	909.1	877.0	878.3	946.4	966.7	987.0	1,122.5	1,178.8	1,234.7	1,215.7	1,258.7
<u>Debt Service on previous loans:</u>												
Land ^{/c}	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
Other ^{/d}	<u>50.4</u>	<u>50.4</u>	<u>50.4</u>	<u>50.4</u>	<u>50.4</u>	<u>50.4</u>	-	-	-	-	-	-
Subtotal	71.4	71.4	71.4	71.4	71.4	71.4	21.0	21.0	21.0	21.0	21.0	21.0
<u>Disposable cash income plus value of on-farm consumption</u>												
	872.4	837.7	805.6	806.9	875.0	895.3	966.0	1,105.5	1,157.8	1,213.7	1,194.7	1,237.7
Commercial crops	9.0	9.0	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
Milk	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4
Other (subsistence crops and minorspecies)	<u>71.6</u>	<u>71.6</u>	<u>71.6</u>	<u>71.6</u>	<u>71.6</u>	<u>71.6</u>	<u>71.6</u>	<u>71.6</u>	<u>71.6</u>	<u>71.6</u>	<u>71.6</u>	<u>71.6</u>
Subtotal	127.0	127.0	127.9	127.9	127.9	127.9	127.9	127.9	127.9	127.9	127.9	127.9
<u>Total Income</u>	<u>999.4</u>	<u>964.7</u>	<u>933.5</u>	<u>934.8</u>	<u>1,002.9</u>	<u>1,023.2</u>	<u>1,093.9</u>	<u>1,233.4</u>	<u>1,285.7</u>	<u>1,341.6</u>	<u>1,322.6</u>	<u>1,365.6</u>
Of which: remuneration of family labor:												
Commercial crops	313.2	436.3	428.4	414.0	421.2	430.8	430.8	430.8	430.8	430.8	430.8	430.8
Livestock	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0
Other	<u>88.4</u>	<u>88.4</u>	<u>88.4</u>	<u>88.4</u>	<u>88.4</u>	<u>88.4</u>	<u>88.4</u>	<u>88.4</u>	<u>88.4</u>	<u>88.4</u>	<u>88.4</u>	<u>88.4</u>
	447.6	570.7	562.8	548.4	555.6	565.2	565.2	565.2	565.2	565.2	565.2	565.2

^{/a} Net of debt service on short term subloans and on project-financed long term subloans; net of the value of on-farm consumption.

^{/b} Based on costs and benefits from the 127 ha dual-purpose cattle activity budget (without project situation).

^{/c} Col\$ 100 per ha per year for 15 years.

^{/d} Col\$ 240 per ha per year for 5 years.

Source: Mission

April 16, 1979.

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Illustrative Farm Model No. 3: Dual-purpose Cattle

Empresa Comunitaria, 142 ha (5 families)

	Without Project	With Project (Years)										
		1	2	3	4	5	6	7	8	9	10	11
<u>Net Cash Inflow/a</u>												
Livestock (127 ha)	249.9	284.1	293.9	240.1	251.3	266.5	274.0	274.0	274.0	274.0	274.0	346.0
Crops (15 ha)/b	86.8	86.8	86.8	86.8	86.8	86.8	86.8	86.8	86.8	86.8	86.8	86.8
Minorspecies/c	-	32.8	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7
Subtotal	336.7	403.7	415.4	361.6	372.0	388.0	395.5	395.5	395.5	395.5	395.5	467.5
<u>Debt Service on previous loans</u>												
Land/d	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
Other long term loans/e	34.0	34.0	34.0	34.0	34.0	34.0	-	-	-	-	-	-
	48.2	48.2	48.2	48.2	48.2	48.2	14.2	14.2	14.2	14.2	14.2	14.2
<u>Disposable cash income</u>	288.5	355.5	367.2	313.4	323.8	339.8	381.3	381.3	381.3	381.3	381.3	453.3
<u>Plus: Value of on-farm consumption</u>												
Milk	17.6	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2
Crops	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2
Minorspecies	7.5	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Subtotal	58.3	65.4	65.5	65.4	65.4	65.4	65.4	65.4	65.4	65.4	65.4	65.4
<u>Total Income</u>	<u>346.8</u>	<u>420.9</u>	<u>432.6</u>	<u>378.8</u>	<u>389.2</u>	<u>405.2</u>	<u>446.7</u>	<u>446.7</u>	<u>446.7</u>	<u>446.7</u>	<u>446.7</u>	<u>518.7</u>
Of which: remuneration of family labor:												
Livestock	116.9	127.0	137.1	140.2	142.8	142.9	142.9	142.9	142.9	142.9	142.9	142.9
Crops	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
Minorspecies	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Subtotal	212.4	222.5	232.6	235.7	238.4	238.5	238.5	238.5	238.5	238.5	238.5	238.5

/a Net of short-term debt service of project related long-term debt service (not corrected for expected inflation) and of family on-farm consumption.

/b Based on per ha costs and benefits from 15 ha-crop activity budget (without project situation).

/c Minor species = 0.55 of a pig activity budget (15 a.u. per family); 1 poultry activity budget (9 hens per family) and 0.8 of a agriculture budget (1 hive per family).

/d Col\$ 100 per ha per year over 15 years.

/e Col\$ 240 per ha per year over 5 years.

Source: Mission
April 16, 1979

COLOMBIA
 THIRD AGRICULTURAL CREDIT PROJECT - INCORA
 Illustrative Farm Model No. 4: Beef Cattle Breeding
 Empresa Comunitaria, 320 ha (8 families)
 (Col\$ '000)

	Without Project	With Project (Years)													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Net cash inflow /a															
Minor species /b	-	54.5	101.1	101.1	101.1	107.5	107.5	107.5	107.5	107.5	107.5	107.5	107.5	107.5	107.5
Beef cattle breeding (300 ha)	388.1	420.3	410.5	284.4	366.5	375.9	378.3	383.3	389.3	389.9	391.3	388.5	397.3	394.3	471.8
Crops (20 ha) /c	115.7	115.7	115.7	115.7	115.7	115.7	115.7	115.7	115.7	115.7	115.7	115.7	115.7	115.7	115.7
Subtotal	503.5	590.5	627.3	501.2	583.3	599.1	601.5	607.0	612.5	613.1	614.5	611.7	620.5	617.5	695.0
Debt service on previous long-term loans															
Land /d	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0
Other /e	72.0	72.0	72.0	72.0	72.0	72.0	-	-	-	-	-	-	-	-	-
Subtotal	104.0	104.0	104.0	104.0	104.0	104.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0
Disposable cash income plus: value of on-farm consumption															
Minor species	12.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
Milk	23.1	24.5	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8
Crops	53.2	53.2	53.2	53.2	53.2	53.2	53.2	53.2	53.2	53.2	53.2	53.2	53.2	53.2	53.2
Sub-total	88.3	93.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total income:	488.1	580.2	623.3	497.2	579.3	595.1	669.5	675.0	680.5	681.1	682.5	679.7	688.5	685.5	763.0
Of which: Remuneration of family labor:															
Cattle breeding	269.7	285.6	292.0	290.0	292.5	292.5	292.5	292.5	292.5	292.5	292.5	292.5	292.5	292.5	292.5
Crops	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
Minor species	-	10.8	10.8	10.8	10.8	10.8	20.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8
Sub-total	389.7	414.0	422.8	420.8	423.3	423.3	423.3	423.3	423.3	423.3	423.3	423.3	423.3	423.3	423.3

/a Net of debt service on short term and project-financed long term subloans (not corrected for expected inflation), and of the value of on-farm family consumptions.

/b .9 of a pig activity budget (one sow per family) and 1.6 of a poultry activity budget (9 hens per family).

/c Based on per ha costs and benefits from the 15 ha crop activity budget (without project situation).

/d Col\$ 100 per ha per year over 15 years.

/e Col\$ 240 per ha per year over 5 years.

Source: Mission
 April 16, 1979

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Activity Budget No. 1: Crops, 15 ha

Investment Costs

	Unit	Unit Cost (Col\$)	Number of Units	Year 1	Total Cost (Col\$)	Foreign Exchange Total	%
1. <u>Infrastructure</u>							
Drying platform	Platform	4,000	1	4,000	4,000		
Shed	Shed	10,000	1	10,000	10,000		
Milling house	House	60,000	0.5	30,000	30,000		
Sub-total				44,000	44,000	6,600	15
2. <u>Equipment</u>							
Mill-motor evaporating pans		80,000	0.5	40,000	40,000	34,000	85
Minor equipment /a		5,000		5,000	5,000	500	10
Sub-total				45,000	45,000	34,500	77
3. <u>Establishment Costs</u> (sugar cane)							
Labor	Man-day	120	500	60,000	60,000	-	-
Seed	m ton	400	25	10,000	10,000	-	-
Fertilizers	m ton	9,600	2.5	24,000	24,000	19,200	80
Pesticides				1,500	1,500	1,125	75
Sub-total				95,500	95,500	20,325	21
<u>Total Investment Costs</u>				184,500	184,500	61,425	33
Of which labor: total (man-days)				500	500		
value (Col\$)				60,000	60,000		
<u>Financing:</u> Beneficiary's contribution (15%)							
Cash				-	-		
Family labor				27,675	27,675		
Total				27,675	27,675		
Long-term subloan (85%)				156,825	156,825		

/a Shovels, machetes, forks.

Source: Mission

April 16, 1979

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT--INCORA

Activity Budget No. 1: Crops, 15 ha

Costs, Benefits and Financial Rate of Return

Category	Without Project	With Project				
		Years				
		1	2	3	4	5 onwards
1. <u>Maize (8 ha)</u>	(6 ha)	----- (8 ha) -----				
<u>Costs (Col\$)</u>						
Land Preparation	10,800	14,400	14,400	18,000	18,000	18,000
Inputs	6,000	10,480	14,720	19,520	19,520	19,520
Labor	<u>12,960</u>	<u>22,080</u>	<u>24,960</u>	<u>24,960</u>	<u>24,960</u>	<u>24,960</u>
Subtotal	29,760	46,960	54,080	62,480	62,480	62,480
<u>Benefits</u>						
Total Production (Mt)	8.4	12.8	14.4	16.8	16.8	16.8
Total Value of Production (Col\$6,000/Mt)	50,400	76,800	86,400	100,800	100,800	100,800
2. <u>Cassava (2 ha)</u>	(1 ha)	----- (2 ha) -----				
<u>Costs (Col\$)</u>						
Land Preparation	2,200	4,400	4,400	5,400	5,400	5,400
Inputs	3,820	8,000	9,100	9,500	11,900	11,900
Labor	<u>4,200</u>	<u>11,280</u>	<u>12,240</u>	<u>12,240</u>	<u>12,240</u>	<u>12,240</u>
Subtotal	10,220	23,680	25,740	27,540	29,540	29,540
<u>Benefits</u>						
Total Production (Mt)	7.0	16.0	17.0	18.0	20.0	20.0
Total Value of Production (Col\$2,500 Mt)	17,500	40,000	42,500	45,000	50,000	50,000
3. <u>Sugarcane-Panela (5 ha)</u>	(2 ha)	----- (5 ha) -----				
<u>Costs (Col\$)</u>						
Land Preparation	-	- a/	-	-	-	-
Inputs	450	- a/	18,850	19,625	23,250	25,700
Labor	<u>40,800</u>	- a/	<u>107,400</u>	<u>112,800</u>	<u>112,800</u>	<u>96,480</u>
Subtotal	41,250	-	123,250	132,425	136,050	122,180
<u>Benefits</u>						
Total Production, Panela (Mt)	8.0	-	25.0	27.5	30.0	24.0
Total Value of Production (Col\$ 8,000 Mt)	64,000	-	200,000	220,000	240,000	192,000
<u>Financial Analysis</u>						
Total Investment Costs	-	184,500	-	-	-	-
Total Operating Costs	<u>81,230</u>	<u>70,640</u>	<u>203,070</u>	<u>222,445</u>	<u>228,070</u>	<u>214,200</u>
Total Costs	81,230	255,140	203,070	222,445	228,070	214,200
Total Benefits	<u>131,900</u>	<u>116,800</u>	<u>328,900</u>	<u>365,800</u>	<u>390,800</u>	<u>342,800</u>
Net Benefits	50,670	-138,340	125,830	143,355	162,730	128,600
Net Incremental Benefits		-189,010	75,160	92,685	112,060	77,930
Financial Rate of Return on 20 Years		45 %				

a/ Investment
Source: Mission
April 16, 1979

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT--INCORA

Activity Budget No. 1: Crops, 15 ha

Cash Flow Projections
(Col\$)

	Without Project	With Project										
		1	2	3	4	5	6	7	8	9	10	
Cash Inflow												
Sales ^{a/}	129,000	115,100	326,000	362,900	387,900	339,900	339,900	339,900	339,900	339,900	339,900	339,900
Beneficiary's cash contribution:												
To investment costs	-	-	-	-	-	-	-	-	-	-	-	-
To operating costs	-	-	-	-	-	-	-	-	-	-	-	-
Subloans:												
Medium/long term	-	156,825 ^{b/}	-	-	-	-	-	-	45,000	-	-	-
Short term ^{c/}	77,168	67,108	182,763	189,078	193,860	182,070	182,070	182,070	182,070	182,070	182,070	
Total inflow	206,168	339,033	506,763	551,978	581,760	521,970	521,970	521,970	521,970	521,970	521,970	
Cash Outflow												
Cash investment costs	-	124,500	-	-	-	-	-	-	45,000	-	-	-
Cash operating costs	50,630	58,115	161,310	179,725	185,350	171,480	171,480	171,480	171,480	171,480	171,480	
Total outflow	50,630	182,615	161,310	179,725	185,350	171,480	171,480	171,480	216,480	171,480	171,480	
Cash balance before debt service	155,538	156,418	347,453	372,253	396,410	350,490	350,490	350,490	350,490	350,490	350,490	
Debt Service												
Medium and long term subloan:												
Interest ^{d/}	-	-	25,412	25,412	20,910	16,728	12,546	8,364	4,182	12,212 ^{e/}	12,212 ^{e/}	
Principal	-	-	-	26,137	26,138	26,137	26,138	26,137	26,138	-	-	
Short term subloan:												
Interest ^{d/ f/}	9,260	8,053	21,932	22,689	23,264	21,848	21,848	21,848	21,848	21,848	21,848	
Principal ^{d/}	77,168	67,108	182,763	189,078	193,860	182,070	182,070	182,070	182,070	182,070	182,070	
Total debt service	86,430	75,161	230,107	263,316	264,172	246,783	242,602	238,419	234,238	216,130	216,130	
Cash balance after debt service (and disposable cash income)	69,108	81,257	117,346	108,937	132,238	103,707	107,888	112,071	116,252	134,360	134,360	
including:												
Remuneration of Family Labor:	30,600	40,200	41,760	42,720	42,720	42,720	42,720	42,720	42,720	42,720	42,720	

a/ Net of family consumption.

b/ 85% of total investment costs.

c/ 95% of operating costs during the first year, 90% during the second year and 85% during the third year and after.

d/ 15% interest, plus 1% life insurance per annum on outstanding balances.

e/ 6 annual installments.

f/ Over 9 months.

Source: Mission
April 16, 1979

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Activity Budget No.2: Crops 150 ha (10 families)

Investment Costs

	Unit	Unit Cost (Col\$)	Number of Units	Year 1	Year 2	Total Costs (Col\$)	Foreign Exchange	
							Total	%
1. <u>Land levelling</u>	ha	165	100	16,500	-	16,500	5,775	35
2. <u>Infrastructure</u>								
Drainage canals	1 m	100	800	80,000	-	80,000		
Irrigation canals	1 m	150	680	102,000	-	102,000		
Culverts	m2	1,000	20	20,000	-	20,000		
Forks	m2	250	30	7,500	-	7,500		
Intake head works /a	m2	8,065	31	250,000	-	250,000		
Warehouse	m2	2,000	36	72,000	-	72,000		
Machinery shed	m2	900	40	36,000	-	36,000		
Drying platform	m2	600	25	15,000	-	15,000		
Sub-total				582,500		582,500	87,375	15
3. <u>Farm equipment</u>								
Tractor		800,000	1	800,000	-	800,000	680,000	85
Combine		2,500,000	0.25	625,000	-	625,000	531,250	85
Sub-total				1,425,000	-	1,425,000	1,211,250	85
4. <u>Irrigation equipment /b</u>		428,000	0.50	214,284	-	214,284	128,570	60
5. <u>Miscellaneous /c</u>				20,000	-	20,000	2,000	10
6. <u>Establishment costs</u>								
Cocoa								
Labor /d	man-days	120	2,400	180,000	108,000	288,000	-	-
Seeds - cocoa	planting	0.35	10,000	3,500	-	3,500	-	-
Seeds - plantain	planting	2.06	6,300	13,000	-	13,000	-	-
Polybags	unit	0.25	10,000	2,500	-	2,500	-	-
Pesticides				8,000	6,500	14,500	10,875	75
Fertilizers				5,000	13,500	18,500	14,800	80
Hauling				10,000	10,000	20,000	7,000	35
Sub-total				222,000	138,000	360,000	32,675	9
<u>Total Investment Costs</u>				<u>2,480,284</u>	<u>138,000</u>	<u>2,618,284</u>	<u>1,467,645</u>	<u>56</u>
Of which labor: total (man-days)				1,500	900	2,400		
value (Col\$)				180,000	108,000	288,000		
<u>Financing:</u>								
Beneficiary's contribution (15%)								
Cash				177,243	-	177,243		
Family labor				107,500	108,000	215,500		
Total				284,743	108,000	392,743		
Long-term subloan (85%)				2,195,541	30,000	2,225,541		
Total				2,480,284	138,000	2,618,284		

- /a For two farms; rounded figures.
 /b Motor-pump (1206/ms. per minute), pipeline.
 /c Includes wooden trays for fermenting cacao (30 trays at Col\$200 per tray), shovels and pruning scissors.
 /d All family labor.

Source: Mission.

April 16, 1979.

THIRD AGRICULTURAL CREDIT PROJECT--INCORA

Activity Budget No. 2: Crops 150 ha (10 families)

Costs, Benefits and Financial Rate of Return

Category	a/ Without Project	With Project						
		Years						
		1	2	3	4	5	6	7
1. Rice (50 ha)								
<u>Operating Costs (Col\$)</u>								
Land Preparation	230,000	230,000	230,000	230,000	230,000	230,000	230,000	230,000
Inputs	715,000	1,105,000	1,245,000	1,245,000	1,245,000	1,245,000	1,245,000	1,245,000
Labor	216,000	264,000	288,000	288,000	288,000	288,000	288,000	288,000
Planting	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
Pest Control (Aereal)	120,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000
Weed Killing (Aereal)	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
Harvesting	130,000	160,000	175,000	175,000	175,000	175,000	175,000	175,000
Hauling	30,000	32,000	35,000	35,000	35,000	35,000	35,000	35,000
Subtotal	1,526,000	1,956,000	2,138,000	2,138,000	2,138,000	2,138,000	2,138,000	2,138,000
<u>Benefits</u>								
Total Production (Mt)	320.0	410.0	455.0	455.0	455.0	455.0	455.0	455.0
Total Value of Production (Col\$)	1,920,000	2,460,000	2,730,000	2,730,000	2,730,000	2,730,000	2,730,000	2,730,000
2. Cacao (10 ha)								
<u>Operating Costs (Col\$)</u>								
Labor	-	-	-	93,600	100,800	110,400	110,400	110,400
Inputs	-	-	-	24,000	33,000	42,000	42,000	42,000
Hauling	-	- b/	- b/	10,000	5,000	5,000	7,000	8,000
Subtotal	-	-	-	127,600	138,800	157,400	159,400	160,400
<u>Benefits</u>								
Total Cacao Production (Mt)	-	-	-	1.5	3.5	5.0	7.0	8.0
Total Plantain Production (Mt)	-	-	35.0	50.0	-	-	-	-
Total Value of Production (Col\$)	-	-	105,000	264,000	266,000	380,000	532,000	608,000
3. Sorghum (90 ha)								
<u>Operating Costs (Col\$)</u>								
Land Preparation	144,000	144,000	144,000	180,000	180,000	180,000	180,000	180,000
Planting	-	-	54,000	54,000	54,000	54,000	54,000	54,000
Pests Control	-	54,000	54,000	54,000	54,000	54,000	54,000	54,000
Labor	97,200	64,800	32,400	32,400	32,400	32,400	32,400	32,400
Inputs	243,900	299,700	332,100	355,500	355,500	355,500	355,500	355,500
Harvest-Hauling	115,200	129,600	136,800	144,000	144,000	144,000	144,000	144,000
Subtotal	600,300	692,100	753,300	819,900	819,900	819,900	819,900	819,900
<u>Benefits</u>								
Total Production (Mt)	180.0	198.0	216.0	234.0	234.0	234.0	234.0	234.0
Total Value of Production (Col\$)	990,000	1,089,000	1,188,000	1,287,000	1,287,000	1,287,000	1,287,000	1,287,000

Financial Analysis

	(Col\$)							
Total Investment Costs	-	2,480,184	138,000	-	-	-	-	-
Total Operating Costs	2,126,300	2,648,100	2,891,300	3,085,500	3,096,700	3,115,300	3,117,300	3,118,300
Total Costs	2,126,300	5,128,384	3,029,300	3,085,500	3,096,700	3,115,300	3,117,300	3,118,300
Total Benefits (Production Value)	2,910,000	3,549,000	4,032,000	4,281,000	4,283,000	4,397,000	4,549,000	4,625,000
Total Net Benefits	783,700	(1,579,384)	865,700	1,195,500	1,186,300	1,281,700	1,431,700	1,506,700
Incremental Net Benefits		(2,363,084)	82,000	411,800	402,600	498,000	648,000	732,000

Financial Rate of Return on 20 Years: 21%

a/ Irrigated, two crops per year

b/ Investment

c/ Cocoa Col\$76,000/m ton., plantain Col\$3,000/m ton.

Source: Mission

April 16, 1979.

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT--INCORA

Activity Budget No. 2: Crops, 150 ha (10 Families)

Cash Flow Projections
(Col\$'000)

	Without Project	With Project										
		1	2	3	4	5	6	7	8	9	10	11
Cash Inflow												
Sales ^{a/}	2,901.0	3,540.0	4,013.1	4,271.1	4,274.0	4,388.0	4,540.0	4,616.0	4,616.0	4,616.0	4,616.0	4,616.0
Beneficiary's cash contribution:												
To investment costs	-	177.2	-	-	-	-	-	-	-	-	-	-
To operating costs	-	-	-	-	48.8	43.3	36.5	36.8	36.9	36.9	36.9	36.9
Subloans:												
Medium/long term ^{b/}	-	2,195.5	30.0	-	-	-	-	-	-	-	1,659.3 ^{e/}	-
Short term ^{d/}	2,020.0	2,515.7	2,602.2	2,622.7	2,632.2	2,648.0	2,649.7	2,650.6	2,650.6	2,650.6	2,650.6	2,650.6
Total inflow	4,921.0	8,428.4	6,645.3	6,893.8	6,955.0	7,079.3	7,226.2	7,303.4	7,303.5	7,303.5	8,962.8	8,962.8
Cash Outflow												
Cash investment costs ^{e/}	-	2,480.2	30.0	-	-	-	-	-	-	-	1,659.3	-
Cash operating costs ^{e/}	1,813.1	2,319.3	2,570.9	2,671.5	2,675.5	2,684.5	2,686.5	2,687.5	2,687.5	2,687.5	2,687.5	2,687.5
Total outflow	1,813.1	4,799.5	2,600.9	2,671.5	2,675.5	2,684.5	2,686.5	2,687.5	2,687.5	2,687.5	4,346.8	2,687.5
Cash balance before debt service	3,107.9	3,628.4	4,044.4	4,222.3	4,279.5	4,394.8	4,539.7	4,615.9	4,616.0	4,616.0	4,616.0	4,616.0
Debt Service												
Medium and long term subloan:												
Interest ^{f/}	-	-	351.3	356.1	340.0	324.1	292.0	236.1	180.0	124.0	68.0	450.0 ^{e/}
principal	-	-	-	100.0	100.0	200.0	350.0	350.0	350.0	350.0	425.0	-
Short term subloan:												
interest ^{f/}	242.4	301.9	312.2	314.7	315.9	317.8	322.5	318.1	318.1	318.1	318.1	318.1
principal	2,020.0	2,515.7	2,602.2	2,622.7	2,632.2	2,648.0	2,649.7	2,650.6	2,650.6	2,650.6	2,650.6	2,650.6
Total debt service	2,262.4	2,817.6	3,265.7	3,393.5	3,388.1	3,489.9	3,614.2	3,554.8	3,498.7	3,442.7	3,461.7	3,418.7
Cash Balance After Debt Service	845.5	810.8	778.7	828.8	891.4	904.9	925.5	1,061.1	1,117.3	1,173.3	1,154.3	1,197.3
Minus: Reserve for following year cash operating expenditures	-	-	-	48.8	43.3	36.5	36.8	36.9	36.9	36.9	36.9	36.9
Disposable Cash Income	845.5	810.8	778.7	780.0	848.1	868.4	888.7	1,024.2	1,080.4	1,136.4	1,117.4	1,160.4
including:												
Remuneration of Family Labor	313.2	436.3	428.4	414.0	421.2	430.8	430.8	430.8	430.8	430.8	430.8	430.8

a/ Excluding family consumption.

b/ 85% of investment costs (Col\$2,225,541).

c/ 6-year loan--equal installments.

d/ 95% of total operating costs during the first year, 90% during the second year and 85% during the third year and later (including family labor for up to 20% of subloan value).

e/ Excluding family labor.

f/ 15% interest, plus 1% life insurance per annum--over 9 months.

Source: Mission
April 16, 1979.

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Activity Budget No. 3: Dual-Purpose Cattle, 127 ha, (5 families)

Investment Costs

	Unit per Model	Cost per Unit	Investment by Year		Total Cost	Foreign Exchange Cost	
			1	2 (Col\$)		Total	%
Land clearing	2.0 ha	840	-	1,680	1,680	42	2
Pasture establishment	10.0 ha	2,970	-	29,700	29,700	19,920	67
Fencing: new	2.0 km	28,800	-	57,600	57,600	12,800	22
Corrals: new	0.5	20,000	10,000	-	10,000	1,000	10
Trough: mineral	3.0	1,200	3,600	-	3,600	-	-
Water points	1.0	2,000	2,000	-	2,000	200	10
Livestock:							
Bulls	2	20,400	40,800	-	40,800	-	-
Breeding cows	4	12,400	24,800	24,800	49,600	-	-
Breeding heifers	6	11,400	32,400	32,400	64,800	-	-
Animal health	154-167	289	44,500	48,260	92,760	60,294	65
Miscellaneous items	-	-	7,900	7,390	15,290	4,281	28
Total investment costs			166,000	201,830	367,830	98,537	27
Of which family labor:							
			62	178	240		
			-	-	-		
			-	1,560	1,560		
			-	4,800	4,800		
			-	9,600	9,600		
			1,500	-	-		
			360	-	-		
			600	-	-		
			4,963	5,383	5,383		
			7,423	21,343	28,766		

Financing: Beneficiary's contribution (15%)							
			17,477	8,931	26,408		
			7,423	21,343	28,766		
			24,900	30,274	55,174		
Long-term subloan (85%)			141,100	171,556	312,656		

Source: Mission

April 16, 1979.

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Activity Budget No. 3: Dual-Purpose Cattle 127 ha (5 families)

Cost, Benefits and Financial Rate of Return
(Col\$'000)

	Without Project	1	2	3	With Project	4	5	6-19	20
I. BENEFITS									
1. Milk									
Production:									
Volume ('000 liters)	6.5	8.3	10.5	13.5	15.4	15.4	15.4	15.4	15.4
Value	52.0	66.6	84.0	108.0	123.2	123.2	123.2	123.2	123.2
On-farm consumption:									
Volume ('000 liters)	2.2	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Value	17.6	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2
Sales:									
Volume ('000 liters)	4.3	5.4	7.6	10.6	12.5	12.5	12.5	12.5	12.5
Value	34.4	43.2	60.8	98.0	100.0	100.0	100.0	100.0	100.0
2. Beef cattle									
Production (m tons liveweight)	9.2	9.5	10.0	10.4	10.8	11.3	11.5	11.5	11.5
Production value (and sales)	295.4	304.0	320.4	333.9	344.7	361.3	369.3	369.3	369.3
Total Production Value	347.4	370.6	404.4	441.9	467.9	484.5	492.5	492.5	492.5
Incremental Herd Value	-	-	-	-	-	-	-	-	252.3
TOTAL BENEFITS (A)	347.4	370.6	404.4	441.9	467.9	484.5	492.5	492.5	744.8
II. COSTS									
1. Investment Costs									
	-	166.0	201.8	-	-	-	-	-	-
2. Operating Costs									
Labor: /a									
Animal health	2.3	-/b	-/b	5.4	5.5	5.6	5.6	5.6	5.6
Animal care	2.6	2.8	2.9	3.0	3.1	3.1	3.1	3.1	3.1
Milking	16.6	21.4	24.9	30.9	33.3	33.3	33.3	33.3	33.3
Fence maintenance	12.6	12.6	12.6	15.0	15.0	15.0	15.0	15.0	15.0
Fertilizer application	-	-	-/b	1.7	1.7	1.7	1.7	1.7	1.7
Weed control	82.8	82.8	82.8	84.2	84.2	84.2	84.2	84.2	84.2
Sub-total	116.9	119.6	123.2	140.2	142.8	142.9	142.9	142.9	142.9
Inputs:									
Veterinary products	18.4	-/b	-/b	43.2	43.9	44.3	44.3	44.3	44.3
Fertilizers	-	-	-	6.3	6.3	6.3	6.3	6.3	6.3
Herbicides	10.6	10.6	10.6	10.8	10.8	10.8	10.8	10.8	10.8
Fencing materials	22.2	22.2	22.2	26.4	26.4	26.4	26.4	26.4	26.4
Sub-total	51.2	32.8	32.8	86.7	87.4	87.8	87.8	87.8	87.8
Tools and implements	-	-	-	0.1	0.1	0.1	0.1	0.1	0.1
Transport and other	17.7	18.2	19.2	20.0	20.7	21.7	22.2	22.2	22.2
Taxes	11.0	12.1	12.7	13.0	13.2	13.2	13.2	13.2	13.2
Total Operating Costs	196.8	192.7	187.9	260.0	264.2	265.7	266.2	266.2	266.2
TOTAL COSTS (B)	196.8	348.7	389.7	260.0	264.2	265.7	266.2	266.2	266.2
Net Benefit (A - B)	150.6	21.9	14.7	181.9	203.7	218.8	226.3	226.3	478.6
Incremental Net Benefits		-128.7	-135.9	31.3	53.1	68.2	75.7	75.7	328.0

Internal Financial Rate of Return (over 20 years):22%

/a All family labor. Available on the farm: 1 man-year per family, 240 man-days per year at Col\$ 120 per man-day (1,200 man-days per year, Col\$ 144,000).

/b In investment costs.

Source: Mission
April 16, 1979

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Activity Budget No. 3: Dual Purpose Cattle, 127 ha, (5 families)

Cash Flow Projections
(Col\$ '000)

	Without Project	With Project										
		1	2	3	4	5	6	7	8	9	10	11-20
Years												
<u>Cash Inflow</u>												
Sales:												
Milk	34.4	43.2	60.8	98.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Beef cattle	295.4	304.0	320.4	333.9	344.7	361.3	369.3	369.3	369.3	369.3	369.3	369.3
Total	329.8	347.2	381.2	431.9	444.7	461.3	469.3	469.3	469.3	469.3	469.3	469.3
Beneficiary's cash contribution	-	17.5	8.9	-	-	-	-	-	-	-	-	-
Subloan	-	141.1	171.6	-	-	-	-	-	-	-	-	-
Total Cash Inflow	329.8	505.8	561.7	431.9	444.7	461.3	469.3	469.3	469.3	469.3	469.3	469.3
<u>Cash Outflow</u>												
Cash investment costs	-	158.6	180.5	-	-	-	-	-	-	-	-	-
Cash operating costs	79.9	63.1	64.7	119.8	121.4	122.8	123.3	123.3	123.3	123.3	123.3	123.3
Total Cash Outflow	79.9	221.7	245.2	119.8	121.4	122.8	123.3	123.3	123.3	123.3	123.3	123.3
<u>Cash balance before debt service</u>	249.9	284.1	316.5	312.1	323.3	338.5	346.0	346.0	346.0	346.0	346.0	346.0
<u>Debt Service</u>												
Principal	-	-	-	22.0	25.5	29.6	34.3	39.8	46.2	53.6	61.7	-
Interest /a	-	-	22.6	50.0	46.5	42.4	37.7	32.2	25.8	18.4	10.3	-
Total Debt Service	-	-	22.6	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	-
<u>Cash balance after debt service</u>	249.9	284.1	293.9	240.1	251.3	266.5	274.0	274.0	274.0	274.0	274.0	346.0
Family labor:												
Investment costs	-	7.4	21.3	-	-	-	-	-	-	-	-	-
Operating costs	116.9	119.6	123.2	140.2	142.8	142.9	142.9	142.9	142.9	142.9	142.9	142.9
Total	116.9	127.0	144.4	140.2	142.8	142.9	142.9	142.9	142.9	142.9	142.9	142.9

/a 15% plus 1% life insurance per annum.

Source: Mission
April 16, 1979

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Activity Budget No. 4: Beef Cattle Breeding, 300 ha, (8 families)

Investment Costs

	Unit per Model	Cost per Unit	Investment by Year		Total Cost	Foreign Exchange Cost	
			<u>1</u>	<u>2</u> (Col \$)		<u>Total</u>	<u>%</u>
Land clearing	5 ha	840	4,200	-	4,200	300	7
Pasture establishment	15 ha	3,080	-	45,900	45,900	30,750	67
Fencing: new	2 km	28,800	28,800	28,800	57,600	12,800	22
Corral: new	1	20,000	10,000	10,000	20,000	2,000	10
Trough: mineral	1	1,200	1,200	-	1,200	-	-
Water points	1	2,000	-	2,000	2,000	200	10
Livestock:							
Bulls	2	20,400	40,800	-	40,800	-	-
Breeding cows	5	12,400	62,000	-	62,000	-	-
Breeding heifers	5	11,400	57,000	-	57,000	-	-
Animal health	266-279	218	57,980	58,860	116,840	75,950	65
Miscellaneous items	-	-	11,800	6,360	18,160	5,630	31
<u>Total investment costs</u>			<u>273,780</u>	<u>151,920</u>	<u>425,700</u>	<u>127,630</u>	<u>30</u>

Of which family labor:

Total (man-days)	<u>150</u>	<u>183</u>	<u>333</u>
Value (Col\$)	-	-	-
Land clearing	3,900	-	-
Pasture establishment	-	7,200	-
Fencing	4,800	4,800	-
Corral	1,500	1,500	-
Trough	120	-	-
Waterpoints	-	600	-
Animal health	<u>7,713</u>	<u>7,830</u>	-
	<u>18,033</u>	<u>21,930</u>	-

Financing: Beneficiary's contribution (15%):

Cash	23,034	858	23,892
Family labor	<u>18,033</u>	<u>21,930</u>	<u>39,963</u>
Total	<u>41,067</u>	<u>22,788</u>	<u>63,855</u>

Long-term subloan (85%):

	232,713	129,132	361,845
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Source: Mission

April 16, 1979.

COLOMBIA
THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Activity Budget No. 4: Beef Cattle Breeding, 300 ha, (8 families)

Cost, Benefits, and Financial Rate of Return
(Col\$'000)

	Without Project	-----			With Project			-----	
		1	2	3	4	5	6	7-19	20
I. BENEFITS									
1. Milk									
Production:									
Volume ('000 liters)	4.0	4.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Value	28.0	29.4	36.4	36.6	36.4	36.4	36.4	36.4	36.4
On-farm consumption:									
Volume ('000 liters)	3.3	3.5	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Value	23.1	24.5	30.8	30.8	30.8	30.8	30.8	30.8	30.8
Sales:									
Volume ('000 liters)	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Value	4.9	4.9	5.6	5.6	5.6	5.6	5.6	5.6	5.6
2. Beef Cattle									
Production (m tons liveweight)	16.1	16.2	17.2	15.9	18.8	19.6	19.6	20.3	20.3
Production value (and sales)	515.2	518.4	549.0	510.4	602.5	627.8	627.8	650.8	650.8
Total Production Value	543.2	547.8	585.4	546.8	638.9	664.2	664.2	687.2	687.2
Incremental Herd Value	-	-	-	-	-	-	-	-	313.9
TOTAL BENEFITS (A)	543.2	547.8	585.4	546.8	638.9	664.2	664.2	687.2	1,001.1
II. COSTS									
1. Investment Costs									
	-	273.0	151.9	-	-	-	-	-	-
2. Operating Costs									
Labor: /a									
Animal health	4.6	-/b	-/b	8.1	8.2	8.2	8.2	8.2	8.2
Animal care	39.0	44.5	45.8	47.5	47.5	47.5	47.5	47.5	47.5
Milking	10.1	10.7	11.9	11.9	11.9	11.9	11.9	11.9	11.9
Maintenance (fences)	14.4	14.4	14.4	14.4	16.8	16.8	16.8	16.8	16.8
Fertilizer application	-	-	-/b	2.9	2.9	2.9	2.9	2.9	2.9
Weed control	201.6	201.6	201.6	205.2	205.2	205.2	205.2	205.2	205.2
Sub-total	269.7	271.2	273.7	290.0	292.5	292.5	292.5	292.5	292.5
Inputs:									
Veterinary products	29.9	-	-/b	53.0	53.5	53.5	53.5	53.5	53.5
Fertilizers	-	-	-/b	10.8	10.8	10.8	10.8	10.8	10.8
Herbicides	25.8	25.8	25.8	26.2	26.2	26.2	26.2	26.2	26.2
Fencing material	25.3	25.3	25.3	25.3	29.5	29.5	29.5	29.5	29.5
Sub-total	81.0	51.1	51.1	115.3	120.0	120.0	120.0	120.0	120.0
Tools and implements	-	-	-	0.2	0.2	0.2	0.2	0.2	0.2
Transport and other	25.8	25.1	28.2	29.6	34.9	35.8	35.8	35.8	35.8
Taxes	25.2	26.8	27.6	28.6	28.6	28.6	28.6	28.6	28.6
Total Operating Costs	401.7	374.2	380.6	463.7	476.2	477.1	477.1	477.1	477.1
TOTAL COSTS (B)	401.7	648.0	532.5	463.7	476.2	477.1	477.1	477.1	477.1
Net Benefits (A - B)	141.5	-100.2	52.9	83.1	162.7	187.1	187.1	210.1	524.0
Incremental Net Benefits		-241.7	-88.6	-58.4	21.2	45.6	45.6	68.6	382.5

Internal Financial Rate of Return (over 20 years): 12%

/a All family labor. Assuming that each family contributes 1.5 man-year per year (240 man-days per year).
/b In investment costs.

Source: Mission

April 16, 1979

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Activity Budget No. 4: Beef Cattle Breeding, 300 ha, (8 families)

Cash Flow Projections

(Col\$ '000)

	Without Project	With Project - Years													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14 on
Cash Inflow															
Sales: Milk	4.9	4.9	5.6	5.6	5.6	5.6	5.6	56.	5.6	5.6	5.6	5.6	5.6	5.6	5.6
Cattle	<u>515.2</u>	<u>518.4</u>	<u>549.0</u>	<u>510.4</u>	<u>602.5</u>	<u>627.8</u>	<u>627.8</u>	<u>650.8</u>	<u>650.8</u>	<u>650.8</u>	<u>650.8</u>	<u>650.8</u>	<u>650.8</u>	<u>650.8</u>	<u>650.8</u>
Total	520.1	523.3	554.6	516.0	608.1	633.4	633.4	656.4	656.4	656.4	656.4	656.4	656.4	656.4	656.4
Beneficiary's cash contribution	-	23.0	0.9	-	-	-	-	-	-	-	-	-	-	-	-
Subloan (long term)	-	232.7	129.1	-	-	-	-	-	-	-	-	-	-	-	-
Total Cash Inflow	<u>520.1</u>	<u>779.0</u>	<u>684.6</u>	<u>516.0</u>	<u>608.1</u>	<u>633.4</u>	<u>633.4</u>	<u>656.4</u>	<u>656.4</u>	<u>656.4</u>	<u>656.4</u>	<u>656.4</u>	<u>656.4</u>	<u>656.4</u>	<u>656.4</u>
Cash Outflow															
Cash investment costs	-	255.7	130.0	-	-	-	-	-	-	-	-	-	-	-	-
Cash operating costs	<u>132.0</u>	<u>103.0</u>	<u>106.9</u>	<u>173.7</u>	<u>183.7</u>	<u>184.6</u>	<u>184.6</u>	<u>184.6</u>	<u>184.6</u>	<u>184.6</u>	<u>184.6</u>	<u>184.6</u>	<u>184.6</u>	<u>184.6</u>	<u>184.6</u>
Total Cash Outflow	<u>132.0</u>	<u>358.7</u>	<u>236.9</u>	<u>173.7</u>	<u>184.7</u>	<u>183.7</u>	<u>184.6</u>	<u>184.6</u>	<u>184.6</u>	<u>184.6</u>	<u>184.6</u>	<u>184.6</u>	<u>184.6</u>	<u>184.6</u>	<u>184.6</u>
Cash balance before debt service	388.1	420.3	447.7	342.3	424.4	448.8	448.8	471.8	471.8	471.8	471.8	471.8	471.8	471.8	471.8
Debt Service															
Principal	-	-	-	-	-	15.0	15.0	35.0	35.0	40.0	45.0	55.0	55.0	66.8	-
Interest /a	-	-	37.2	57.9	57.9	57.9	55.5	53.0	47.5	41.9	35.5	28.3	19.5	10.7	-
Total Debt Service	-	-	37.2	57.9	57.9	72.9	70.5	88.0	82.5	81.9	80.5	83.3	74.5	77.5	-
Cash balance after debt service	<u>388.1</u>	<u>420.3</u>	<u>410.5</u>	<u>284.4</u>	<u>366.5</u>	<u>375.9</u>	<u>378.3</u>	<u>383.8</u>	<u>389.3</u>	<u>389.9</u>	<u>391.3</u>	<u>388.5</u>	<u>397.3</u>	<u>394.3</u>	<u>471.8</u>
Family labor: investment costs	-	18.0	71.9	-	-	-	-	-	-	-	-	-	-	-	-
operating costs	<u>269.7</u>	<u>271.2</u>	<u>273.7</u>	<u>290.0</u>	<u>292.5</u>	<u>292.5</u>	<u>292.5</u>	<u>292.5</u>	<u>292.5</u>	<u>292.5</u>	<u>292.5</u>	<u>292.5</u>	<u>292.5</u>	<u>292.5</u>	<u>292.5</u>
Total	<u>269.7</u>	<u>289.2</u>	<u>295.6</u>	<u>290.0</u>	<u>292.5</u>	<u>292.5</u>	<u>292.5</u>	<u>292.5</u>	<u>292.5</u>	<u>292.5</u>	<u>292.5</u>	<u>292.5</u>	<u>292.5</u>	<u>292.5</u>	<u>292.5</u>

/a 15% plus 1% life insurance per annum.

Source: Mission
April 16, 1979

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Activity Budget No. 5: Pigs (9 sows)

Cost Benefit Analysis
(Col\$)

	Year 1	Year 2 on	F.E.	
<u>Initial Costs (Investment)</u>				<u>Total</u> %
9 gilts	45,000	-	-	-
1 boar	<u>7,000</u>	-	-	-
	52,000	-	-	-
<u>Operating Costs</u>				
Sales costs (Col\$5 per kg)	11,760	11,760		
Sanitation (Col\$50 per animal per yr. /a)	1,550	1,550		
Feeding - maize equivalent				
547 kg per animal per year				
at Col\$6 per kilo /a	101,742	101,742		
Family labor (1 hour daily, 365 days/year)	<u>5,475</u>	<u>5,475</u>		
	120,527	120,527		
<u>Income</u>				
Sale 42 porkers (80 kg at \$70 per kg)	<u>235,200</u>	<u>235,200</u>		
<u>Net benefit</u>	<u>62,673</u>	<u>114,673</u>		

Internal Financial Rate of Return: above 50% (10 years), (assuming replacement of sows and boar every fourth year. Value of culled animals as salvage value).

/a Six months for porkers

Source: Mission.

April 16, 1979.

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Activity Budget No. 5: Pigs (9 sows)

Cash Flow Projections
(Col\$)

	Year			
	1	2	3	4 onwards
<u>Cash Inflow</u>				
Revenues	235,200	235,200	235,200	235,200
Subloan /a	44,200	-	-	-
Beneficiary's contribution	7,800	-	-	-
Total	<u>287,200</u>	<u>235,200</u>	<u>235,200</u>	<u>235,200</u>
<u>Cash Outflow</u>				
Investment costs	52,000	-	-	-
Cash operating costs	<u>115,052</u>	<u>115,052</u>	<u>115,052</u>	<u>115,052</u>
Total	<u>167,052</u>	<u>115,052</u>	<u>115,052</u>	<u>115,052</u>
<u>Cash balance before debt service</u>	120,148	120,148	120,148	120,148
<u>Debt Service</u>				
Interest /b	7,072	-	-	-
Principal	<u>44,200</u>	-	-	-
Total	<u>51,272</u>	-	-	-
<u>Cash balance after debt service</u>	<u>68,876</u>	<u>120,148</u>	<u>120,148</u>	<u>120,148</u>
(Family labor)	(5,475)	(5,475)	(5,475)	(5,475)

/a 85% of initial costs.

/b 15% plus 1% life insurance p.a.

Source: Mission
April 16, 1979

COLOMBIATHIRD AGRICULTURAL CREDIT PROJECT - INCORAActivity Budget No. 6: Poultry (45 hens)Cost Benefit Analysis
(Col\$)

	Year 1	Year 2	F.E.
<u>Initial Costs (Investment)</u>			<u>Total</u> %
Purchase 50 day-old chicks			
at Col\$12 each	600	-	- -
Sanitation at Col\$1.50 per animal	75	-	49 65
Concentrates /a (5 months /a of starter feed) (2 kg per animal per month at Col\$7 per kilo)	<u>3,325</u>	<u>-</u>	<u>2,494 75</u>
	4,000	-	2,543 64
<u>Operating Costs</u>			
Grain equivalent /c (365 days, 50 gms per day per animal at Col\$6 per kg)	3,034 /d	10,402	
Sanitation	-	143	
Concentrates /a (5 months of starter feed)	-	6,650	
Family labor (0.5 hour daily, 365 days/year)	<u>2,738</u>	<u>2,738</u>	
	5,772	19,933	
<u>Income</u>			
Sale 43 cull hens at Col\$150	-	6,450	
Sale eggs /b (43 x 92 at Col\$3)	6,923 /b	11,868	
Males (45 at Col\$150)	<u>-</u>	<u>6,750</u>	
	6,923	25,068	
<u>Net Benefit</u>	<u>-2,849</u>	<u>5,135</u>	

Internal Financial Rate of Return: above 50% (10 years).

/a Assuming an average number of chicks of 47.5 on year 1, and 95 from year 2 onwards.

/b Assuming 96 eggs per hen per year (92 sold and 4 kept for hatching).

/c Assuming an average number of animals of 47.5 on year 1, and 95 from year 2 onwards.

/d 7 months.

Source: Mission.

April 16, 1979

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Activity Budget No. 6: Poultry (45 hens)

Cash Flow Projections
(Col\$)

	Year			
	1	2	3	4 onwards
<u>Cash Inflow</u>				
Revenues	6,923	25,068	25,068	25,068
Subloan /a	3,400	-	-	-
Beneficiary's cash contribution	600	-	-	-
Total	<u>10,923</u>	<u>25,068</u>	<u>25,068</u>	<u>25,068</u>
<u>Cash Outflow</u>				
Investment costs	4,000	-	-	-
Cash operating costs	<u>3,034</u>	<u>17,195</u>	<u>17,195</u>	<u>17,195</u>
Total	<u>7,034</u>	<u>17,195</u>	<u>17,195</u>	<u>17,195</u>
<u>Cash balance before debt service</u>	3,889	7,873	7,873	7,873
<u>Debt service</u>				
Interest /b	-	544	292	-
Principal	-	<u>1,574</u>	<u>1,826</u>	-
Total	<u>-</u>	<u>2,118</u>	<u>2,118</u>	<u>-</u>
<u>Cash balance after debt service</u>	<u>3,889</u>	<u>5,755</u>	<u>5,755</u>	<u>7,873</u>
(Family labor)	(2,738)	(2,738)	(2,738)	(2,738)

/a 85% of initial costs.

/b 15% plus 1% life insurance p.a.

Source: Mission

April 16, 1979

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Activity Budget No. 7: Apiculture (10 hives)

Cost Benefit Analysis
(Col\$)

	Year 1	Year 2	F.E.
<u>Initial Cost (Investment)</u>			
10 hives	15,000	-	-
10 swarms	6,500	-	-
1 wheelbarrow	200	-	-
1 smoker	150	-	-
1 pair gloves	160	-	-
Miscellaneous equipment	390	-	-
	24,900		-
<u>Operating Costs</u>			
Family labor (20 days per year)	2,600	2,600	
<u>Income</u>			
Honey: 10 hives x 28 kg at \$34 per kg	9,520	9,520	
<u>Net benefits</u>			
Wax, nucleos, royal jelly, etc. additional to cover operating costs	-17,980	6,920	

Internal Financial Rate of Return^{1/}: 38% (10 years).

1/ Assuming salvage value: 5% of initial costs

Source: Mission

April 16, 1979.

COLOMBIATHIRD AGRICULTURAL CREDIT PROJECT - INCORAActivity Budget No. 7: Apiculture (10 hives)Cash Flow Projections
(Col\$)

	Year					
	1	2	3	4	5	6 onwards
<u>Cash Inflow</u>						
Revenues	9,520	9,520	9,520	9,520	9,520	9,520
Subloan /a	21,165	-	-	-	-	-
Beneficiary's cash contribution	3,735	-	-	-	-	-
Total	<u>34,420</u>	<u>9,520</u>	<u>9,520</u>	<u>9,520</u>	<u>9,520</u>	<u>9,520</u>
<u>Cash Outflow</u>						
Investment cost	<u>24,900</u>	-	-	-	-	-
<u>Net cash balance before debt service</u>	9,520	9,520	9,520	9,520	9,520	9,520
<u>Debt Service</u>						
Interest /b	3,386	2,894	2,323	1,660	892	-
Amortization	<u>3,078</u>	<u>3,570</u>	<u>4,141</u>	<u>4,804</u>	<u>5,572</u>	-
Total	<u>6,464</u>	<u>6,464</u>	<u>6,464</u>	<u>6,464</u>	<u>6,464</u>	-
<u>Cash balance after debt service</u>	<u>3,056</u>	<u>3,056</u>	<u>3,056</u>	<u>3,056</u>	<u>3,056</u>	<u>9,520</u>
(Family labor)	(2,600)	(2,600)	(2,600)	(2,600)	(2,600)	(2,600)

/a 85% of initial costs.

/b 15% plus 1% life insurance p.a.

Source: Mission
April 16, 1979

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Financial and Economic Prices /a

(Col\$/m ton)

A. Traded Commodities

<u>Economic Prices</u>	<u>Cocoa</u>	<u>Maize</u>	<u>Rice (Paddy)</u>	<u>Sorghum</u>	<u>Beef Cattle (Liveweight)</u>	<u>Panela</u>
1978	95,000	6,000	6,000	5,500	32,000	5,800
1979	78,600	6,700	5,760	6,250	36,540	6,580
1980 /b	65,450	8,100	5,640	7,170	36,830	7,190
1981	59,190	8,110	5,760	7,250	36,220	7,710
1982	55,768	8,240	6,000	7,290	36,130	9,690
1983	52,120	8,330	6,160	7,350	37,170	11,600
1984	48,480	8,420	6,320	7,410	38,210	13,500
1985	44,840	8,510	6,480	7,470	39,260	13,500
1986	42,579	8,520	6,520	7,470	39,520	12,900
1987	40,318	8,530	6,560	7,470	39,780	12,300
1988	38,057	8,540	6,600	7,470	40,040	11,700
1989	35,796	8,550	6,630	7,470	40,300	11,100
1990	33,535	8,560	6,660	7,470	40,544	10,440

Financial Prices 1978-90

Cocoa	76,000
Maize	6,000
Panela	8,000
Rice	6,000
Sorghum	5,500
Beef cattle	32,000

B. Non-Traded Commodities (1978-90)

	<u>Financial</u>	<u>Economic</u>
Cassava	2,500	2,320
Plantain	3,000	2,790
Eggs ('000 units)	3,000	2,790
Honey	34,000	31,620
Milk ('000 liters)	7,900	7,350
Pork (liveweight)	70,000	65,100
Poultry (liveweight)	100,000	93,000

/a In constant 1978 terms.

/b Year 1 of the project.

Source: Mission.

May 15, 1979.

COLUMBIA
THIRD AGRICULTURAL CREDIT PROJECT - INCOBA
Project Cash Flow (INCOBA)
(Without Price Contingencies)
(Col\$ million)

	Project Years																		TOTALS
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
CASH INFLOW																			
<i>Sub-loan recuperation (principal)</i>																			
Farm development																			
Short term	57.9	177.7	349.3	560.0	647.8	650.9	646.7	639.1	639.1	639.1	639.1	639.1	639.1	639.1	639.1	639.1	639.1	639.1	639.1
Medium/long term	0.5	0.9	12.5	30.2	55.5	86.3	95.3	107.4	108.5	101.9	77.8	50.1	36.1	14.3	10.7	5.8	-	-	-
Agroindustries	-	-	-	-	3.7	8.0	12.3	12.2	12.4	12.4	8.7	4.4	-	-	-	-	-	-	-
Sub-total	<u>58.4</u>	<u>178.6</u>	<u>361.8</u>	<u>590.2</u>	<u>707.0</u>	<u>745.2</u>	<u>754.2</u>	<u>758.7</u>	<u>760.0</u>	<u>753.4</u>	<u>725.6</u>	<u>693.6</u>	<u>675.2</u>	<u>653.4</u>	<u>649.8</u>	<u>644.9</u>	<u>639.1</u>	<u>639.1</u>	<u>10,984.7</u>
<i>Interest payments (16%) b/</i>																			
Farm development																			
Short term	6.1	20.0	40.2	65.1	77.3	78.0	77.6	76.7	76.8	76.8	76.7	76.7	76.7	76.7	76.7	76.7	76.7	76.7	76.7
Medium/long term	-	16.0	43.8	79.3	114.8	111.3	97.3	81.9	64.7	47.4	31.1	16.6	10.6	4.8	2.5	0.8	-	-	-
Agroindustries	-	-	-	3.6	7.7	11.3	10.0	8.1	6.1	4.1	2.1	0.7	-	-	-	-	-	-	-
Sub-total	<u>6.1</u>	<u>36.0</u>	<u>84.0</u>	<u>148.0</u>	<u>199.8</u>	<u>200.6</u>	<u>184.9</u>	<u>166.7</u>	<u>147.6</u>	<u>128.3</u>	<u>109.9</u>	<u>94.0</u>	<u>87.3</u>	<u>81.5</u>	<u>79.2</u>	<u>77.5</u>	<u>76.7</u>	<u>76.7</u>	<u>1,208.2</u>
<i>Government equity</i>																			
On-farm lending	84.3	157.8	218.6	197.3	14.5	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-
Agroindustry lending	-	-	10.5	12.1	8.2	4.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Technical assistance, training and project management	13.6	10.4	4.2	3.0	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total	<u>97.9</u>	<u>168.2</u>	<u>233.3</u>	<u>212.4</u>	<u>25.7</u>	<u>10.2</u>	-	-	-	-	-	-	-	-	-	-	-	-	<u>678.7</u>
<i>IBRD</i>																			
On-farm lending	71.9	134.4	186.8	168.0	12.4	5.3	-	-	-	-	-	-	-	-	-	-	-	-	-
Agroindustry lending	-	-	11.9	13.7	9.7	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Technical assistance, training and project management	32.1	19.8	2.2	1.4	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total	<u>104.0</u>	<u>154.2</u>	<u>200.9</u>	<u>183.1</u>	<u>23.5</u>	<u>9.4</u>	-	-	-	-	-	-	-	-	-	-	-	-	<u>578.2</u>
TOTAL INFLOW:	266.4	532.0	879.4	1,133.7	956.1	965.4	939.6	925.4	902.6	881.7	835.5	787.6	762.5	734.9	729.0	721.9	715.8	715.8	14,398.5
CASH OUTFLOW																			
<i>Sub-loans</i>																			
On-farm investment																			
Medium and long term	98.3	172.3	233.2	252.2	38.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Short term	57.9	177.7	349.3	560.0	607.8	650.9	646.7	639.1	639.1	639.1	639.1	639.1	639.1	639.1	639.1	639.1	639.1	639.1	639.1
Agroindustries	136.2	350.0	582.5	812.2	646.2	650.9	646.7	639.1	639.1	639.1	639.1	639.1	639.1	639.1	639.1	639.1	639.1	639.1	639.1
Sub-total lending	<u>156.2</u>	<u>350.0</u>	<u>604.9</u>	<u>838.0</u>	<u>672.2</u>	<u>650.9</u>	<u>646.7</u>	<u>639.1</u>	<u>639.1</u>	<u>639.1</u>	<u>639.1</u>	<u>639.1</u>	<u>639.1</u>	<u>639.1</u>	<u>639.1</u>	<u>639.1</u>	<u>639.1</u>	<u>639.1</u>	<u>639.1</u>
Technical assistance, training and project management	45.7	30.2	6.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Commission to Caja Agraria b/	0.4	2.3	5.3	9.3	12.5	12.5	11.6	10.4	9.2	8.0	6.9	5.9	5.4	5.1	5.0	4.8	4.8	4.8	4.8
Transfer to life insurance fund c/	0.4	2.3	5.3	9.3	12.5	12.5	11.6	10.4	9.2	8.0	6.9	5.9	5.4	5.1	5.0	4.8	4.8	4.8	4.8
<i>Debt service on IBRD loan d/</i>																			
Principal	-	-	-	-	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.8	51.8	51.8	-
Interest (7.9% p.a.)	-	-	8.2	36.2	50.7	51.0	44.0	40.5	35.9	31.8	27.7	23.6	19.5	15.5	11.3	7.2	3.2	-	-
Commitment charge	4.7	3.7	2.4	0.9	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total	<u>4.7</u>	<u>11.0</u>	<u>22.8</u>	<u>37.1</u>	<u>102.7</u>	<u>102.9</u>	<u>95.9</u>	<u>92.4</u>	<u>87.8</u>	<u>83.7</u>	<u>79.6</u>	<u>75.5</u>	<u>71.4</u>	<u>67.4</u>	<u>63.1</u>	<u>59.0</u>	<u>55.0</u>	<u>-</u>	<u>674.4</u>
TOTAL OUTFLOW:	207.4	396.7	644.7	898.1	804.3	783.2	770.2	756.7	749.7	743.2	736.9	730.6	725.1	721.1	716.6	712.1	708.1	653.1	12,458.6
Net Cash Inflow	59.0 e/	140.3 e/	234.7 e/	235.6 e/	151.8	182.2	169.4	168.7	152.9	138.5	98.6	56.8	36.8	13.8	12.4	10.3	7.7	62.7	1,937.2

a/ Assuming an average repayment of 8 years, including 2 of grace.
b/ 1% of sub-loan outstanding balances.
c/ 1 percentage point of 16% interest rates on sub-loan outstanding balances.
d/ Assuming a bank loan of US\$17.0 million (excluding price contingencies), with a 17 year repayment period including four years grace, a commitment fee of 0.75% per annum, and an interest rate of 7.9% per annum.
e/ To be reserved for following year non-project financed short term (non-incremental working capital).

Source: Mission
April 16, 1979

COLOMBIA

THIRD AGRICULTURAL CREDIT PROJECT - INCORA

Related Documents and Data Available in Project File

General Reports and Studies Relating to the Project

- (a) Proyecto de Credito Integral para los Asentamientos de INCORA, Preparation Report, INCORA, November 1978;
- (b) Draft Report of the Preparation Mission to Colombia. INCORA Credit Project. Working Papers. FAO/World Bank Cooperative Program. WP 4/78, November 13, 1978.
- (c) Perspectives on Colombian Agriculture: Selected Issues and Options. IBRD, draft December 4, 1978.
- (d) Agricultural Sub-sector Report. Research and Extension, IBRD, draft, July 21, 1978.
- (e) Agricultural Sub-sector Report. Marketing and Price Policy, IBRD, draft, July 21, 1978.
- (f) Agricultural Sub-sector Report. Agricultural Credit, IBRD, draft, July 21, 1978.
- (g) Agricultural Sub-sector Report. Agrarian Reform, Colonization, Irrigation and Drainage. IBRD, draft, August 8, 1978.

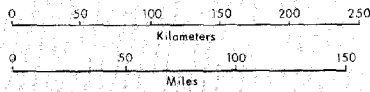
Selected Working Papers

Appraisal Mission Working Papers:

- (a) The Crops and Livestock Components
- (b) INCORA
- (c) Project Financial and Economic Analysis: Detailed Analysis and Assumptions

April 26, 1979

COLOMBIA III AGRICULTURAL CREDIT PROJECT-INCORA



- Project areas
- INCORA agencies
- Caja Agraria
- Banco Ganadero
- Main paved roads
- Secondary paved roads
- Railroads
- Rivers
- Department boundaries
- International boundaries

ALTITUDES (meters)	AVERAGE TEMPERATURES (°C)	CLIMATE
Above 4,000	Below 7°	Alpine
3,000-4,000	Below 12°	Moorland
2,000-3,000	Not less than 12°	Cold
1,000-2,000	Not less than 17.5°	Temperate
Up to 1,000	Over 24°	Hot

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