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

CAPITAL ASSISTANCE PAPER

Proposal and Recommendations
For the Review of the
Development Loan Committee

DOMINICAN REPUBLIC - AGRICULTURAL SECTOR LOAN

AID-DLC/P-2043

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

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June 7, 1974

MEMORANDUM FOR THE DEVELOPMENT LOAN COMMITTEE

SUBJECT: Dominican Republic - Agricultural Sector Loan

Attached for your review are recommendations for authorization of a loan in an amount not to exceed twelve million United States dollars ($12,000,000) to the Government of the Dominican Republic ("Borrower") to assist in financing the United States dollar and local currency costs of goods and services needed to support Borrower's program ("Program") directed toward: (1) increasing agricultural production for domestic consumption; (2) increasing the productivity of small farmers; (3) increasing employment in agriculture in the rural areas; (4) developing the institutional and human resources needed to sustain agricultural growth and development; and (5) raising and more equitably distributing rural income.

This loan proposal is scheduled for consideration by the Development Loan Staff Committee on Thursday, June 13, 1974. Also please note your concurrence or objection is due by close of business Tuesday, June 18, 1974. If you are a voting member a poll sheet has been enclosed for your response.

Development Loan Committee
Office of Development
Program Review

Attachments:

Summary and Recommendations
Project Analysis
ANNEXES

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DOMINICAN REPUBLIC AGRICULTURE SECTOR LOAN

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SUPPLEMENTARY DOCUMENTS (See Official Files)

DOMINICAN REPUBLIC AGRICULTURE SECTOR LOAN

SUMMARY AND RECOMMENDATIONS

A. Borrower and Implementing Entities

The Borrower will be the Government of the Dominican Republic (GODR). The executing agency will be the Secretariat of State for Agriculture. The implementing agencies will be the Secretariat of State for Agriculture (SEA), the Agricultural Bank (AgBank), the Dominican Development Foundation (DDF), the Cooperative Development and Credit Institute (IDECOOP), the Central Bank and its Fund for Economic Development (FIDE), and the Secretariat of State for Public Works (SOP).

B. The Loan

1. Amount: Not to exceed $12.0 million.

2. Terms: Interest in U. S. dollars at 2% during the first ten years; 3% thereafter. Repayment in U. S. dollars over 40 years, including a 10-year grace period.

C. Purposes

To implement and support major policy changes in the agricultural sector, particularly with regard to the allocation of budgetary, financial and human resources within the sector and to raising the level of the total available resources allocated to the sector, thereby increasing production, rural incomes and rural employment. Within a period of three years the sector program will double the number of small farm units which receive credit and technical assistance and will increase incrementally the total amount of credit resources available to agriculture. Simultaneously the orientation of the AgBank will be shifted toward small/medium borrowers, and commercial banks will assume lending to large scale commercial farms backed by Central Bank rediscounting. A system to deliver agricultural inputs to small farmers will be developed to assure the usefulness of new credit and commensurate technical assistance. Further, the program will improve institutional coordination by strengthening the authority and capability of the Secretarial of State for Agriculture in the sector with regard to credit policy, marketing activities, education, input delivery systems, and rural road construction.

Note: Peso amounts shown throughout this document are calculated at an exchange rate of $1.00 Dominican peso to US$1.00.

D. The Program

The sector loan will provide AID assistance to support Dominican Republic efforts to stimulate continued development of its agricultural sector by strengthening the GODR's capability for achieving the following objectives of its agricultural sector development plan:

1. Expand credit and input availability to small farmers to increase production, create employment, and bring about a more equitable distribution of income.

2. Strengthen the Secretariat of Agriculture's ability to respond effectively to the problems of the small farmers by creation of a market research/farm management service division.

3. Provide new educational opportunities to benefit the vocational skills of small farmers, and better professional agriculturalist capacilities to serve them.

4. Increase the Dominican Republic's capacity to construct and improve feeder and access roads, with emphasis on labor-intensive methods and maximum participation of the road's beneficiaries.

The program funding is as follows:

(in Thousands)

Program Element	GODR	AID		TOTAL
	Pesos	US$	Pesos	US$ Equiv.
Small Farm Credit Program	18,990	-	9,050	28,040
Market Research Program	950	300	-	1,250
Human Resources Program	960	1,650	-	2,610
Feeder Roads Program	1,000	-	1,000	2,000
		1,950	10,050	
TOTAL	21,900	12,000		33,900

Note: With respect to the $12.0 million shown in this table as the AID contribution to the Program, the USAID/Santo Domingo shall have authority to shift up to $1.2 million in funds between Program activities (as defined in the Loan Agreement) provided that the funds for each such activity are not increased or decreased by more than 50% of the total amount programmed for each such activity without AID/W concurrence.

E. Alternative Sources of Funds

The Mission has been informed that the IBRD, IDB and Export-Import Bank have been advised of this proposed loan and have indicated no interest in this financing.

F. Statutory Criteria

All statutory criteria have been met. (See Annex A, Exhibit 1.)

G. Mission Views

The Country Team fully endoreses this Agricultural Sector Loan.

H. Loan Administration

1. Procurement: No U.S. dollar procurement of commodities is contemplated under the loan. Payment of U.S. dollar costs of the loan for training and technical assistance components will be by the standard AID letter of commitment procedure.

2. Disbursements: Local currency utilized under the loan shall be Dominican Republic pesos obtained by AID with U.S. dollars. (See Section VI for a more detailed description of the procedures to be used for generation of local currency to be utilized under the loan.)

I. Issues

The issues raised in State 085059, dated April 24, 1974, which are summarized in Section V, have been resolved to the satisfaction of the Mission's Sector Loan Committee. There are no other issues.

J. Recommendations

It is recommended that a loan be authorized to the Government of the Dominican Republic in U.S. dollars for an amount not to exceed $12,000,000 to finance the dollar and local currency costs of the Agricultural Sector Program described herein, subject to the following terms and conditions:

1. Interest and Repayment Terms

Borrower shall repay the loan to AID in U.S. dollars within forty (40) years from the date of first disbursement under the loan, including a grace period not to exceed ten (10) years. Borrower shall pay to AID in U.S. dollars on the disbursed balance of the loan interest of two (2) percent per annum during the grace period and three (3) percent per annum thereafter.

2. Other Terms and Conditions

In addition to the usual conditions precedent to first disbursement, a general condition precedent regarding the lowering of the Agricultural Bank's lending ceiling, as well as several conditions precedent to disbursement for each discrete aspect of the loan have been developed. These preconditions, as well as especially designed loan covenants, are set forth in full in Section IV.

K. Capital Assistance Committee

Capital Resources Development Officer.....: Theodore T. Foley

Chief, Agricultural Development Staff.....: Jimmie M. Stone

Reviewing Officers.....: Michael R. Stack, Assistant Director
Richard L. Hough, Deputy Director

Mission Approval Officer.....: J. B. Robinson Director

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SECTION I - ECONOMIC SITUATION IN THE DOMINICAN REPUBLIC

A. Present Status of the Dominican Economy

The Dominican economy continues to be relatively strong and thriving. The boom situation is continuing, but with reduced intensity. The economy may best be characterized by: a) its outstanding growth during recent years, a growth stimulated by rapidly rising exports and investments (particularly public investments) fueled in significant amounts by large U.S. bilateral resource transfers in the 1965 to 1969 period; b) the continued severity of unemployment in urban areas and underemployment in rural areas, despite rapid growth; c) the skewed distribution of income; d) its first serious experience (1973) with price inflation, partly as a result of world-wide inflation; e) its strengthened international financial position as evidenced by increases in net foreign exchange reserves since 1967 and the appearance of a merchandise trade surplus during 1972-73. (For more detail see pages 12 through 28 of the FY 1975 DAP, dated October 31, 1973.)

The inflation problem which is of recent origin has to some extent resulted from the country's vulnerability to rising import costs. While the Government could slow the pace of inflation with monetary/fiscal and budgetary allocation policies, it has yet to announce any special program which has these anti-inflationary objectives explicitly in mind. The energy crisis will probably lead to an overall balance of payments deficit and decline in foreign exchange reserves in 1974. Credit and tax measures could be taken to check the volume of imports, including imports of some luxury consumption goods. The high prices for the principal agricultural exports, some diversification of exports as a result of the development during recent years of mineral resources and the sizeable inflow of foreign public and private capital point to a reasonably stable short-term outlook for the balance of payments which, however, is not without its danger points with regard to the increasing domestic demand and world prices for petroleum and food products.

On the other hand, the traditional pattern of development in the Dominican Republic whereby traditional export crops constitute the lead sector, where heavy protection and tax subsidies have made private investment in industry very profitable, and where the bulk of public investments has been concentrated in urban areas has led to imbalances in the economy. Little progress has been made recently in reducing under/unemployment. Inequities in income distribution have been

accentuated by the inflationary situation. Because of high profits obtained from import substitution and urban real estate, there has been less incentive to invest in agriculture or export industries based on domestic raw materials. Alternatively there has been an incentive to invest in capital intensive industries requiring sizeable imports of capital equipment. These trends may have led to some weakening in the country's balance of payments position, a weakening that has been masked by the extraordinarily high prices prevailing in foreign markets for the country's traditional export crops. Insofar as these trends have led to a diversion of investments from agriculture to less productive uses elsewhere, they contributed to inflation.

GNP at constant prices grew at a compound rate of 4.4% per annum from 1960-1966 and 8.8% from 1967 to 1973, a period which included the drought year 1968 when overall growth was 0.5%. Since 1969 annual growth rates have ranged from 8%-12.5%. The highest GNP growth during this period was 12.5% in 1972; the lowest annual growth rate was 8.0% in 1973. Although no national accounts information is available concerning the sector components of growth in 1973, the U.S. Agricultural Attaché estimates that because of adverse weather agricultural production fell in 1973 in the output of plantains, tubers, peanuts, corn and rice.1/ Thus it is quite likely that the lower rate of increase of GNP may be attributed primarily to this absolute decline in agricultural production which was partly caused by adverse weather conditions.

This high growth rate received strong stimulus from a more than doubling of exports from 1970-1973 and a rise in fixed investments from 14% of GDP in 1967 to 23.3% in 1973. The sectors principally responsible for the high growth rates since 1969 were agriculture, manufacturing, mining and commerce. Agricultural growth really started in 1969 after stagnation throughout the period 1963-1968 (see Table I in Annex B, Exhibit 3). Agricultural growth since 1969 has been greatest in export crops which grew at an annual rate of 12.9% from 1969-1972 while production for the domestic market increased at an annual rate of 5.5%. (See Table II in Annex B, Exhibit 3.)

Consumer prices in Santo Domingo rose by only 8% from 1963 to 1971; they rose by an additional 8% in 1972 and 15% in 1973. It is believed that prices rose relatively more rapidly in rural than in urban areas during 1973 because of supply shortages. Price stability up to 1971

1/ Agricultural Situation 1973, January 16, 1974 (No. DR 4002).

appears to have resulted largely from restrictive fiscal policies in which public sector investments were financed in considerable measure from current budget surpluses. The sharp rise in prices in 1972-73 in part reflected international inflation, since imports of goods and services constituted 25%-30% of GDP. The GODR estimates that rising import costs accounted for 60% of inflation during 1973, but no import price data are available to confirm this estimate. Domestic monetary pressures were also contributing to inflation; bank credit rose by 21% in 1971, 23% in 1972 and 36% in 1973. The rise in bank credit, largely to the trade and industrial sectors, was the principal cause of the expansion of the money supply by 10% in 1971, 18% in 1972, and 18% in 1973 (see Table VI, Annex B, Exhibit 3). Expectations of rising prices probably also served to increase the velocity of money, thus putting further pressure on prices, especially during 1973.

President Balaguer may be proposing a draft law to Congress providing for a general price freeze. Experience in other countries suggests that the administration of a general price freeze is a difficult undertaking. Alternatively, the Government could combat inflation by monetary means, especially by controlling the rate of expansion of credit and by dampening import demand for consumer items. Furthermore, the country's leading private consultant economist has characterized the Government's new program which this proposed loan would support as "anti-inflationary". The Central Bank has been following a selective and flexible credit policy which lends itself to tightening credit somewhat in lower priority areas of capital intensive industry and luxury imports, while permitting a more rapid growth of credit to production areas such as agriculture. This trend is expected to increase as a consequence of the new program. This approach would also stimulate greater production and employment within overall policy to restrain inflation. A selective increase in the level of interest rates could also be considered, since in view of the present rate of price increases, interest rates today are negative. Interest rate adjustments to levels that divert funds from cash holdings and the unorganized money markets to investment in time deposits and securities could have a considerable counter-inflationary impact.

The pattern of the balance of payments from 1967-1971 shows a continuous rise in the net deficit on merchandise account (from $18 million in 1967 to $68 million in 1971) and a net deficit in goods, services and private transfers (rising from $68 to $121 million during the same period). The net deficit on current account was more than offset by a surplus on capital account from 1968-1971 which permitted an annual improvement in the net foreign exchange reserve position. The dramatic

rise in exports, which nearly doubled from 1971 to 1973, brought about a surplus on current merchandise account during 1972 and 1973. This change was undoubtedly largely brought about by the doubling of the international price of sugar from 1971 to 1973 and the appearance of exports of ferronickel in 1972 ($47 million) and 1973 ($86 million). Prospects for 1974 are very uncertain because of the volatile character of international prices, especially for petroleum. Table III in Annex B, Exhibit 3, shows that there will again be a small deficit on trade account in 1974, as well as a significant drawdown of the country's foreign exchange reserves. It appears, however, that effects of the increase in the price of petroleum will be largely offset by greater receipts from sugar exports and continuance of high prices for other staple products being exported.

Table III provides the first official estimate of the balance of payments for 1973; it also provides a revision of the 1974 projection of the balance of payments contained in Santo Domingo 777 based on later available data and partly on estimates of the technical staff of the Central Bank. The tentative finding was to show a modest $16.6 million reduction of exchange reserves from the level of $38.9 million (net) that prevailed at the end of 1973. However, the Central Bank has not yet completed its work on a 1974 balance of payments projection and there are a number of unknowns, e.g., the impact of inflation on the balance of payments, still in the picture which militate against making any firm projection at this time on the course of development of the balance of payments over 1974 and its impact on the economy.

1. Debt Service of the Dominican Republic

The external public debt of the Dominican Republic rose from $88 million in 1966 to $291 million at the end of 1972 (see Table IV in Annex B, Exhibit 3). According to Central Bank sources, this public debt had risen to $319 million by September 30, 1973. External public debt services rose from $3.3 million or 2.1% of export of goods and services in 1966 to $18.8 million or 5.0% in 1972 (see Table V). The ratio remained at 5.0% in 1973. The debt service is projected by IMF to rise to an average of about $20 million a year from 1974 to 1977. If exports continue to increase, debt service as a percentage of exports of goods and services may be expected to fall below the modest level of 5% during the next four years.

By international standards a debt service of less than 10% of the value of exports of goods and services is not considered to be a

serious burden. The high prices for staple exports such as sugar and coffee (which prices will probably remain relatively high for the foreseeable future) and the increased diversification of the country's exports (as illustrated by ferronickel and the recent prospect of sizeable exports of gold) lend assurance to the foreign creditor that for the foreseeable future the Dominican Republic is a good credit risk from an economic standpoint.

2. The Major Economic Problem

Certainly economic growth in the traditional sense as measured by GDP has not been the country's major economic problem; growth of 10.6% per annum since 1969 may be unparalleled in the developing world. What the Dominican Republic illustrates is that despite an 8.8% per annum compound growth rate since 1967 the country's human resources remain seriously underutilized without material improvement over the 7-year period. Underemployment in the countryside is assumed to be the equivalent in man years of perhaps 40% of the rural labor force and unemployment in the cities is variously estimated to be 15%-20% of the urban labor force. Nevertheless, since President Balaguer obtained much support in the countryside in the election campaign just over, these percentages can be overly dramatized. New estimates reflect both a high 3+% population growth rate and insufficient allocation of investment resources and technical know-how in a manner to alleviate substantially the situation. The problem of an inequitable distribution of income is in large part a concomitant of the underutilization of human resources and the decline in per capita productivity in the rural sector during the past decade. This reflects the pressures of population on a limited resource base. Because of the "population explosion", underutilization of human resources may well constitute the most acute problem facing the D. R. during the remainder of this century. Because so much under/unemployment is concentrated in rural areas, the achievement of higher levels of employment is associated with higher agricultural production, thereby raising rural incomes and helping to alleviate the allied problems of food shortages and malnutrition.

In conclusion, problems of inflation and the balance of payments would appear to be manageable over the short-run. The problem of rural poverty and unemployment is long-run and not amenable to easy solution, the resolution of which will require careful planning in the allocation of public resources. The loan should begin to have early beneficial effects in improving the situation.

B. The Role of Agriculture in the Dominican Economy

Agriculture is the keystone of the Dominican economy; it constitutes about 21% of GDP; it employs somewhat more than 50% of the active labor force; it dominates export trade (agricultural products account for 75% of the value of total exports); and commerce and industry have traditionally been based on the production and sale of agricultural products. During the period 1960-1971 the primary production sector, which include agriculture and mining, suffered an absolute decline in per capita output while secondary and tertiary sectors, which includes manufacturing, construction, commerce, etc., enjoyed a very significant increase in per capita output. The decline in agricultural productivity and the associated decline in its share of real income reflect the pressure of a growing population on the limited area of cultivable land and the serious underemployment of the rural labor force, especially among small farmers. Except for the large enterprises engaged in commercial export crops, agriculture has not enjoyed the fruits of modernization and technological advance to the extent of other sectors.

Thus a dual economy exists in which small farmers who account for nearly half of the country's labor force are subject increasingly to an erosion of living standards as a result of the paucity of modern technology, the continued growth of the agricultural labor force and an essentially static land situation. Thus, while agriculture represents the keystone of the economic structure, it also represents the touchstone of incipient discontent. Unless solutions can be found, this economic imbalance will be progressively accentuated by population growth.

Agriculture's share of GDP fell from 33% in 1960 to 21% today. This reflects the emphasis given during the past decade to industrial development through tariff protection and investment incentives, as well as large public investments in urban infrastructure. Manifest in the classic transformation model in which heavy urban investment is designed to absorb the surplus rural labor that migrates to the cities and in which rural labor supplies to some extent the industrial labor force needed. The success of this model depends on the growth of urban employment opportunities exceeding the net increase in the rural labor force. This has not happened in the Dominican Republic as evidenced by the fact that during recent years the rural labor force has continued to increase by about 4,000 a year while substantial unemployment continues to prevail in the cities. Since investments are at the high level of 23% of GDP, a policy of raising aggregate investments would further

accentuate inflation. A shift in resource flows with greater emphasis on employment intensive investments in rural areas, calculated also to raise production for domestic consumption, appears to be a more suitable alternative.

At the present stage in the development of the Dominican economy, such investments would be largely for production inputs such as fertilizers, rural infrastructure (e.g., canals, roads, reforestation, etc.) and the upgrading of technical skills through extension. This alternative model can be both profitable and labor intensive with respect to farm investments as is illustrated by the following data relating to agricultural production in Japan and India:1/

Region	Aver. Size of Holding (acres)	Labor Use Per Acre	Operating Expenses Per Acre	Value of Fertilizers Per Acre	Gross Output Per Acre
India (W. Bengal)	2.9	1.9	$ 17.30	$ 2.70	$ 45.80
Japan (Kinke)	3.0	7.1	$132.00	$34.90	$448.30

Nearly four times as much labor and 12 times as much fertilizer were used in Japan. Output per acre was nearly 10 times higher in Japan. The above data shows that labor intensity and increased investment in operating capital can be highly productive and profitable.

1. Resources and Output

In 1971 export crops accounted for 42% of total agricultural output, i.e., sugar cane, tobacco, coffee, and cocoa. The balance of crop production is primarily for domestic consumption, about half of which are cereals, tubers and root crops and the remainder a variety of items such as vegetables, bananas and peanuts. Despite sizeable output for domestic consumption, food imports have traditionally been about 12%-15% of total imports. Last year, partly due to poor harvests, the ratio rose to 20%. In a world of growing food shortages where the Dominican Republic may have difficulty in importing needed food despite its increasing foreign exchange earnings, the Dominican Government has recognized that greater emphasis has to be given to raising production for domestic consumption.

1/ John W. Mellor: "Economics of Agricultural Development" p. 160.

Land: Cultivated land per person in the Dominican Republic is estimated at .18 hectares, one of the lowest ratios in the world. The country has 4.16 million acres in pastureland and 2.18 million acres in cropland; the cultivated area includes 606,000 acres planted in sugar and 921,000 acres dedicated to cacao and coffee, leaving 1.3 million acres for tobacco and domestic food crops. Since no significant areas of unused but cultivable land remain, future increases in output must in large part come from increases in productivity. Despite the vital importance of land as a scarce factor of production, there exists no coherent land-use policy and no tax on land.

Water: Irrigation programs have affected 270,000 acres to date and are being extended to an additional 160,000 acres. As with land, there is no coherent water-use policy and tariffs on agricultural water are not effectively applied so as to obtain the most efficient use. Irrigation works now being planned or under construction are clearly aimed at raising production for domestic consumption rather than for export.

Labor: While land is scarce, labor is abundant; a 1969 OAS survey estimated that nearly half of the rural labor supply was marginal. A recent ILO survey found that disguised unemployment amounted to over 40% of the active rural labor force. Agricultural labor productivity is one of the lowest in Latin America. Basic skills are lacking and nutrition is deficient.

Credit: Although agriculture received about 20% of total bank credit in 1973, the distribution of credit within the sector is heavily weighted in favor of large farms and export crops. According to the most optimistic of estimates, only 60,000 of 470,000 farm units have access to institutional credit. About two-thirds of all bank credit is directed to relatively large farms that require credits of RD$5,000 or more. It is evident that small farmers with holdings of less than 30 hectares and who account for close to half the country's active labor force, suffer from a shortage of capital as well as land.

Technology: Dominican agriculture has a small but competent group of research technicians. The provision of technical assistance to farmers, however, is sharply limited at the present by an extension staff that is small, inadequately paid and undertrained. Extension assistance is given principally to farmers who receive credit. Consequently, lack of technical knowledge exists among the same group that lacks credit.

Forests: The valuable forests that once covered the island have been reduced to 2.5 million acres as a result of exploitation and the application of slash and burn techniques. An evaluation made in 1968 in the Cordillera Central showed that 1,250,000 acres of forest land should be replanted. Reforestation is highly labor intensive and in view of the current world shortage of timber and rising prices in world markets, the GODR should explore the feasibility of new projects and investments in this field. An FAO survey indicated that the country could extract 100,000 to 150,000 c.b.m. of timber a year for the next ten years, assuming that a reasonably effective program of forest management and reforestation were carried out.

Fisheries: The Fisheries sub-sector, although not fully developed, is playing an increased role in satisfying food requirements in the Dominican Republic. The value of domestic products sold in 1973 was approximately $10 million of which about $1 million was exported. An additional $6 million in canned fish was imported. Research and development activities have commenced for the purpose of applying new technology for pond culture of tilapia and carp and to improve estuary and offshore marine fishing techniques and marketing. IDB is providing financing for some of these activities through a recent loan to develop marine fishing cooperatives. The internal and external market demand and price of inland and marine fish, lobster, shrimp and conch are high, and the potential for growth of fisheries appear to be substantial.

2. Institutional Support

There are an array of public agricultural agencies; the Secretariat of State for Agriculture; the Agricultural Bank; the Agrarian Reform Institute; the Institute of Development and Cooperative Credit (IDECOOP); the Dominican Center for Promotion of Exports (CEDOPEX); the Price Stabilization Institute (INESPRE); the State Sugar Council (CEA); and the National Water Resources Board (INDRHI). The Central Bank and its development fund (FIDE) have also been playing an increasing role in financing agricultural development. Most of these institutions are currently receiving or have received external technical assistance during recent years. The recent OAS mission of economists to the Dominican Republic found that the Secretariat of State for Agriculture, the Agricultural Bank, CEDOPEX, and the Central Bank have become increasingly efficient and effective in serving the agricultural sector and have been given a freer hand in managing their own affairs.

3. Public Sector Financial Support for Agriculture

Raising agricultural production is a foremost objective. Production can be raised by increased use of one or more of the factors of production -- land, labor and capital. In the case of the Dominican Republic, cultivable land is largely fixed and labor is over-abundant. Thus, the key factor is capital investment of the type needed to meet priority needs. There is an urgent need for working capital in the form of seeds, fertilizers and pesticides for small farmers. This can only be supplied if adequate credit is made available. There is also a need for fixed investments in roads, farm improvements, irrigation canals and marketing transportation. There is a need for investment in human capital in the form of training of farmers and extension services to raise the productivity of labor. Public expenditures for agriculture, both capital and current expenditures, are both an important means for developing agriculture and an important test of the priority given to agriculture relative to other sectors.

Table VII through XII, attached in Annex B, Exhibit 3 are intended to supply the best available data to show the relative significance and development of public sector expenditures and credit to the agricultural sector over the period 1968-1973. Lack of planning data makes it impossible to show meaningful official projections of government expenditures and credit utilization for 1974 and subsequent years. Table VII shows that total agricultural expenditures as a percent of total public expenditures declined from 13.7% in 1969 to 11.2% in 1970 and then rose to 13.0% in 1973. This rising trend should continue as a consequence of the additive effects on public spending of the agricultural sector program. The absolute 99% increase in public spending on agriculture from 1968 to 1973 represents a significant real increase after adjustment is made for the 32% rise in prices during the period. Further, Table VIII shows how expenditures under the jurisdiction of the Secretary of State for Agriculture rose from RD$9.9 million in 1968 to RD$12.3 million in 1972 and RD$23.6 million in 1973. Table IX shows that current expenditures have risen along with capital expenditures from 1970-1972, although at a somewhat slower pace. Current expenditures rose from RD$18.9 million to RD$25.8 million; capital expenditures rose from RD$16.5 million to RD$23.2 million. Table X shows a decline in dependence on external resources for financing agriculture from 1968-1972. Table XI provides a comparison of Central Government expenditures for different purposes from 1966 to 1972 (the only functional classification available). It clearly shows for 1972 the disparities between Central Government budget proposals and actual expenditures, the relatively small share of expenditures for

agriculture and irrigation compared to transportation (highways), urbanism and public buildings and housing. It would appear that expenditures for agriculture could be raised appreciably relative to expenditures for housing, public buildings and highways in order to meet priority economic needs. In 1973, there was, however, a both promising and significant shift of total public expenditures in favor of agriculture.

In the area of credit, the value of loans to the agricultural sector in 1973 ($85.6 million) exceeded total public sector expenditures in agriculture for that year ($58.7 million). However, credit to the agricultural sector markedly declined in the period 1969-1973 relative to the total credit dispensed to all sectors of the economy; agriculture share of total credit fell from 33.1% in 1969 to 16.9% in 1973 (see Table XII). The relative decline resulted in large part from the failure of the Agricultural Bank to raise significantly the absolute level of loans. The Agricultural Sector Loan is premised on a very significant expansion of Agricultural Bank credit during the next 3 years which should raise significantly the share of agricultural credit in total credit.

4. Public Sector Expenditures, Income Distribution and Employment

The OAS Team that was recently in the Dominican Republic indicated that it was difficult to evaluate public sector allocation of resources because of absence of data. The 1973 budget execution is not yet available and there are no official projections of planned expenditures. The Mission also found out that the Office of National Planning (ONAPLAN) is preparing a consolidation of public sector expenditures and is making projections of savings and investments. When that information is available, we will be in a better position to evaluate the adequacy of projected expenditures for agriculture. USAID has endeavored to estimate from information obtained from official budget sources public sector expenditures 1968-73 on a consolidated basis in constructing tables VII-X.

Based on the information described above, one can surmise that public expenditures for agriculture and irrigation as a percentage of total public sector expenditures should be raised considerably (perhaps to within the range of 13%-16%) over the next 2-3 years. Likewise, agricultural credit as a percentage of total credit should return in coming years close to the levels (28%-33%) that prevailed in 1968-69.

The presumption certainly is that the recent clearcut establishment of agriculture as the priority development sector of the economy by the Government as well as its commitment to our joint agricultural sector program, where there will be a $21 million GODR contribution and a $12 million U.S. contribution, provides adequate earnestness of the Government's intentions to progressively and significantly increase the flow of its own resources into the agricultural sector.

The Agricultural Sector Assessment (Part VII, B. 7) has a discussion of the income distribution and direct employment effects of the agricultural sector program. It is there shown that net unemployment might be reduced by 40,000 (from 213,000 to 173,000) over the three-year period as a result of greater farm production and a program for the construction of feeder roads. Provision of adequate credit under reasonable terms, so as to permit farmers to finance needed inputs to raise production, will reduce income disparities and unemployment. In addition to such a program, higher public expenditures on rural infrastructure will be required if rural unemployment expressed in terms of man years of unemployment, is to be reduced from 213,000 (43% of the active population of farm owners and family workers) to some reasonable level such as 100,000.

With respect to income distribution, the assessment lists seven factors which should contribute to greater equity: a) a more rational allocation of capital, b) greater access to technological information and production inputs, c) more efficient marketing and leveling of seasonal price fluctuations, d) expanded employment opportunities, e) development of useful farm management and marketing skills, f) savings on interest costs as more farm families have access to institutional credit, and g) the distributional aspects of taxation. The section concluded that the effect of the strategy could be to raise average income per farm worker in the target group by 50% over the 3-year period of the program.

Programs such as those described will have a multiplier effect in raising the demand for consumer and producer goods in rural areas. If such a multiplier is to be translated into further increases of income and employment and not be dissipated by rising prices or increased imports, industrial production will have to be raised to meet the demand. This presents the country with a unique opportunity to initiate programs of agro-industry development in rural areas. Small agro-industries will increase supplies of goods needed by farmers at reasonable prices and increase demand by creating new markets for their production. The Sector Program anticipates the need for some credit

resources for the development of such agro-industries as processing, packaging and storage of farm products. Such initiatives will widen the market for such products thereby providing added incentive for greater production, partly as a result of import substitution. These agro-industries will be employment intensive and their growth will help alleviate urban unemployment.

SECTION II - CONCLUSIONS OF THE AGRICULTURAL SECTOR ASSESSMENT

A. Current Situation

The 60% of the Dominican population who live on 455,000 rural farm units produce 22% of the gross domestic product and account for 75% of foreign exchange earnings. Within 25 years the country will double to triple its population. Consequently, agricultural resources which are limited - and in the future will become increasingly so - must be allocated in ways which contribute progressively to development and equity and which will provide the margin for advancement of the rest of the economy.

The Agricultural Sector Assessment points out that the economy has grown at an average rate of 10.6% per year for the last five years but this growth has not been reflected in the agricultural sector where underemployment and scarcity of capital continues to prevail. The percentage of GDP attributable to agriculture remains below the 1960 level and in comparative terms, agriculture's share of GDP is falling, its share of investment lagging.

The scarcity and high cost of imported foods and the mounting population pressure caused by a three plus percent annual population growth rate has intensified the need to increase agricultural production. Of necessity, because of the limitations on arable land, attention is focused on small and medium farm units which are engaged in food crop production. These potentially productive farms for lack of capital, knowledge and technical assistance, have been producing at well below capacity. Moreover, by devoting more resources on this large, hitherto neglected group, equity targets can be served in terms of increased rural incomes and better income distribution.

The Dominican group which undertook the Assessment formulated quantitative agricultural goals within the context of equity and production requirements, crop by crop. That is to say, a more equitable distribution of income in the rural sector, provision of adequate food and fibre at reasonable costs, and provision of raw materials for industrial use, import substitution and exportation were all important considerations in arriving at the goals which were established.

Between two extreme macro strategy alternatives of maximum production for export with heavy importation of basic food supplies, and maximum production for domestic consumption at the expense of produc-

tion for export, the Assessment indicated a middle ground in which the comparative advantage of production for import substitution and for export is weighed in the balance along with social goals to attain beneficial production mixes.

The alternative of maximum production for domestic consumption was rejected given the importance of agriculture as a source of foreign exchange, militating against major shifts of land resources toward production for domestic consumption. Moreover, substantial areas are more suited for the production of traditional export commodities than food crops. On the other hand, the food requirements of a burgeoning population required the dismissal of the alternative proposing major shifts in land resources for the production of export crops. The strategy selected, therefore, places emphasis on resource allocation alternatives which will maintain a rational balance between production for domestic consumption and for export while stimulating, greater investment in agriculture as a whole so as to produce the efficiencies which will result in greater productivity, employment and improved income distribution.

B. The Constraints and the Dominican Government Program

A clear outline of the future program for Dominican Agricultural Development is beginning to emerge as a result of the analytical process within SEA. Major elements of this program are set out in the letter requesting the loan signed by the President of the Dominican Republic on May 24, 1974.

The major goals of the program are to increase production and productivity and, thereby, to improve rural living conditions. Conclusions of the sectoral assessment process of the SEA regarding intermediate strategies and purposes of the Sector Program are also incorporated in the President's letter as major elements of the Agricultural Program. The major strategy of the Dominican Agricultural program is to channel greater resources to smaller farms in order to tap their latent productive potential. These resources are to be primarily in the form of credit, production inputs, and technical assistance which will be supported by employment opportunities, improved market systems and upgraded support infrastructure, particularly in credit and technical assistance delivery systems. Another element of the strategy is to induce greater private investment in agriculture through various fiscal mechanisms available to the Central Bank. The President has explicitly stated his willingness to provide the internal resources necessary for the accomplishment of the foregoing.

Heavy, long term investment in irrigation projects is also an integral part of the agricultural program. Large scale projects have been underway for several years and the stated goal of the Government is to assure, eventually that every possible potential irrigation project is accomplished. Investments in this area are projected at more than RD$11.0 million in 1974.

As a matter of policy, the economic position of the less advantaged rural worker/producer is of prime concern. The GODR is and will continue to be engaged in finding the means and the resources to help this element deal with its problems. This thrust is reflected in heavy outlays for agrarian reform measures, assignment of newly created irrigated land to small farmers and assignment of increasingly larger blocks of credit assets to those farmers.

Perhaps the critical element of the Dominican program is that, within the context of its goals and concern for the smaller farm unit, it is developing its ability to adjust programs to needs through the use of analytical systems. This means that the total sector program will change with the development of experience and knowledge about the nature of the totality of problems. The conclusions of the first Dominican Sectoral Assessment, (drafts of which are now available and which will be published in August) are reflected in the USAID's assessment document and are outlined below. Essentially these conclusions and recommended courses of action constitute the active core of the Dominican Agricultural Development Program as it stands today.

The major problems of the sector relate to land use and tenure, inputs and their use, credit, particularly institutional credit, the marketing system, including the rural road network and the institutional and human resources base. These constraints weigh most heavily on the small/medium farm. A broad, integrated series of corrective actions either have been adopted or are being planned by Dominican policy-markers to moderate and progressively overcome these constraints so as to release productive capacities in the agricultural sector.

1. Land Problems

The problems of land utilization and tenure are manifold and complex, socially, politically and economically. They are inextricably tied to undue fragmentation and parcelization of land holdings, a demand for land in excess of availability, a stagnant market for land transfers and the virtual absence of land taxation. There are no easy

short-term solutions. However, the GODR with IDB support is taking a necessary first step to address the problem through a national cadastre, and there is growing recognition, particularly in SEA, of the need to develop effective and comprehensive land policies geared to a more rational utilization of this scarce resource. Though the solutions will have to be formulated through evolution in a political as well as an economic context, SEA's ongoing analytical process will be of great value in evaluating alternative approaches and determining the appropriate timing for the necessary actions.

2. Inputs and Their Use

Inputs - fertilizers, plant protection chemicals, plant materials, improved seed and machinery - are beyond the reach of most small and medium farmers. If production is to increase, credit will have to be made profitable through an expanded and timely use of such inputs. SEA plans a broad frontal attack on the problem: stimulation of private sector delivery systems; direct credit to cooperatives for establishment of input stocks and systems for sale to members and non-members; and use of regional and sub-regional extension stations as alternative channels when and where necessary, to assure supplies at reasonable prices to small/medium farms. This supply system will be linked to a radio extension outreach network and to the conventional extension system.

3. Credit

With respect to credit, the realization that agriculture has been neglected in comparison with other sectors has become clear and monetary and fiscal measures have been proposed which will shift credit marginally from the industrial/trade sectors to agriculture. These include an adjusted discount mechanism, a guaranteed loan fund, and reductions in the maximum loan size in the Agricultural Bank for large farmers. As a result, significant increases in credit will be provided for agricultural inputs for small farmers.

4. Marketing

Serious weaknesses exist in the marketing system for supplying inputs and distributing outputs. While much of the failure of the marketing system is due to the lack of market information and skills and marketing procedures and methods, credit for marketing enterprises is also lacking. In marketing, SEA has developed a plan for institu-

ting a Market Research/Information unit which will be linked with specialized marketing offices in the Price Stabilization and Export Promotion Institutes. This new unit will develop and disseminate market information vital to farmers, tradesmen and consumers. It will also initiate programs supported by credit, where necessary, in order to develop a stable and efficient marketing system. Relating closely to a more serviceable marketing system is the Government's intention to expand selectively its penetration roads into outlying rural areas so as to incorporate a considerable number of subsistence primary producers into the market economy.

5. Human Resources

Human resources at the farm level are seriously underutilized, due both to over-population on the land and lack of basic skills. At the professional level, the base of well qualified agriculturalists needs to be expanded if the present impetus to development is to be sustained and extended. The development of the human resources base of Dominican agriculture from the top downward and from the bottom upward is fundamental if expected short-run gains are to evolve into longer-term, irreversible patterns of growth.

To ameliorate the severe scarcity of farm-level skills, SEA plans to undertake a pilot vocational education project to develop the experience necessary to create a system of mass vocational training in agronomic and manual skills. On the professional level, SEA plans to identify future manpower needs in terms of the required skills and numbers and to develop the capacity to produce B.S. level agriculturalists in a wider variety of disciplines keyed to manpower and production goals.

The present extension system reaches few Dominican farmers (perhaps only about 18%). In order to reach more small farmers, SEA plans quantitative and qualitative improvements through: radio outreach programs which broadcast marketing, technological, credit and other useful information; an increase in the number of extensionists by sponsoring and directing university extension efforts; linking the extension network to the credit system for group lending and group technical assistance; forming a Farm Management Office to formulate usable management packages for regions and sub-regions which will be linked to the market research and information functions and the extension/radio outreach networks; upgrading the qualifications of extensionists by formal in-service training at Dominican universities; and hiring new extension/credit agents.

This institutional upgrading of the extension system is not only designed to provide a higher quality, more timely and expanded set of services at the micro-level of production but also to facilitate greater coordination and integration of efforts between sector institutions such as SEA and the AgBank as well as between these public agencies and key private institutions such as the universities, the Dominican Development Foundation (DDF) and the commercial banks.

C. The Role of AID in the Dominican Agricultural Program

Analyses of the Dominican Republic's agricultural sector strategy have convinced the Mission that AID capital and technical assistance in the agricultural sector, targeted on major constraints and linkages, will assist and encourage the GODR to provide a more solid basis for institutional improvements and production and increased public and private investment in agriculture. It will also provide an additional impetus to the continuing development of Dominican agriculture in a way that will influence the Government to furnish benefits to the population more rapidly than would otherwise be possible, and give the Government more confidence in its ability to address its long-term agricultural problems.

A sector loan at this time will enable the GODR to move swiftly to alleviate the most serious constraints without establishing the type of commitment which would create a long-term dependence or which would take on the characteristics of budget support.

The GODR has requested AID assistance to carry out its agricultural program. The GODR loan request states in part: "The loan funds requested will be utilized in programs and activities which will be put into effect by the Government and the private sector, both interested in increasing the agricultural productivity and the improvement of the socio economic conditions of the small farmers, basically by channeling, in greater scale, the production resources, through the credit field, the generation of employment which will result in higher income, the improvement of the production and business infrastructures, and the training of the necessary technical assistance."

The GODR's request affirms that its counterpart funds for the program will derive from the national budget and will be in addition to the normal operating and investment budgets of the Secretariat of Agriculture and other institutions in the agricultural sector.

The Government also proposed to initiate and implement, as part of its reorientation of priorities in the agricultural sector, a series of program actions leading to specific objectives. Thus, policy changes will be made in the AgBank's upper lending limit, which will result in a shift of up to $13.6 million of credit funds in its portfolio for lending to small and medium farmers. Further, incentives will be provided to commercial bank to engage in agricultural lending by the establishment of a Guarantee Loan Fund and by offering rediscounting incentives for private bank agricultural loans. In terms of providing unified leadership to the sector, an important development is that the Secretary of Agriculture will, for the first time, serve as a member of the Board of Directors of the Agricultural Bank.

The technical administration of the AgBank, SEA and DDF small farmer credit programs will be expanded and strengthened through the addition of 250 field credit agents, 90 clerical/bookkeeping workers and 20 supervisors. Qualified SEA representatives will be placed in AgBank field offices to assist in analyses and processing of loans to small farmers. Approximately 32,500 such loans will be made in three years.

Other elements of the Loan Program include the construction or repair of approximately 137 kilometers of feeder and access roads, the establishment of a new Marketing Research/Farm Management Office within the Secretariat of Agriculture and the establishment of a university upgrading program and a program of vocational training in rural skills.

The AID Sector Loan is designed to respond to the GODR request for assistance in carrying out its agricultural sector development program. Capital and technical assistance will provide resources to continue and to strengthen programs started under previous AID project loans and other international donor agency loans, specifically by supporting new, accelerated or enlarged initiatives as indicated in the sectoral assessment in the following areas: (1) expansion of credit availability to small farmers, distribution of inputs and delivery of technical assistance to utilize such credit most productively, (2) further strengthening the Secretariat of Agriculture to facilitate marketing research and farm management studies and information services, (3) creation of new educational opportunities to provide agricultural vocational skills and to develop a system to produce increasingly competent professional agriculturalists, and (4) expansion of feeder and access road efforts, utilizing labor-intensive methods. These program elements address specific constraints identified in the Sector Assessment.

Problems of land ownership and use are manifold, complex and interwoven with political factors and commitments. It is clear at this point that their resolution must be uniquely Dominican. While the Sector Program contemplates a Governmental examination of policies through a study to arrive at a reasonable solution to land resources problems, USAID tentatively has concluded that the time is not now propitious to deal with this problem by means of external assistance, particularly in the absence of the National Cadastre (to be financed by BID) which should focus the basis for any future actions.

All program elements supported under AID funding are described more fully in the following Section III and in Annex B, Exhibit 2.

D. Relationship of Other Donor Programs

1. IDB

The IDB represents the principal donor to the agricultural sector through its $24.8 million loan in support of the Plan Integrado de Desarrollo Agropecuario (PIDAGRO). The purpose of this project is to bolster capacities of the GODR in several key areas including agricultural reform, research, extension, credit livestock, cadastre and training. Three principal elements of the program meet critical needs of the agricultural sector (credit, cadastre and training).

Over a four year period $17,488,000 in credit resources is planned to go for crops, livestock, agrarian reform and general agricultural loans for approximately 6,000 farmers. The provision of this significant amount of credit, although small in terms of universal needs, is recognized as an important contribution and potentially beneficial to increased production. However, the effectiveness of the credit will be limited, at least in a geographic sence, because credit will reach only a small number of farmers in a specific area (Cibao).

The training element of the PIDAGRO loan ($2.5 million) provides for in-country and overseas training for 1,027 medium level technical personnel. This part of the program could have very positive long-term benefits by providing more governmental services to the rural areas involved.

The Cadastre portion of the program ($2.2 million) will support the work of the Directorate of National Cadastre to map property lines and identify the potential of agricultural production and proper land use by means of environmental and soils data.

Other PIDAGRO activities include support to an Animal Health and Research Center ($7.8 million) and Agrarian Reform Projects ($7.0 million). The program elements described above represent a series of essentially unrelated but important individual projects, covered by one loan, which being area specific, cannot be considered a truly integrated approach in addressing constraints to agricultural development on a national basis. The Project has not targeted on fundamental policy or institutional problems. Its potential for long range impact, then, may be severely limited.

The current status of the IDB PIDAGRO Loan is that $2 million has been disbursed to date. The Fondo para el Desarrollo Agropecuario (FEDA), the newly-created principal implementing agency, is building its staff with personnel seconded principally from other governmental bodies. PIDAGRO's first quarter lending through the AgBank, the principal fiscal agent of PIDAGRO credit funds, totaled $2,743,734 for 566 individual loans with an average size of $4,848. PIDAGRO credit for agricultural production will be disbursed also through DDF and OCD.

The two principal donor programs (AID and IDB) for agricultural credit are viewed as being complementary and mutually supportive. The AID program is different in terms of the target man, loan size, geographic scope and use of credit by commodities (livestock versus food crops) and by groups of farmers. Then too, it should be noted that because of the serious need for agricultural credit by small farmers, the resources of both donors still do not meet small farmer requirements. The AID mechanism of providing credits to groups of farms will enable fiscal agents to disburse an increased credit portoflio in terms of peso totals without overloading their capacity.

The AID Sector Loan provides resources to support activities in marketing research, farming systems, marketing systems, input systems, farmer training and technical training, all of which are supportive of activities of PIDAGRO. The sector wide impact of the AID Loan on GODR budget policy, credit policy, banking policy, professional and sub-professional training and institutional building will help to create an improved development environment which will affect the impact of the IDB PIDAGRO Loan in a positive manner.

Other activities of IDB relating to the agricultural sector are in early stages of implementation or are being considered for possible financing in the future. The IDB has signed a loan for $2.0 million to provide assistance in cooperative marine fisheries and

marketing. Other future activities may include irrigation (Yaque del Norte), telecommunications, feeder roads and vocational education. These are viewed as being complementary to AID's sector-wide assistance to the GODR.

2. United Nations Development Program (UNDP) - FAO

The UNDP program for 1972-76 provided for assistance to the PIDAGRO Project. However, because implementation of the PIDAGRO Project was delayed for several reasons, UNDP continued its ongoing programs and began support to a series of area specific projects.

In the Cibao Valley activities centered on crop production, soil fertility, irrigation and rural administration. An extension of this project funded under the Diversification Fund of the International Coffee Organization will provide for 108 man months of overseas university level scholarships. FAO provides one expert for the Cacao Project in cooperation with SEA and USAID. A FAO project in Veterinary Medicine is terminating in April, 1974. Three technicians are providing technical assistance in a Training and Demonstration project in Health and Animal Production. Animal nutrition problems are being worked on in a molasses feeding project and in a 5 year project funded at $647,000 in Livestock Pasture Development.

There is no duplication between the AID Sector Program and the UNDP/FAO assistance in the Dominican Republic. Complementarity exists between AID and UNDP donor assistance in that the AID Sector Program's institutional and manpower strengthening elements will enable UNDP assistance to be more applicable to achieving development objectives.

3. Interamerican Institute for Agricultural Sciences (IICA)

IICA, a regional institution funded by the Organization of American States (OAS), AID and other sources, is skilled in the areas of agricultural program administration and marketing. If integrated into the Agricultural Program of SEA, then, it could be of substantial significance. While programs of assistance in these areas have not yet been initiated, communications between IICA, USAID and SEA have indicated the possibility of IICA involvement. IICA's participation might involve seminars, training courses and workshops in administration and management aspects of research, extension, marketing, input systems and training programs. IICA has capabilities to provide tech-

nical assistance in the planning and conduct of market surveys, market research and farm information activities. Such participation would complement AID and other donor efforts of assistance to the GODR.

4. International Bank for Reconstruction and Development (IBRD/IDA)

An IDA Cattle credit loan ($5 million), signed in 1971 and administered by the Central Bank, is now being implemented. The loan project provides long-term credit for up to 80% of livestock development sub-projects and requires that a substantial portion of each sub-loan be used for capital improvements. The loan is now 50% dispersed and IDA is now examining the possibility of a follow-on loan of $5 million, which may be approved in 1974.

In 1973, IDA approved a loan of $13 million to finance one-third of the Yaque del Norte project and related irrigation works, in conjunction with the IDB loan project. The IDA is currently examining a project in agro-industry, in addition to the above follow-on loan to livestock development.

Both target groups and delivery systems under IBRD/IDA projects fit the very large farm category or support major investment in infrastructure. The impact of these programs, while affecting the sector as a whole, do not conflict with the proposed AID loan.

5. International Center for Tropical Agriculture (CIAT)

The research linkages between the GODR and CIAT are being established on a firmer basis by building on to past assistance from CIAT in rice production and extension training of Dominicans in Colombia. Visits to CIAT in May 1974 were made by the chief of SEA planning office and the Sub-Secretary of State for Agriculture in charge of research and extension. Regular visits to the D.R. by CIAT rice experts are occurring.

SECTION III - THE PROGRAM: AGRICULTURAL SECTOR LOAN

A. The Loan

1. Purposes

To implement and support major policy changes in the agricultural sector, particularly with regard to the allocation of budgetary, financial and human resources within the sector and to raising the level of the total available resources allocated to the sector, thereby increasing production, rural incomes and rural employment. Within a period of three years the sector program will double the number of small farm units which receive credit and technical assistance and will increase incrementally the total amount of credit resources available to agriculture. Simultaneously the orientation of the AgBank will be shifted toward small/medium borrowers, and commercial banks will assume lending to large scale commercial farms backed by Central Bank rediscounting. A system to deliver agricultural inputs to small farmers will be developed to assure the usefulness of new credit and commensurate technical assistance. Further, the program will improve institutional coordination by strengthening the authority and capability of the Secretariat of State for Agriculture in the sector with regard to credit policy, marketing activities, education, input delivery systems, and rural road construction.

2. Priority of Sector Loan Program

The President of the Dominican Republic, the Secretary of Agriculture, and other ministerial level Dominican officials have made official statements declaring agriculture as the primary sector where greater Dominican resources and external assistance are needed for the country's sustained economic growth and alleviation of its social problems. The loan program will have a measurable effect on the Dominican Republic's capacity to develop its agricultural potential and to foster the achievement of mutually accepted development objectives. The GODR and the USAID Mission assign the highest priority to this loan program. The assignment of this priority by the Government is recognized as valid by the USAID because the sector program represents a major change of emphasis in the allocation of resources which is consistent with the productive potential and AID's concern for less advantaged groups.

3. The Target Group

The sector loan program intends two major types of beneficiaries direct and indirect. The group intended to receive credit, access to inputs, technical assistance, vocational training and employment are the direct recipients. A broader category of people to benefit from the sector program are those who profit from useful market information, more reasonably priced inputs, improved roads, greater access to staple food

commodities, and employment opportunities generated by greatly expanded agricultural credit.

a) Description of Direct Beneficiaries

Although 98% of all Dominican farm units are under 500 tareas (32 hectares) and hence will be eligible for credit under the sector program, the RD$1,000 limit per loan per individual recipient will determine the farm size to which the credit can be applied. For example, at high levels of technology, RD$1,000 will finance about 37 tareas (2.2 ha.) of rice, 74 tareas (4.4 ha.) of corn, 47 tareas (2.9 ha.) of beans, 56 tareas of peanuts, 30 tareas of tomatoes or 76 tareas of sorghum. The RD$1,000 maximum is appropriate for small (under 500 tareas) existing livestock operations where minor management improvements are needed. There is no lower limit on credit under the sector program (except as may be established by the individual economic evaluation of each application).

The target group is, in essence, that part of the 83% of Dominican farm units under five hectares in area which are not associated with formal sources of credit such as IAD and IDECOOP, and do not qualify for, or have not recently used credit under other portions of the AgBank portfolio. There are approximately 377,000 farms in this size category, of which about 60,000 have institutional and formal credit resources. The group also contains 109,000 units which are under 10 tareas (.63 ha.) in size, many of which may be unable to employ credit with expectation of significant economic returns. Eliminating from the target group those who already have access to credit and those unable to use credit, a group of 250,000 farms remains to be served by new credit programs and technical assistance.

To the limit of available resources, the sector loan program seeks to serve the maximum possible number of farm units in this category, selecting, through simple but effective economic evaluation, those units which have potential for increased production and commercial profitability.

Because credit is the major element designed to be made more effective by expanded input supply and technical assistance, the following subborrower criteria are presented to describe the target group.

b) Criteria for Group Subborrowers

Subborrowers must:

(1) Be farming or ranching and own, rent, lease or be otherwise in possession of no more than 32 hectares (500 tareas). Ownership is not required. The subborrower may be a renter or sharecropper; agriculture need not be the sole means of support.

(2) Be engaged in production of commodities destined primarily for domestic consumption.

(3) Be willing to participate in informal groups of farmers for the purpose of receiving credit and to accept legal responsibility for payment of the group loan.

(4) The solicitants may (i) be without collateral, (ii) have poor credit ratings for reasons beyond their control, (iii) be operating farms too small for ordinary financing, and (iv) not be regular clients of credit institutions under other portfolios.

(5) Be willing to accept and apply technical advice from promotors or extension personnel.

c) Criteria for Individual Borrowers

Individual borrowers must:

(1) Be unable to participate in groups by reason of isolation or for cultural or social reasons.

(2) Meet the general criteria outlined above for group borrowers

B. Functional Aspects

1. Credit

a) Credit Objectives and Strategy

The primary objective of the credit program is to provide substantially more credit to small farmers now outside the institutional credit system. To achieve this, a credit strategy has been adopted that will shift the more affluent Agricultural Bank borrowers to commercial credit sources. The funds freed by this step will become available for relending to small farmers. Therefore, the quantity of credit going to small size farms, will be substantially larger than that originating from program resources. This shift will be made possible because of the Government's willingness to establish lower limits on the size of credits

extended to individual farmers by the Agricultural Bank which will oblige the large farmer to obtain his credit elsewhere.

Equally important is that the measures necessary to accommodate this shift in the Agricultural Bank's portfolio, will provide a solid basis for continued, future agricultural credit expansion. This expansion will be based primarily on private credits and, accordingly, provide for a more economic use of Dominican resources. To accommodate the above shift that also provides a basis for long-term credit expansion, the Government has indicated its willingness to introduce a number of further policy measures that include: (a) a more favorable rediscounting rate for agricultural credit, (b) a reorientation of Central Bank resources in favor of agriculture, and (c) the study and consideration of reestablishing an Agricultural Guarantee Loan Fund.

Collectively, this strategy will insure that a larger number of small farmers now outside the credit system will receive credit at reasonable terms while concurrently providing a more rational and sound foundation for a long-term credit expansion in agriculture.

The Agricultural Sector Assessment substantiated that the credit going to agriculture is not rationally distributed. It was determined that less than a fifth (20%) of all Dominican farm units receive any form of institutional credit. (Only 17% or 81,455 of some 455,000 farm units of the country, indicated they received agricultural credit in 1973.) Furthermore, examination revealed that a disproportionate share of government institutional credit went to large farmers, at the expense of the smaller farmers, and that most of these more affluent recipients could be serviced by commercial credit sources. The credit program was devised to address this inbalance by directly assisting the small farmer.

b) Functional Elements of the Credit Program

The credit program, involving some $18.1 million of the program's total resources, contains three basic elements. They are Small Farmer Credit, Input/Marketing Credit and New Credit Policies. While the credit inputs are budgeted in set amounts by element, and in turn, by implementing agency, full operational flexibility has been incorporated into the program. Subject to AID approval, credit funds may flow freely between different credit elements as well as between different implementing agencies without limitation except for the following. To insure that the major portion of the program's credit funds go to small

farmer credit, a ceiling of $8.0 million has been placed on the Inputs/ Marketing Credit element subject, of course, to periodic reviews. As regards the entire program, the funds budgeted for different program activities such as Credit, Feeder Roads and Human Resources may be changed up to 20% subject to AID approval.

(1) Small Farmer Credit

$12.0 mil. of project resources are budgeted for small farmer credit. An additional $13.6 mil. of Agricultural Bank credit funds now going to large farmers, will be shifted to small farm credit during the loan's disbursement period.

Of the $12.0 mil., $8.0 mil. is to be channeled through the Agricultural Bank/SEA Supervised Credit organizations,1/ $2.0 mil. is to be handled by the Dominican Development Foundation and $2.0 mil. disbursed through SEA commercial bank custodial accounts (see Section III B 1. d). The group lending technique utilized so effectively by the Dominican Development Foundation will be used by all implementing agencies responsible for small farmer credit to the maximum extent possible. The SEA custodial accounts will follow the pattern set by the Dominican Development Foundation in utilizing this system of disbursement.

The funds can be used for crop production (sugar, coffee, cacao and tobacco excluded), small scale farm improvement, acquisition of small equipment items and the purchase of improved plant materials and stock. There will be a $1,000 ceiling on size of subloan funded with direct program resources. Duration will depend on purpose. For crop production, loan duration normally will be 12 months or less.

As Table I illustrates, it is the small farmer, i.e., with a farming unit of 500 tareas (76 acres) and below, that has not been the major recipients of institutional credit, particularly that originating from government credit institutions. The consensus of the Agricultural Sector Assessment is that this group should become the

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1/ Agricultural Bank is responsible for the fiscal administration of this amount.

Recipients of Institutional Agriculture Credit in the Dominican Republic - Before and After

Table I

Farm Category	No. Farms	No. farm units with present institutional sources of credit	No. farm units to receive credit as a result of (a) credit policy changes (b) program resources
Large Multi-Family 5,001 Tareas and up	475	475 AgBank/Commercial	475 Commercial
Medium Multi-family 501-5,000 Tareas	7,775	7,775 AgBank/Commercial	7,775 Commercial
Small multi-family 80-500 Tareas	69,100	37,000 - AgBank - IDECOOP - DDF - Other Formal	
Family 21-79 Tareas	141,140		
Sub-Family 1-20 Tareas	236,510	30,000 - AgBank - DDF - SEA Supervised Credit - IDECOOP	101,312* - AgBank - DDF - SEA Supervised Credit - IDECOOP
	455.000	75,250	109.562*

* Includes a 34,312 increment of small farmer recipients as a direct result of the AID Sector Loan.

major beneficiaries of the government's credit programs. The intensive review has indicated that the program's resource should be focused on those farm units under 80 tareas which constitute the target farm unit.

To reach the largest practical number of target farm units, $12.0 million is budgeted for small farm production credit at an estimated $350 average per subloan.[2/] Accordingly, some 28,500 additional farm units will receive credit through the Agricultural Bank, SEA Supervised Credit and Dominican Development Foundation delivery systems during the loan's disbursement period. An additional 4,000 farm units will be benefitted directly through the SEA -- commercial bank custodial account delivery system, based on a slightly larger average subloan figure of $500 per beneficiary.

The sum total of these two figures is substantially lower than the estimated number of recipients set forth in the USAID's Agricultural Sector Assessment. The intensive review has revealed the prior assessment figure (80,000) based on an average size subloan of $200 per subloan was overstated. Further analysis revealed that the lowest two categories of Agricultural Bank lending for 1973 provided an average subloan very close to our $350 target figure. Empirical data, prior experience and current price trends, indicate that a $350 average subloan figure is reasonable.

To monitor subloan size, the USAID will review the lending performance of each implementing agency at the time a new advance is requested, to assure the maximum practical compliance with loan objectives. While a reasonably low subloan figure is desirable to benefit the largest possible number of farm units, the program must be responsive to realistic farmer needs. Therefore, some adjustment in the $350 target figure may be necessary during the loan's implementation.

Additional to the above direct project inputs, $13.6 mil. of Agricultural Bank sublending will be shifted to small farm

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2/ Hereafter the term subloan relates to final number of credit beneficiaries. Therefore, if one group loan benefits 10 individual farm units, the number of subloans is reflected as 10.

credits. A maximum lending limit by the Agricultural Bank at $10,000 for production credit and $20,000 for livestock is programmed over a three-year period. Assuming a reasonable average size subloan of $7,500, 1,812 additional small fatmers can be expected to benefit from this shift.

The results in terms of beneficiaries and amounts of credit are summarized below.

Table II Small Farmer Credit Summary

Direct Project Resources:	Amount	Number of Subloans
AID and GODR (50/50) (Custodial Accounts)	$12 mil.	28,500 4,000 32,500
Non-Project Resources: AgBank Shift	$13.6 mil.	1,812
	$25.6 mil.	34,312

(2) Input/Marketing Credit

$6.1 mil. of project credit funds is budgeted for agricultural inputs and improved food crop distribution and marketing. $1.6 mil. of the $6.1 mil. is budgeted for the stocking and distribution of agricultural inputs through IDECOOP (Instituto de Desarrollo y Credito Cooperativo). $400,000 is budgeted for the stocking and distribution of agricultural inputs through SEA extension and research stations to reach areas and users not serviced by private dealers or cooperatives. The remainder, $4.1 mil., is to be disbursed through the Central Bank's FIDE[3/] system for agricultural inputs and improved food crop distribution and marketing. The principal agricultural inputs to be financed will be improved seeds and plant materials, fertilizers and agro-chemicals and to a limited degree, farm machinery and equipment.

3/ Fondo de Inversiones para el Desarrollo Económico

USAID anticipates discussions with SEA to determine if AID/W assistance in locating fertilizers for purchase for the account of the GODR would be desirable in accordance with STATE 111573 of May 28, 1974. On the marketing side, small agricultural processing, distribution or storage projects will be financed.

Serious weaknesses exist in the marketing system for supplying inputs and distributing outputs. While much of the failure of the marketing system is due to the lack of market information and skills, lack of private and public infrastructure, and inefficient marketing procedures and methods, credit for marketing enterprises of the input/output delivery system is also lacking. Credit under the Sector Program will be made available to merchants, entreprenuers, processors, wholesalers, and transporters, for working capital where justified, to improve the marketing system. This credit will be used for improving the infrastructure, which is lacking in many instances, to adequately move agricultural inputs and production to end users. Credit would be employed for such improvements as construction of warehouses, produce collection centers, packing houses, packing materials, grading sheds, grading equipment, refrigerated storage, freezing facilities, refrigerated trucks, and related equipment and supplies. Provision of technical assistance by SEA or private enterprises would be provided to assist in the efficient planning and use of such infrastructural elements of the marketing system. SEA in conjunction with FIDE personnel will be responsible for determining the criteria for the use of the credit.

Improvement of the input/output delivery system will reduce uncertainties for producers, processors, wholesalers, retailers and consumers alike. Efficiencies in the system would result in the form of greater competition, higher volumes and lower but equitable price margins for products. Credit supplied by the program would enable an expansion of the use of production contracts with individual or groups of farmers. Improvements of the infrastructure using labor intensive operations would provide additional employment opportunities in rural areas.

Table III Input/Marketing Credit Summary

Direct Project Resources:

AID and GODR (50/50)	$4.1 mil.	via FIDE system
" " " "	1.6 "	" IDECOOP
" " " "	.4 "	" SEA Extension
	$6.1 mil.	

(3) New Credit Policies

(i) Agricultural Bank Portfolio Shift

To provide $13.6 mil. of additional credit to small farmers, the Government has proposed to direct Agricultural Bank lending to small farmers by eliminating subloans larger than $10,000 for crop production and $20,000 for livestock over a phased time period. The transition is expected to be as follows:

Table IV AgBank Portfolio Shift[4/]

Non Project Resources	Amounts Shifted	No. of Subloans
Year 1 $50,000 loan limit	$ 7.7 mil.	1,026
" 2 $25,000 " "	2.0 "	266
" 3 $10,000 " "	3.9 "	520
	$13.6 "	1,812

The impact of this change will be to provide credit to an additional 1,800 small farmers over the loan's disbursement period. The underlying rationale for this measure is that examination of the Agricultural Bank's lending record revealed a substantial proportion of funds going to large farmers who were treated as prime borrowers.[5/] The adoption of the recommended measures will result in this group being shifted to commercial credit sources.

4/ By the third year, the proportion of AgBank lending going to livestock loans above $10,000 is expected to be sufficiently small that a total shift to loans below $10,000 is reflected. The larger livestock loans can be serviced readily by the commercial banks.

5/ AgBank 1973 lending above $10,000 was as follows:

	No. of Loans	Amount
$10,000 - $20,000	234	$ 3,091,202
20,001 - 50,000	87	2,739,140
50,000 - up	55	7,753,065
	376	$13,583,567
versus all others (i.e., up to $10,000)	39,370	$29,770,490

(ii) Additional New Credit Policies

The following policy measures, included in the Government's formal loan request, would insure that at least $13.6 million of agricultural credit from principally private sources would be made available to those clients shifted away from the Agricultural Bank. This clientele will be the large, more affluent farmer who has sufficient assets to qualify for credit from the commercial banks.

The first policy measure is the Government's representation that the Central Bank will orient a larger portion of its resources to agricultural credit for medium and large farmers. This step is critical in order to accommodate those producers displaced by the shift in the Agricultural Bank portfolio. If this group of large scale producers were not accommodated, production would fall at a time when the economy can ill afford it. The Agricultural Assessment concluded that the Central Bank's lending through FIDE to agriculture was relatively small (approx. 20%) in recent years and that the majority of this credit originated from the World Banks livestock improvement loan.6/

The second measure which in part will facilitate the above but, more importantly, serve as a broad-gauged incentive to increased agricultural lending with private resources, is the Government's representation that the Central Bank will lower the discount rate on agricultural lending below that on commercial and industrial paper. With the present commercial/industrial rate at 5 1/2%, we expect the agricultural rate to be in the 4 1/2-5% range. Given the more or less static interest rate structure in the Dominican Republic, this step will provide a positive financial incentive to the commercial banks to increase agricultural lending. In terms of the Government's posture over the last several years on agriculture, this measure in combination with that cited above represent a good faith demonstration of the Government's commitment to agriculture.

The third measure is the Government's representation to study, in conjunction with AID, the most practical means of

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6/ Of some 713 loans from 1966 to 1973 by FIDE, 108 were for agriculture. In the years 1972 and 1973 of the total lending approved by FIDE, 19 and 22.5% respectively were for agriculture which consisted primarily of World Bank credits.

establishing and operating a system for insuring or guaranteeing private commercial bank investment in priority agricultural areas. The USAID welcomes this as a realistic method to ensure the best result rather than attempt to rejuvenate a Guaranteed Loan Fund that legally exists but never functioned properly during the Trujillo era. The Agricultural Sector Assessment called for the operation of such fund for a number of valid reasons, including lack of adequate or acceptable collateral by a large number of agricultural producers. Also, a guarantee fund is an effective instrument for encouraging specific crops or discouraging others through its selective application.

The issue of increased interest rates on agricultural lending, particularly that of small farmer credit to reflect greater overhead, costs and risks, was raised and discussed with the Government. The GODR's position is that interest rates at the Agricultural Bank should not be raised at this time for the following reasons.

(a) An increase in interest rates for small farm credit should be part of a much broader series of interest rate adjustments throughout the economy.

(b) An increase in the rate of interest charged small farmers under this program would be unfair to the latter since others, including the large farmers shifted to other credit sources, can obtain credit elsewhere at a lesser rate than would result from any significant increase (2-4 points) in the Agricultural Bank rate. (The Agricultural Bank's current rate is 8%. The rate charged by banks utilizing FIDE credits is 9%.)

(c) While the Agricultural Bank lending rate is 8%, closing fees up to 2 points are normally charged. Therefore, the difference is not as great as it would first appear.

(d) The Government's representation to provide a lower discount rate on agricultural lending than applied to commercial and industrial paper, will have a similar effect in terms of financial incentive to lending institutions.

Given the above, while perhaps not ideal but realistic in terms of local conditions, the USAID's judgment is that we should not press for, or require at this time, an increase in interest rates in the Sector Loan program. However, the USAID will

Table V

CREDIT PROGRAM FINANCIAL SUMMARY

Mobilization of Agricultural Credits

Credit Program Elements		Program Resources	Non-Program Resources	Total
I. Small Farmer Credit		$12.0 mil.	$13.6 mil.	$25.6 mil.
AgBank	$5.0 mil.			
SEA Supervised Credit	3.0 "			
SEA Custodial Accounts	2.0 "			
DDF	2.0 "			
II. Inputs/Marketing Credit		6.1 "		6.1 "
FIDE	4.1 "			
IDECOOP	1.6 "			
SEA Extension	.4 "			
III. (a) AgBank Portfolio Shift		-	(13.6 mil.)*	(13.6 mil.)*
(b) Additional Credit Policies		-	13.6 " **	13.6 " **
		$18.1	$27.2 "	$45.3 "

* Included in Small Farmer Credit above.

** Minimum.

a continuing effort to encourage the Government to address this question in greater depth during the loan implementation period.

Summary

Some 45.3 million is expected to be mobilized into agricultural credit as a result of the program's credit strategy. This is based on an AID input of $12.0 million. Table V below summarizes this credit mobilization by individual program element. While this amount of credit did not originate from direct program resources, this credit mobilization is the cummulative result of all credit measures planned under the program. Furthermore, some 34,312 farmers, predominantly those who are not now recipients of institutional credit, will benefit from the program.

c) Micro-Economic Analysis of Production

Credit in one form or another represents approximately 75 percent of the loan resources which are intended for assisting small farmers to increase their production of food crops. It is anticipated that credit may be used by farmers to cover many items of the costs of production. In some cases these uses may not be elements of a cultural package which increases production. For example, plowing of land must be accomplished when a low level of technology is employed, as well as when a higher level is used. Other cultural operations likewise are common to both traditional as well as improved methods, i.e., planting, irrigating, weeding, harvesting, etc. In most cases these operations require the same amount of labor/time or slightly more, which may be carried out by unemployed or underemployed family members with no additional cash outlay.

To the extent that farmers will improve their technological methods of culture of rice, beans, peanuts, vegetables or other crops, the required inputs such as fertilizer, insecticides, herbicides and seed for new varieties usually represent the only out-of-pocket costs that are additional to those of current methods of growing these crops. The additional inputs of improved technology are the only elements of a package that are measurable in terms of economic effectiveness.

The methodology employed in this micro-economic analysis was to establish yield, additional input costs and additional output values corresponding to one or more improved technical packages for

five principal crops and to measure the economic benefits expected from these improved technological packages against current methods of growing these five crops. Marginal benefit/cost ratios7/ were determined for each, employing partial budgetary economic analysis procedures.

Data was gathered from agricultural officers of SEA, research stations, agri-business firms and other sources regarding yields from traditional practices and improved practices as developed to date. Due to lack of information regarding the total costs of production of the many crops and the variability which exists in computing these costs from region to region, total production costs for these crops were not able to be determined with accuracy. The methodology employed in the analysis, therefore, was to determine the level of additional benefits that could be expected from additional inputs of one or more improved practices compared to the current or traditional cultural methods. While much research needs to be done to perfect the cultural methods of the various crops to make them more efficient and economic, the analysis of the existing information has shown that simple improvements can be made in the cultural practices at minimum costs to further maximize profit for the small farmer. The economic aspects of the research are expected to be developed by the new economic planning unit of the SEA. Such work will enable true costs of production data for these crops to be determined on a regional basis which will serve as a guide for perfecting technical recommendations to make them even more economic.

Rice and beans were included in the analysis because they represent crops which will receive the greatest emphasis in the program, based upon the strategy and production targets established in the AID/GODR Agricultural Sector Assessments. Peanuts were included because this crop is expected to meet half of the edible oil requirements by 1980. Production of vegetables is expected to double by 1980.

7/ B/C ratio = $\frac{\text{Added value minus reduced value}}{\text{Added costs minus reduced costs}}$

In all calculations, reduced value and reduced costs were assumed to be nil. Assumptions also were made that costs of inputs and values of production would remain constant or increase (as a result of inflation) at a rate that would not be significantly disproportional.

Tomatoes and onions were selected for analysis because they represent two important, high value crops within the vegetable group. Dairy and poultry products were not selected because it is anticipated that agribusiness enterprise will provide all capital investment requirements for increases in production of these products and not the small farmer

Rice

For rice an economic analysis was made with three levels of nitrogen fertilizer application compared to tradition methods of rice culture employing no fertilizer. The national average yield for rice is 2,500 Kg./ha., some of which is derived from improved practices, therefore, the comparative yield base of 2,500 kg./ha. without fertilizer has been considered very conservative. Table I indicates that from an additional investment of $22.61 for 40 kilograms of actual nitrogen per hectare applied to a new variety (Juma 57), an additional income of $256.17 may be derived compared to that of the traditional package of rice cultivation. The B/C ratio derived from use of seed of a new variety (which costs the same as the old seed) and a low level of nitrogen fertilizer is more than 18 to 1. In the case of a medium level of nitrogen fertilizer, the increased income over traditional methods is $340.61 resulting from an investment of $45.83, or a B/C ratio of more than 10 to 1. Maximization of profit occurs when the highest level of nitrogen application is applied. This level also results in the maximum yield, although the B/C ratio is reduced slightly. An intelligent and knowledgeable farmer should opt for this method of rice culture if the necessary resources are available to him.

The analysis has been made assuming that costs of herbicides may be eliminated by the farmer's own hand labor for manual weeding (estimated at approximately 100 man-hours per hectare). Costs of insecticides were not included because of the variability which exists from region to region. If attack of insects on the rice crop did occur, whether on traditional or improved methods as described, the cost of full protection for the crop would not exceed $35 per hectare. There appears to be adequate margin between the value of the outputs and the costs of the insecticides in all cases cited, to provide for these costs of protecting the crop if or when necessary.

The analysis shows clearly that significant increases in yield are possible through use of new varieties and low to high levels of nitrogen fertilizer application. The technological package, although not perfect to a high degree, does exist and can be applied by small

farmers for increasing rice production. What has become very apparent to foreign observers is that considerable improvements can be made in cultural practices that do not require significant additional input costs. Because of the newness of rice as a crop in the Dominican Republic, many of the basic principles of rice culture, such as proper land preparation, water management, timing of fertilizer application and planting and handling after harvest, are not fully understood by most rice farmers. There is an apparent need for a concerted effort in farmer education regarding modern rice technology to accompany the use of credit for purchase of inputs.

Beans

The technical package for beans as developed to date consists of the use of virus free seed of the variety Pompadour Large and the application of 290 kilograms of 16-20-10 fertilizer. Research results and farmer experience has shown that beans are most productive when the above package is grown on irrigated lands in the dry season following rice.

The analysis (Table II) shows that when improved technology is employed, yields are more than 150 percent of traditional yields of 860 kg./ha. From an investment of $45.24 in fertilizer, an increased income of $184 results over the traditional output value of $374 per hectare of a B/C ratio of 4.1 to 1. The use of virus free seed is not considered as an additional input cost because such seed will be available to farmers at the same price as seed which he now uses for planting.

The analysis shows that improved culture of beans although perhaps not as profitable as well grown rice, provides an opportunity for increasing small farmer income with a margin of profit considered adequate. The assumption is made that when the B/C ratio exceeds 2.5 to 1., adequate benefits are possible, within the existing price relationships of inputs and outputs, to motivate the farmer to apply the technology. While the traditional farmer usually does not undertake even a simple mathematical analysis to determine his profitability from the use of improved agricultural inputs, he will make rational decisions regarding their use. The more dramatic the results, the more likely the farmer will accept the use of the improved package of technology. The B/C ratio of 4.1 to 1 is considered to be adequately positive to bring about wide scale acceptance of improved bean cultural methods in the Dominican Republic. The technical package must be supported, of course,

by a strong delivery system of providing inputs, such as seed and fertilizer, information regarding the technology of the improved practices, credit, and marketing assistance.

Peanuts

The culture of this crop has been pursued by small farmers for many years. Edible oil processing firms have been instrumental in its promotion by their programs of providing credit, technical assistance and services of various kinds to farmers. Traditional yields are approximately 793 kg./ha. Those farmers who have adopted the improved practice of fertilizer application (at the rate of 25 pounds/tarea of 12-24-12) have achieved average yields of 1,082 kg./ha. As seen from the analysis on Table III, an increased income of $151.94 results from an additional input cost of $29.88/hectare for fertilizer. While this Benefit/Cost ratio is rather marginal (1.74 to 1), this low level of technology has been widely accepted by most peanut farmers. It is apparent from the analysis that if the famers would apply only 10 pounds/tarea more of fertilizer, they could achieve yields of 2,164 kg./ha.

A Benefit/Cost ratio of 5.9 to 1 results from the application of 253 kg./ha. of 12-24-12 fertilizer. The increased income over traditional practices is approximately $247 per hectare.

There appears to be adequate incentive for most farmers to change their practice of applying a low level of fertilizer to that of a higher level. By applying only about one third more fertilizer, they could more than double again their yields and more than quadruple their increased incomes over the low technology model. What apparently prevents this from happening within the present system is the lack of widespread knowledge of the potentials for increasing production and the lack of availability of credit for the increased input needs. The loan program would make available a part of the credit resources as well as the delivery system necessary to achieve the potential of increasing yields suggested in the analysis.

Tomatoes

The production of tomatoes for processing into paste, sauces and catsup has been promoted by the agri-business sector. Small farmers who have participated in contract purchase programs of the tomato processing firms have adopted the current practice of applying approximately 50#/tarea of 10-20-10 fertilizer with average yields of about 30 cwt./tarea (21.6 tons/hectare). As seen from the analysis (Table IV),

the achieved yield of more than 21 tons at a price of 1 1/2 cents per pound provides an output value of $714/ha. Experimental trials at research stations and in farmers' yields have shown that when a higher level of fertilizer is applied (125#/tarea at a cost of approximately $131), the yield increases to more than 39 tons/hectare with an additional income of $595 resulting from the additional $79 worth of fertilizer (a F/C ratio of 7.57 to 1). This is clearly economic and technically capable of achievement.

The case for table tomatoes is even more dramatic, especially if prices of this perishable product are favorable. The current practices of most farmers growing tomatoes for fresh market consumption is to apply 50#/tarea of 10-20-10 fertilizer. Their average yields are about half that of processing tomatoes (15 cwt/tarea or 10.8 tons per hectare). Experience of some farmers has shown that when additional fertilizer is applied in three applications, yields with such improved varieties as Manalucie, Manapal and Ace Royal increased to approximately 50 tons per hectare. Since the price range of tomatoes is extremely variable depending upon the supply and demand situation, it is extremely difficult to project anticipated benefits. Prices may range in the peak season of production from two to four dollars/cwt. In periods of relative scarcity, prices may increase to 10 dollars/cwt.

What is obvious from the analysis is that fertilizer costs, as one of the elements of the total cost of production, is very minor in relation to the value of the output. Tomatoes can be highly productive with proper levels of fertilizers. There is no reason that adequate fertilizer should not be used. Labor for harvesting, grading, packing and transporting the crop, no doubt, become significant cost items in a package of improved technology. Marketing of an over abundance of tomatoes in the peak season of production is a serious problem that reflects itself back to the farm in the form of low prices.

Onions

This crop is one of the high value vegetables that offer income increasing opportunities for small farmers. Current methods of culture employ the use of about 80 pounds per tarea of 10-20-10 fertilizer on the variety Red Criole. Cultivation is of an intensive type using irrigation and a high labor input. The Red Criole variety used at present is not completely satisfactory since the quality of the bulbs produced is low.

An improved technology of simply changing varieties with slight improvements in the current cultural methods is considered to be the best package of technology for increasing farmer income with onions. The use of seed of the variety Red Granex Hybrid is considered an adequate improvement to increase the percentage of high quality bulbs and to provide significant increases in production. This variety has high consumer acceptance.

The analysis of current methods of production (Table V) shows that an input of $22/ha. for seed and $89/hectare of fertilizer produces a crop valued at $3,065 per hectare. By changing the variety to Red Granex Hybrid and applying more fertilizer, an added cost of $90 produces an added value of $1,731 per hectare (B/C ratio of 19 to 1). With a higher level of technology, an added cost of $166 provides an added value of $2,411 per hectare (B/C ratio of 14.5 to 1). These two improved technical packages which are highly profitable, are considered to be easily acceptable by present onion growers, providing that the high cost seed of Red Granex Hybrid ($40 per pound) is imported and made available to them along with fertilizer under credit arrangements.

Conclusions

The examples cited indicate clearly that improved technology and accompanying inputs representing added costs over traditional methods of culture, can provide significant added value to the production of rice, beans, peanuts, tomatoes and onions. Other crops which have not been included in the analysis would most likely show similar income potential if improved technological packages were developed and employed by farmers.

The examples cited are considered adequately dramatic to motivate farmers in acceptance of the technology if they are made aware of the economic potentials. If the farmer can be shown that results from the use of a better package are sufficient to offset such risks as possible bad weather, possible insect or disease attack, poor market prices, etc., he should choose to employ a higher level of technology than he currently uses.

The role of the delivery system of providing information, technical guidance, credit and assistance in obtaining needed inputs is vital in helping the farmer make his decisions regarding adoption of more modern methods. The farmer will be influenced by his past experiences, his

observation of operations of other farmers, the knowledge that he will acquire through observation and participation in demonstrations, field days, training courses and other communication media. Providing that agricultural inputs are within his reach at reasonable prices through credit arrangements, the small farmer will often take the opportunity to improve his economic well-being, especially if the potentials for substantial reward appear to be high and the risks low. His participation as a member of a group of farmers receiving credit and technical assistance provides him some degree of security in adopting newer and better agricultural methods.

ECONOMIC ANALYSIS OF RICE PRODUCTION

(Traditional vs Three Levels of Nitrogen with Improved Variety - Juma 57)

Level of Tech.	Yield Kg/Hect.	Cost of Inputs Hect.	$0211/kg Value of Output	Increased Income	Marginal B/C Ratio
Traditional variety and cultural practices	2500 (rough) 1625 (milled rice)	0	$ 342.87 (rough)	0	0
Improved variety and low nitrogen	4441 (rough) 2886.5 (m.rice)	$22.61	$ 609.05 (rough)	$256.17	11.3/1
Improved variety and medium nitrogen	4656 (rough 3026 (m.rice)	$45.23	$ 683.48 (rough)	$340.61	7.5/1
Improved variety and hgih nitrogen	5557 (rough 3612.05 (m.rice)	$67.84	$ 762.13 (rough)	$419.21	6.2/1

Low Nitrogen = 50 Kg. N per ha = 190 Kg. Ammonium Sulphate (21%) = $22.61

Medium Nitrogen = 80 Kg. N per ha = 380 Kg. Ammonium Sulphate (21%) = $45.23

High Nitrogen = 120 Kg. N per ha = 570 Kg. Ammonium Sulphate (21%) = $67.84

Price of Ammonium Sulphate 21% = $108 per short ton

Price of Milled Rice = $9.60/cwt = $0.21 per Kg.

Milling Factor - rough to milled rice = 65%

Table I

Table II

ECONOMIC ANALYSIS OF BEAN TECHNICAL PACKAGE 1/

(grown on irrigated land in dry season following rice)

Level of Intensity	Yield in Kg/ha.	Cost of Inputs/ha.	Value of Outputs/ha.	Increased Income/ha.	Marginal B/C Ratio
Traditional Practice	860		$374.00 2/		
Improved Technology	1,306	$45.24 3/	$558.10 2/	$184.00	4.1/1

1/ Basic data from Agriculture Sector Assessment.

2/ Value of beans = $19.75/cwt or 43.5¢/Kg.

3/ Fertilizer applied at 290 Kg. of 16-20-10/ha. at cost of 15.6¢/Kg. or $45.24/ha.

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Table III

ECONOMIC ANALYSIS OF PEANUT PRODUCTION

(Traditional vs. two improved levels of technology)

Level of Tech.	Yield Kg/Hec.	Fertilizer Use	Cost of Fertilizer	Value of Output	Increased Income	Marginal B/C Ratio
Traditional	793.56	-0-	-0-	$142.84/Hect.	-0-	-0-
Low Technology	1,082.12	181 Kg./ha.	$29.81/ha.	$194.78/ha.	$51.94	1.74/1
Improved Technology	2,164.25	253 Kg./ha.	$41.73/ha.	$389.57/ha.	$246.73	5.91/1

Fertilizer:

Type: 12-24-12, 8-24-8

Price: $149.75/2000# = $0.075/lb.

Amount used: 25#/tarea = 397.5#/Ha. for a yield of 150#/tarea = 1,082.12 Kg/Ha.

35#/tarea = 556.5#/Ha. for a yield of 300#/tarea = 2,164.25 Ka/Ha.

Fertilizer Price: 16.5 ¢/Kg.

Peanut price: 18.0 cents/Kg.

Table IV

ECONOMIC ANALYSIS OF TOMATO PRODUCTION

(Processing and Fresh Market - Comparing current methods and improved methods)

Level of Technology	Yield Kg/Ha.	Cost of Fertilizer 3/	Value of Output/Ha.	Additional Income	Marginal B/C Ratio for Fert.
Current Practice					
Processing Tomatoes	21,642	$52.47/Ha.	$ 714.20 1/	-	-
Table Tomatoes	10,821	52.47/ha.	Low Range: $ 800.77 2/	-	-
			High Range: $2,380.67 2/	-	-
Improved Technology					
Processing Tomatoes	39,677	$131.17 added cost $ 78.70	1,309.37	595.17	4.53/1
					7.6/1
Table Tomatoes	50,000	131.17 added cost 78.70	Low Range: $ 3,700.00 High Range: $11,000.00	Low Range: 2,899.23 High Range: 8,619.33	36/1 108/1

1/ Processing tomatoes valued at $1.50/cwt.
2/ Table tomatoes valued at $2-$4/cwt. (low range) - $10/cwt (high range)
3/ Fertilizer costs: $149.75/short ton (12-24-12 analysis); $131.25/short ton (10-20-10 analysis)

Table V

ECONOMIC ANALYSIS OF ONION PRODUCTION

(Traditional vs. two Improved Practices)

Level of Technology	Yield Kg./Hect.	Cost of Input /Ha.	Value of Input 1/	Additional Income	Marginal BC/Ratio
Traditional Practice	18,035	Seed: $22.57 2/ Fert.: $89.04 3/ $111.61	$3,065.95	-0-	-0-
Improved Practice (1)	25,249	Seed: $90.79 2/ Fert.: $111.30 3/ $202.09 Added Cost: $90.48	$4,797.41	$1,731.46	19.14/1
Improved Practice (2)	28,856	Seed: $ 90.79 2/ Fert.: $139.13 3/ Urea: $ 47.70 $277.62 Added Cost: $166.01	$5,482.75	$2,416.80	14.56/1

1/ Average price of onions = $0.17/Kg.

2/ Seed Price: Red Creole: $10 per pound - one pound per 7 tareas
Red Granex Hybr. $40 per pound - one pound per 7 tareas

3/ Fertilizer Price: 10-20-10 = $131.25 per short ton
Urea (46% N) = $300/ton.

d) Implementing Agencies

The implementing agencies and techniques which will be used to deliver the program's credit elements are described below. In some cases a single agency is responsible for more than one credit element. For example, SEA's extension program is responsible for both small farmer production credit and the pilot production inputs credit program.

(1) The Agricultural Bank (AgBank): An autonomous government institution created to increase agricultural production through loans to farmers and agriculturally oriented businesses.

The AgBank has 20 branches located throughout the country, with the central office located in the capital. Total employees number 901, of which 78 are classified as professionally trained in some phase of agriculture, such as agronomy, veterinary medicine, extension, and animal husbandry. The AgBank works in conjunction with overall agricultural production goals of SEA, the Agricultural Reform Institute and IDECOOP and has participating loan programs with all three agencies. In addition the AgBank administers various foreign donor loan programs with IDB and AID.

Historical Weakness of the Institution

The Mission has reviewed, carefully and at length, the operations, activities and philosophy of the AgBank prevailing in the recent past. The AgBank has had a number of sponsors and supporters of various credit programs. IDB, AID, and others have provided technical assistance and funds to the Bank. The foreign advisors involved were not always consistent and the support was not always complementary. However, a general pattern of observations emerges with regard to changes and improvements which were recommended to be adopted by the institution. The following sections deal with the nature of the conclusions and recommendations for improvement and what has been or is being done about them.

The AgBank is in Serious Need of Reorganization

This observation dates from the mid-sixties and has been repeated on numerous occasions since that time. For the past two years, the AgBank has used the advisory services of Arthur D. Little, Inc., in an attempt to formulate the form of reorganization to be adopted. There are visible accomplishments in this field. As

a result of ADL's advisory effort, two new offices have been established at the national level, one for personnel administration and one for programming and management information. The system for automatic data processing is being upgraded. This task should be accomplished by August 1974, enabling the Bank to handle a greatly increased account load, according to IDB officials.

At the branch level, reorganization has begun and will be completed by the end of CY 1974. This reorganization entails: (a) improved use of branch staff by training more office personnel in field operations and employing them as promoters; (b) the use of SEA agents as credit agents and accepting and processing applications generated by them; (c) giving greater attention to farm planning and financing of total farm operations, not simply one crop per loan; and (d) giving the branch full approval authority. These measures have cut the period required for loan approval to 10-12 days in the four branches which have been reorganized to date and have boosted by some 20% the affected branches' capacity to move credit with existing staff. The supervisor of the reorganization estimates that the number of new agents contemplated in the sector program, identified further on, will boost lending capacity by at least another 40%.

The AgBank Should Tighten up its Lending Criteria and Collection Procedures

This is a long-standing recommendation based on the observations that the number of bad debts carried on the Bank's books was growing steadily and that collection efforts were weak and inadequate. Both points were generally true. However, in the last year the AgBank has continued to strengthen its collection efforts and has reduced its bad debt level by RD$2.6 million, from RD$25,264,000 to RD$22,667,000.[1/] In addition, there are some factors which must be taken into account when considering the bad-debt level. First, it is cumulative and includes all bad debts dating from the establishment of the Bank in 1945. Though unusual in U.S. terms, the practice of not writing off bad debts prevails in the Dominican Republic regardless of the potential for collection. Moreover, the RD$23,077,299 reserve for doubtful loans is more than sufficient to cover the cumulative total of past-due account.

Secondly, much of the criticism leveled at the delinquency/default rate is questionable. For example, in the very small-loan category (RD$300 and below) much of the historical problem was that such loans were made under emergency conditions when there was no

1/ Peat, Marwick, Mitchell & Co. audit examination of Dec. 31, 1973.

capacity to repay. The Bank has initiated a program for rehabilitation of borrowers with poor repayment records which has reduced the bad debt level. One criticism aimed at the AID Loan 517-L-010 portfolio was that of heavy delinquency. Upon close examination, however, this observation proved mistaken. After revolving nearly five times, the total collections of principal were 95% of the total loaned.

The AgBank's Financial Situation Should be Improved

This recommendation centers on (a) AgBank assets being held as Government bonds and (b) large unused cash balances. The AgBank holds RD$46.4 million in various bond issues, down nearly RD$2.0 million from December 31, 1973. However, it has been permitted to borrow against these bonds to a certain extent in the case of an RD$33.0 million block. Other bond holdings are short-term and reasonably high-yielding. These are reasonable assets for the Bank.

The past criticism of unused cash assets (RD$17.0 million as of 12/31/72 has limited validity today. First, the cash balance is taken at year's end after the Bank has received heavy repayments and before the crop season begins in earnest. Furthermore, the Bank had reduced this balance to RD$11.9 million as of 12/31/73 and its new operational procedures promise a similar reduction this year. Second, the Bank maintains separate portfolios for accounts of various donor loans which place restrictions on the use of the funds they contain. A large portion of these funds must be held in cash, not in interest-bearing accounts as would normally be the case with subloans which have been approved but not disbursed.2/

A related recommendation that the AgBank divest itself or non-banking functions, such as the commodity price stabilization function, has been successully accomplished.

AgBank Personnel are Insufficient in Number and Quality

This criticism has been acknowledged by the Bank; a personnel evaluation has begun under a new office for personnel administration established for this purpose. The reorganization described above makes better use of existing personnel and the Bank is committed to hire new and better prepared personnel for the sector loan. In this effort, a GODR subsidy for new salaries will be made available to the AgBank. The problem of insufficient numbers has been ameliorated by utilizing SEA personnel in the lending process.

2/ Peat, Marwick, Mitchell & Co. audit examination of Dec. 31, 1973.

As part of the sector loan, 150 new credit agents, 80 clerical/bookkeeping and 15 supervisory personnel will be hired by the Bank. These will be at least vocational agricultural high-school graduates or people with at least two years of higher education. Training will be provided before these new agents enter the system. As an adjunct to the loan the Bank will plan and implement a general personnel upgrading system for all Bank personnel, geared to professional requirements established for each position. This is also a requirement under the PIDAGRO (IDB) loan.

The AgBank Should Reorient its Operations Toward Those of a Development Bank, Focusing on the Entire Agricultural Sector with Emphasis on Small/Medium Farms

Most of the improvements mentioned above are directed toward this end. It remains a valid criticism that the AgBank is too conservative in outlook. This is caused in the main by the fact that direct GODR support of the Bank is minimal and the Bank has to rely on its earnings for its financial and operational resources. The subsidized expansion of personnel contemplated under the sector loan should diminish this conservatism. Despite its conservatism the Bank has expanded markedly its rate of lending, as follows:

TABLE I

AgBank Loan Activity

Year	Amount Loaned (RD$ 000)	Percent Increase	Total Loans	Percent Increase
1967	27,639		27,000	
1970	29,244	8%	28,900	5%
1971	30,102	2%	30,500	3%
1972	31,464	4.5%	31,000	4%
1973	43,253	37%	39,000	38%
1974*	50,000	15.5%	45,000	15%

*Projected

Institutional Capacity

Because of the substantial size of program funds destined for small farm credit, the large majority to be administered by the AgBank, and problems heretofore associated with the AgBank, the Sector Loan Committee undertook an extensive evaluation of the Bank's absorptive capacity to handle these funds as well as those provided through normal growth and other donor loans.

The foregoing description of the problems of the AgBank and the effort to correct these deficiencies is current as of May, 1974. Improvements made to date; the Government's stated intention to implement the remaining administrative, operational and management improvements; the Government's willingness to hire the additional personnel and provide the additional budgetary support required by the program; and the adoption of the group leading technique lead to the conclusion that the AgBank is equipped to meet its responsibilities in the sector program. SEA's intention to provide much slower coordination with and support of AgBank operations, and the immediate adoption of the group lending technique by SEA and the AgBank will increase substantially the institution's ability to deliver the credit for which it will be fiscally responsible.

The composite estimate of the credit delivery capability of the AgBank is based on (a) the probable impact of the reorganization and administrative improvements described above; (b) the estimated capacity generated by adding new and generally better prepared agents to the AgBank and SEA; and (c) the estimated delivery capacity added by the cooperative operation between the two agencies in the field of small farm credit. To establish a theoretical base capacity it was assumed that: (a) the 38% increase in 1973 represented a maximum effort on the part of the AgBank; (b) a 15% increase in 1974 will take place as a result of "goodwill" generated in 1973 and because of ongoing improvement efforts; (c) the full impact of reorganization (20% more capacity) will be felt in 1975; and (d) an additional 20% increase in capacity can be brought on stream in 1975 as a result of additional SEA/AgBank personnel; and (e) all factors tending to increase lending capacity will be fully operative in 1976 when (1) agents will have gained needed experience, and (2) farm groups will have been formed and oriented toward the effective use of production credit. These assumptions indicate the following projection of AgBank delivery capacity in terms of total credit and total loans.

TABLE II

Estimated AgBank Credit Capacity

	1973	1974	1975	1976
Total Credit (RD$ 000)	43,200	50,000	70,000	84,000
Total Loans	39,000	45,000	63,000	75,600
% Increase (Loans)	(38)	(15)	(40)	(20)

The estimated delivery capacity was compared with the loan administration load expected to result from the combination of PIDAGRO, the sector program's small farm credit and shifts in the AgBank's portfolio to lower loan amounts. Based on experience to date, it is clear that PIDAGRO, because of its average loan size of RD$4,800, and its emphasis on supplying credits to borrowers who are already clients of the Bank, e.g., Agrarian Reform settlers and livestock producers, will not add any appreciable numbers of new borrowers, even though total credit to the sector will be affected. Shifts in the AgBank portfolio will result in availabilities of RD$5.0 million in 1975, RD$9.6 million in 1976 and RD$13.6 million in 1977 to borrowers in the category below RD$10,000. The projection assumes an average loan size of RD$7,500 for these funds. For sector program small farm credits, it was assumed that 75% would go to groups averaging 10 borrowers. Also 60% of the funds loaned in one year were presumed to be available for relending in the following year. Based on these assumptions the load of credit, loans, and recipients (RD$350 each for sector loan subborrowers) was projected as follows:

TABLE III

AgBank Credit to be Administered
Under the Sector Program

	1975	1976	1977
AgBank Shift			
Amount (RD$ 000)	5,000	9,500	13,600
Loans (additional)	667	1,267	1,813
Borrowers (additional)	667	1,267	1,813
AgBank Portion Sector Program			
Amount (RD$ 000)	3,616	5,469	6,141
Loans (additional)	3,357	5,077	5,701
Credit Recipients (additnl.)	10,331	15,625	17,545

Thus, in the third year of the program, the additional loan servicing required of the AgBank as a result of the program would be 7,514 more loans, or a total of 52,500, only 16% more loans than will be closed in 1974 and substantially below capacity projected for the period. However, the number of loans under RD$1,000 will increase by 60%.

(2) Secretariat of State for Agriculture (SEA)

SEA is the agency of the Executive authority legally charged with formulating and directing the agricultural policy of the country, administration of essential components of modern agriculture, and coordination with associated decentralized agencies on virtually all aspects of the agricultural sector. The most important working components of the Secretariat are the Sub-Secretary groupings of Production and Marketing, Research and Extension, the Livestock Department, and lately, the Planning Office. The SEA's primary assets are the National Agricultural Research Center (NAIC) and seven regional research and extension stations with their substations. SEA performs essential services -- research, extension, market news, statistics, having 2,000 of the approximately 6,000 public sector employees in agriculture. But, the number of suitably trained agriculturalists employed by the Secretariat is estimated at not more than 200, salaries

remain low (about half that in the private sector for equal capability) and inadequate funding still hampers many operations. Under the leadership of the present Secretary, SEA has begun a climb to professionalization and service orientation. Qualified professionals have been placed in many key positions and increasing coordination is evident throughout the organization. The Secretariat is asserting increasing leadership in the sector.

SEA as a Credit Source (Supervised Credit)

A small supervised credit operation was established in 1968 under an AID local currency project agreement and has made about 7,000 individual loans since that time. The program has concentrated on farmers who were without access to other credit and has managed to qualify about 1,000 for regular AgBank credit by building good credit records. Recoveries have been in the range of 86%.

A supervised credit staff of six supervisors serves as the nucleus of the program, processing loan applications for submission to the AgBank. The resulting supervised credit loans are included in the AgBank statistics. Loan applications in the field are taken by extension agents or AgBank personnel so that experience in credit and cooperation has been developed. Group loans have not been undertaken in this program. However, DDF methods and experience with group loans are transferable. Loan criteria, operational procedures for field agents, economic evaluation procedures and all other elements are well developed and can easily be adapted for use by SEA and AgBank personnel.

The Secretary of Agriculture has agreed that the supervised credit operation will adopt the group lending techniques pioneered by DDF and expand the number of SEA agents working specifically in this program by 100 as well as adding 5 supervisors and 10 clerical personnel. These new personnel will receive training concurrently with new AgBank personnel. DDF officials estimate a required training period of 30-45 days.

SEA has already begun to use its extension personnel as credit agents in concert with the AgBank and the nucleus of such personnel is now sufficient to initiate group lending operations.

(3) Dominican Development Foundation (DDF)

DDF has operated as a non-profit organization since 1966 with the objective of economic and social development among the rural poor. In recent years its program emphasis has been on group lending

to marginal farmers who lack access to other credits. Its portfolio in this category has grown from RD$600,000 in 1971 to the current RD$1.5 million which is loaned in amounts of about RD$300 per recipient in groups averaging about 10 members. DDF now serves 5,000 farm units and its rate of recovery is 96%.

Groups of farmers (there are about 1,500) are formed usually at the instigation of the 32 DDF promoter/agents. With the help of the agent the group analyzes its assets, needs and productive potential. Loan documentation is simple but complete. An analysis of the composition of the group and an economic and technical evaluation is submitted with the loan application. The technical assistance needs of the groups are assessed and arrangements are made through SEA for its provision.

The basic economic evaluations have been accurate enough to ensure profitability as shown by the high rate of repayment. DDF operates on a principle of collective and individual responsibility for debt repayment -- each group member is responsible for the entire debt. Whenever possible, token monthly payments are required during the course of the loan, thus keeping the obligation fresh in the minds of borrowers and building up savings.

DDF as a Credit Source

Because DDF has lacked capital it has built up a backlog of loan requests which could be satisfied immediately upon program initiation. The groups are formed and projects drawn for production projects requiring some RD$250,000 which are now beyond the financial capacity of the Foundation. Executives of the Foundation believe that they can handle up to RD$5.0 million per year in loans without appreciable increases in staff.

The Foundation's use of commercial banks as outlets administering credit in coordination with its own highly efficient accounting and programming center lend credibility to DDF's estimate of its own capacity. PIDAGRO has assigned RD$2.0 million to flow through DDF as credit. This should increase the Foundation's portfilio by no more than RD$1.0 million per year through 1977. The sector program will build up the DDF portfolio as follows:

	1974	1975	1976	1977
Amount (RD$)	60,000	696,000	1,077,600	1,266,560

This projection assumes relending at 60% of the previous year and fully scheduled annual disbursements thereafter. The sector loan will provide for the use of the facilities of branch offices of private banks to disburse and collect DDF small farm credit in areas which lack AgBank branch offices. This will permit the widest possible credit coverage with greatest convenience to clients who in all probability lack inexpensive means of transportation.

(4) SEA Custodial Accounts

Selected commercial banks would provide facilities for disbursement and payment of subloans to both groups and individuals. Initially, participating banks would not assume credit review or collection responsibilities on subloans; however, this would not preclude future involvement in the lending process.

SEA and AgBank credit agents would identify individuals and groups and prepare the necessary documentation for subloans. Regional supervisors would approve loans and authorize initial disbursement through custodial accounts handled by the Bank. The government credit agent would provide technical assistance and supervision on the subloan and authorize subsequent disbursements during the cropping cycle. The credit agent would also have the responsibility for follow-up collection efforts. Individuals or groups would present disbursement documentation to the commercial bank in order to receive monies and would also be able to make payments on subloans directly to the Bank.

Participating banks will handle the bookkeeping functions and advise SEA and AgBank regional supervisors monthly on the status of all subloan accounts. Preliminary talks indicate commercial banks would handle this function for a one or two percent commission.

Some of the advantages to this system are (i) although commercial banks do not initially participate with their own funds, they stand to gain first hand experience in small farmer credit and at the same time have the chance to educate potential clients about other bank services, particularly savings; (ii) the source base and coverage of small farmer credit is expanded; (iii) the sublending process would be speeded up, making it more responsive to the needs of farmers. This system has precedent in a program initiated by the Dominican Development Foundation which even goes one step further in that a limited number of banks are lending bank funds under a sliding guarantee provided by DDF in which group loans from bank funds are backed by a DDF guarantee of variable size, depending upon the credit history of the borrowing group.

(5) The Institute of Development and Cooperative Credit

(IDECOOP) is an autonomous agency which was formed to administer different types of cooperative activities throughout the country; however, agricultural cooperatives have received major emphasis principally due to the international assistance IDECOOP has received for its agricultural lending.

The Institute maintains eight regional offices and the main office in the capital. It has 250 employees of which 16 can be classified as professionally-trained agriculturalists. Additionally, IDECOOP receives technical assistance from SEA, which assigns some personnel to IDECOOP regional offices and budgetary support from the GODR. It also administers various loan programs in conjunction with IDB, AID and GODR.

Marked improvement has been noted in the institution over the past three years, primarily as a result of technical assistance provided under AID Loan 517-L-020. IDB and other donors are also providing assistance to IDECOOP in the form of technical assistance and a fishery loan.

There are 46 agricultural cooperatives registered with IDECOOP. Although all funcion to some degree, only about 25 can be considered viable enterprises. During the past three years IDECOOP has granted, under Loan 517-L-020, subloans to one federation and 18 cooperatives, 16 of which are still operating. Most of these subloans were for buying, handling and marketing of various crops, an activity that requires considerable knowledge of buying, selling and accounting procecures. Other subloans have been for inputs of seed, fertilizer and pesticides. Although none of the subloans have been used for inventory acquisition, several of the cooperatives do handle small hardware items and/or animal feeds and health products purchased with their own resources for resale to both members and non-members.

Managerial Ability: The recent history of cooperatives has shown a marked improvement in business skills, a measure of which is shown in subloan recoveries under AID Loan 517-L-020, which stood at 87% on February 28, 1974 and represented all loans which have matured since 1970. Only two loans in the delinquency schedule are likely to remain in default. All other delinquencies are being worked out. Repayment schedules now include a two-year workout on one small subloan past due for reasons of force majeure, and other cases where payment has been delayed pending the final marketing or settlement on crops which were pignorated and/or resold.

Another example of good business practice is reflected in FETAB, a federation of some 35 small, often unincorporated, member cooperatives working in tobacco and vegetable crops. The volume of business runs into the millions of pesos each year and products are marketed in the U.S. and Europe. Certainly this operation sets an example of the potential success that exists for the cooperative concept.

IDECOOP has placed Peace Corps Volunteers in eight agricultural cooperatives. Most of these volunteers have business, economics or marketing backgrounds. The Peace Corps function is to provide management assistance, particularly in cooperative administration. All cooperatives use a standardized accounting system, judged by qualified accountants to be satisfactory and adequate.

Additionally, the education component of the 517-L-020 Loan has provided training to cooperative managers and management in terms of accounting, business, marketing and retail activities.

Specialized systems for inventory, accounting and sales can easily be established and the training of managers and warehousemen can be accomplished in a very brief period -- not more than one month -- through the use of one of several qualified public accounting firms with offices in the country.

Handling and Warehousing: Estimates provided by IDECOOP indicate an unused storage capacity of 10,000 tons in the viable cooperatives described in Annex B, Exhibit 6. Since inputs must be in place before and during the growing season, no conflict with food commodity storage requirements will occur. In addition, INESPRE, the AgBank and SEA maintain storage facilities which will be used to position supplies in larger quantities. In effect, the sector program offers cooperatives the opportunity to employ unused storage facilities for profit. FETAB alone has some 1,500 tons of excess storage capacity available and has shown an interest in the activity as an added service to members.

Marketing

SEA and IDECOOP's regularly scheduled radio programs will provide farmers with information on participating cooperatives and costs of available inputs.

Participating cooperatives will accept consignments of inputs based on regional requirements estimated by SEA. The inputs will be available to members as well as non-members. At the discretion of the

cooperative, members may be sold inputs on a credit basis, within the guidelines of the supply and accounting procedures established for the system. Prices will be established by SEA and based on an estimated fair market price so as to avoid unfair competition with the private sector.

When feasible in group lending, that portion of sub-loans destined for the purchase of inputs will be used in the form of non-transferable certificates for their acquisition. Farm groups will use these certificates at the cooperative supply center and the cooperative can redeem them for cash through a specified Bank.

Business Terms: Inputs will be consigned to cooperatives at cost. Delivery to the cooperative will be ensured by IDECOOP or SEA. Cooperatives will be charged a nominal interest fee on the cost of their inputs and will be allowed to retain profits to be used to the benefit of the cooperative, returning borrowed principal and nominal interest to a revolving fund. Additional terms of trade will be established to AID's satisfaction before initiation of this program activity.

The sector loan committee concludes that the cooperative system has the capacity to distribute the inputs included in this element of the proposed loan without overtaxing its facilities or managerial and financial capacity. The active and viable cooperatives, which would be the distributors of these agricultural-inputs, will be better able to accomplish their original purposes by participation in the agricultural-inputs merchandising element of the program. The activity will strengthen and complement the cooperative movement by regularizing services which were previously on an ad-hoc footing, improving management practices, profitably employing unused assets and attracting new members. Final determination of participating cooperatives will be made following SEA evaluations of need for such supplementary assistance in the overall distribution system of agricultural inputs.

(6) FIDE (Fondo de Inversiones para el Desarrollo Económico)

The Central Bank's proven FIDE credit system utilizing some 14 highly competitive commercial banks and financial institutions, with broad coverage throughout the country, will be responsible for dispensing the major portion of inputs and marketing credit ($4.1 of $6.1 million). Judging from USAID's experience with FIDE, the latter's delivery capability is compatible with projected disbursements. As a matter of course, however, certain safeguards will be adopted and set forth in letters of implementation to facilitate the expeditious processing of the credit. Primarily, these will focus on autonomous lending by ICI's on

loan amounts below an agreed level with assurance of approval by FIDE if general criteria are met. Both the FIDE's Industrial and Livestock Departments will be utilized, as appropriate, for the type of credit involved. It is worth noting that, as a result of the World Bank's Livestock Improvement Credit, FIDE and most of the participating banks and financial institutions have functional departments for dispensing agricultural credits. Furthermore, the USAID has a great deal of experience with FIDE operations and personnel resulting from two prior private sector loans. Therefore, start-up problems are not anticipated.

These funds are to be used for the purchase and distribution of agricultural inputs primarily by intermediate dealers and suppliers. However, farms up to the medium size level, to be defined in letters of implementation, may also use these credits. Also the funds will be available to finance marketing and distribution facilities and activities up to the retail level.

2. Marketing/Farm Management

a) Market/Research and Information

The sector program will finance the creation of a Market Research/Information Office and capability within a restructured Economics Department of SEA. The technical assistance required for three years of activity in this area and the additional operational funds will be provided by the loan program. Technical assistance will be contracted directly by SEA and the professional staff will be formed from existing and, as necessary, newly hired personnel. Though the professional staff requirements will undoubtedly change over time as different or additional needs arise, it has been estimated, through consultation with IICA and Michigan State University's Marketing consultants, that approximately seven professionals in Agricultural Economics; Marketing Research and Analysis; Agricultural Journalism; Rural Market Management, Grades, Standards and Regulations; and Food Processing will have to be incorporated into the system. The total three-year costs have been estimated at $1,250,000 of which $300,000 will be AID loan funds for technical assistance and training. The estimated annual costs are broken down as follows:

TABLE IV
(000)

1974		1975		1976		1977	
RD$	US$	RD$	US$	RD$	US$	RD$	US$
50	-0-	300	150	300	150	300	-0-

1. Create an institutionalized mechanism for market research and information (for producers, consumers and businessmen), and develop marketing regulations as well as marketing education and training within SEA, working in close collaboration with INESPRE and CEDOPEX. These actions will be designed to accomplish the following objectives:

a) Provide the necessary technical information and statistical data needed to improve estimates of supply, demand and price relationships; provide needed storage, processing, transportation and marketing institutions and facilities; and, determine the type and level of governmental actions best suited to meet supply, demand and distribution problems on a timely basis.

b) Disseminate to producers and marketing subsector personnel information on present and probable future prices; acquaint producers with governmental policies, actions and services available to assist them in making profitable production decisions and in gaining access to the technical and financial assistance to carry out rational production and marketing programs.

c) Educate and train private sector marketing channel personnel in modern marketing procedures which yield more profits and create greater consumer demand for wider varieties of better quality food products.

d) Disseminate to consumers the information needed to make more intelligent nutritional decisions in the selection of food products.

e) Establish quality and purity standards for agricultural products as well as for food handling, processing, marketing and dispensing facilities so that consumer confidence in the quality of foodstuffs is promoted and maintained.

f) Develop a municipal market planning and action program to determine the needed administrative and regulatory changes which will enable public municipal markets to function more efficiently and work with municipal governments to bring about those changes.

2. Address supervised credit to elements in the marketing channels in coordination with the training of the above-mentioned merchants, processors, wholesalers and retailers. This program should include provision of working capital where justified and should be used as a

device to help the marketing system reduce uncertainties for producers, wholesalers, retailers and the transportation network as well as to stimulate healthy competition, higher volumes and lower price margins. It will be used to maximize utilization of the present storage, refrigeration and handling facilities and to expand or create new facilities where economically feasible. Supervised credit will be structured to enable borrowers to supply credit and inputs to producers under production contracts and to provide capital to establish labor intensive operations.

3. Utilize public service radio broadcasting to include farm and consumer market information as well as nutrition, farm input supply and credit, and home economics information to farmers in all sections of the country.

b) Farm Management

The sector program will create an Office of Farm Management which, like Marketing Research/Information will be located within the Economics Department of SEA at the national level so that the two offices can collaborate in the formulation of area-specific production/marketing packages of greater utility to farmers. Additional costs are included under a., above.

At the national level a unit of three M.S. or B.S. degree holders in Agricultural Economics, Crop Production and Soil Science would constitute the nucleus for farm management. In the field, 22 extension agents would be assigned to work as regional or subregional farm management specialists, responsible for executing microanalyses, developing recommended management practices for farms of the region and coordinating the dissemination of this information through the extension system and radio outreach programs. The national level technicians will train regional personnel in techniques of microeconomic analysis, crop production, market analysis and farm management. They are to evaluate recommended practices and information programs before public release in the respective regions.

The purpose is to maximize small farm income by development of intercropping, multiple-cropping and rotation systems for both crops and livestock operations. These systems will be keyed to evaluations of the marketing system so that, where possible, the crop cycle peculiar to regions, subregions and farm groups can be keyed to periods of highest price opportunities.

FAO has agreed to retain as an advisor to the Farm Management Unit, an Agricultural Economist with two years' experience in this

field with the Cibao Valley crop diversification project, the only project to have developed such area-specific information in detail in the Dominican Republic.

c) Use of Radio for Farm Information

To broaden the base of information available and useful to farmers, merchants and consumers, SEA will expand the present level of use of radio networks. Several government agencies, among them SEA and INESPRE, have some experience in such efforts and the radio stations are quite willing to provide on-the-air time at no cost.

As described in the Assessment, radio outreach measures will not be a formal system -- rather, some of the 87 radio stations throughout the country will be used to broadcast simple information on:

(1) Current and future market prices

(2) Where and how to obtain credit and inputs.

(3) Basic agronomic information on crops which are appropriate and profitable in certain areas at certain times -- and how to use extension services to acquire the technical assistance to produce these crops.

(4) Information on nutritional values of certain commodities, e.g., fruits and vegetables (best market choices).

SEA will arrange with appropriately located radio stations to use some on-the-air time for public service broadcasting. This practice has developed in several locations since the measure was first discussed with SEA personnel. Radio stations are generally receptive to such public service broadcasting as a means of injecting variety into their programming.

The difference will be primarily in the wider application of the use of radio and in the care taken in the development of materials for broadcasting. The added attention required in this regard will come from (1) the Market Research/Information Office, and (2) the Farm Management Office working in concert to develop the economic management packages that can be recommended with confidence to farmers. In addition, home economics extensionists will be able to present information on diet, sanitation, food preparation and the like. Agents used for broadcasting

programs need not be specially trained. No additional AID or GODR funds will be required for implementation of radio information broadcasting. All observations confirm that transistor radios are in widespread use in the countryside.

d) Pricing Policies

Prices for basic commodities are of major concern to Dominican policy makers. The major responsibility for Government action falls on INESPRE, with increasing influence from SEA by dint of its growing data base. This data base is viewed as a means of reducing unfounded speculation about stocks, future production, the need to import and the advisability of exporting certain commodities. As a matter of policy SEA is attempting to divorce these decisions from politics and base them on reliable technical evaluation. To insert the Agricultural Council into the decision-making process would further politicize a process which should be based on economic evaluations.

The GODR, primarily through INESPRE, has several means to influence or establish and maintain incentive prices for major agricultural commodities. Support prices are most effective for non-perishables -- rice, corn, beans and sorghum. Farm prices for these crops have been raised to the levels shown below:

Rice (first quality)	RD$ 9.90/cwt
Beans (Red)	RD$19.75/cwt
Corn (No. 1)	RD$ 6.05/cwt
Sorghum	RD$ 4.25/cwt

Cost-benefit analysis and practical experience have shown that, at current costs of production, these prices can provide incentives for higher levels of technological inputs.

In addition to support prices established by the Government, processing industries assure profitable prices for tomatoes (RD$38/MT) and peanuts (RD$9/cwt) which have stimulated production of these crops.

INESPRE is moving to expand the number of crops for which it can influence prices. It has undertaken case-by-case operations in onions, potatoes and garlic for which it has attempted to maintain prices as follows:

Onions	RD$10.33/cwt
Potatoes	RD$13.83/cwt
Garlic	RD$39.62/cwt

The extreme seasonality of production, low levels of technology applied to preservation and storage and inconveniently located storage facilities for such perishable commodities still present major problems which INESPRE is attempting to solve. However, the floor prices achieved to date appear to have stimulated production. Nevertheless, price stabilization of such commodities is often costly, even when crops are confined to well defined geographical locations.

The principle attack on the price problem for commodities other than those mentioned above, will be made in the marketing and farm management area where regional production patterns can be adjusted to national demand and export opportunities, and import requirements can be predicted in advance. In this regard, the linkages between SEA, INESPRE and CEDOPEX mentioned in the Marketing/Farm Management section above, are critical.

In the SEA Sectoral Assessment process, the Market Research/Information function was conceived as the focal point of the effort. CEDOPEX is well advanced in its study of available export markets for specific commodities and INESPRE is managing major import requirements for staple food commodities. The division of responsibilities between institutions is clear in the legal and administrative context. It remains to increase the knowledge and expand the capabilities of the institutions through the action program in marketing sponsored by the loan program. SEA is well advanced in its thinking on this point, having already arranged for the head of the Market Research/Information Office to train at the graduate level in marketing at Michigan State University. SEA has also begun the outline of its first national marketing study.

3. Human Resources

a) Agricultural Vocational Training

The loan will provide the dollar costs of technical assistance and staff training. The GODR will cover the peso costs for salaries, procurement and operating costs. The costs of this program, to be disbursed over four years, are estimated to be:

(in thousands)

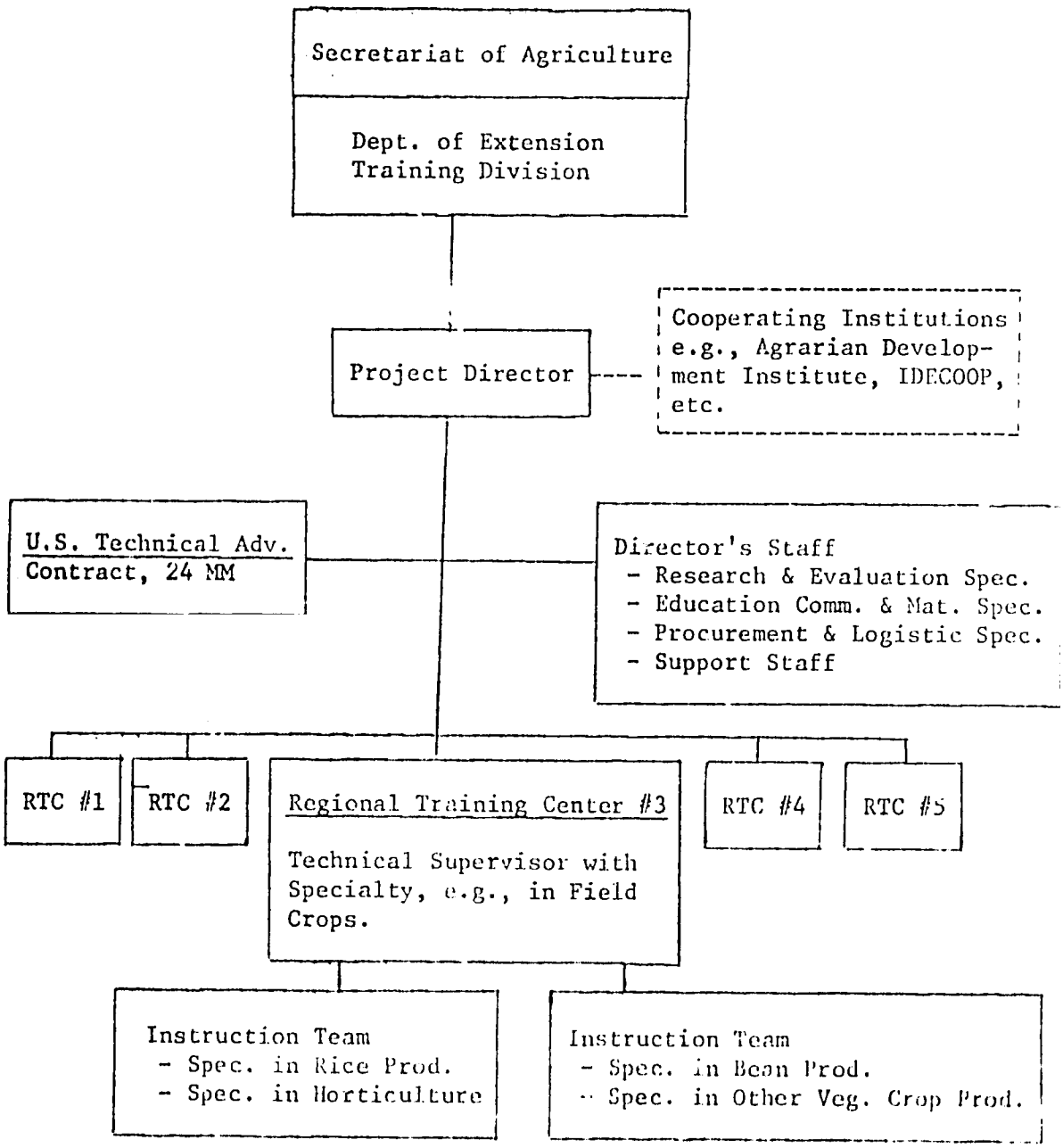
	1974		1975		1976		1977		TOTAL	
	RD$	US$	RD$	US$	RD$	US$	RD$	US$	RD$	US$
Equipment	30		15						45	
Salaries										
Project Direction	20		60		60		60		200	
Instructors			65		70		70		205	
Technical Assistance				40		40		40		120
Staff Training			15	20	15	10			30	30
Operating Costs			80		80		80		240	
	50		235	60	225	50	210	40	720	150

There is no existing public vocational agriculture training in the Dominican Republic. However, SEA, as part of the loan program, plans to carry out a pilot project in five of the seven agricultural regions of the country. The target group will, to the extent feasible, be those farmers participating in the farmer group credit or other supervised credit programs. Approximately 2,000 farmers will be trained during the pilot phase of the project.

The vocational agriculture training project will be established within SEA as an office of the Department of Extension. An official notice to this effect, published by SEA, will be a pre-disbursement condition. Other agricultural institutions will be expected to participate in preparing course materials and make provision for occasional lectures, but the primary operational responsibility will lie within SEA.

A Project Director and staff will make their headquarters at the National Agricultural Training Center in San Cristobal. Under

ILLUSTRATIVE ORGANIZATION CHART OF
VOCATIONAL AGRICULTURE PROJECT



the Director, five Technical Supervisors with university degrees in selected agricultural specialties will be posted at extension training centers already existing in five of the seven agricultural regions of the country. The predominant agricultural activity of small farmers in the region will determine what the technical specialty of the supervisor should be; that is, in a region where beans and rice are the principal crops, the technical supervisor will be a Field Crops Specialist; in a region where fruits and vegetables are predominant, he will be an horticulturist. Each technical supervisor will have two teams of instructors of two men each. The instructors will be graduates of special agricultural schools such as the Superior Institute of Agriculture (ISA) or the La Vega Agricultural High School; in addition, they will have had some practical experience and will undergo a special three-month training course at the beginning of the project prior to the initiation of training of the first group of farmers.

The operational plan for the pilot project is divided into four phases which are summarized as follows:

Phase I (ends December 1974): Deals with the completion of detailed project plans, the selection and assignment of the Project Director, his staff and the technical supervisors, orientation and specialized training, establishment of base line data and the selection of instructional teams.

Phase II (January - June 1975): Approval by the GODR and AID of detailed project plans; conduct specialized 12-week course for 20 instructors; complete field surveys; procure and install necessary equipment for regional training centers; and, select farmers to be trained.

Phase III (July 1975 - June 1976): Begin one-year farmer training program in each of the regional training centers. Instructors will work in pairs and there will be two pairs of instructors at each center. Each team of instructors will train the farmers in groups of 25 which will rotate into the training centers on a weekly basis. Total training for each group of farmers will amount to one month during the course of a year and each team of instructors will handle eight different groups of farmers during the year. The training schedule will be arranged so that the instructors will visit each farmer at his farm at least twice during the instructional year for follow-up purposes. In addition to the visits, simple instructional material will be used to reinforce the training when the farmers are not in the training centers.

Phase IV (July 1976): Using the base line data collected in Phase I and information derived from continuing evaluations being carried out in Phase III, the SEA and USAID will make a comprehensive evaluation in order to decide whether to expand the program or to modify and redirect it.

During the first training cycle each team of instructors will have trained 200 farmers and each training center will have handled 400; the five training centers will therefore have produced 2,000 vocationally trained farmers.

U.S. loan-funded technical assistance will be required during the pilot phase of this activity and will consist of approximately 24 man months of vocational agriculture specialist services. Such services will be used to assist the Project Director and his staff in the training of instructors, the design of course curriculum and the preparation of material for the vocational course, and assist in the preparation and execution of evaluation and follow-up activities.

b) University Professional Training

The program contemplates expenditures of $240,000 pesos by the GODR and $1.5 million of loan funds to be disbursed over three years as follows:

(in thousands)

	CY 1975		CY 1976		CY 1977		TOTAL	
	Pesos	US$	Pesos	US$	Pesos	US$	Pesos	US$
Faculty Upgrading		350		350		350		1,050
Technical Assistance		150		150		150		450
Salaries and Language Training	80		80		80		240	
	80	500	80	500	80	500	240	1,500

The implementing agency will be the SEA working in cooperation with the Universidad Nacional Pedro Henriquez Ureña and the Universidad Católica Madre y Maestra. The purpose of this element of the loan program is to expand the range and depth of professional competence through the development of additional university curricula in new fields of agricultural study.

At present, Dominican universities are able to offer the equivalent of a U.S. Bachelor of Science degree only in a very limited range of agricultural subjects. Locally trained agricultural professionals clearly lack the specialties and the knowledge of the latest improvements in their disciplines which are necessary to the accomplishment of long-term development objectives. Although over 150 Dominican university students received grant-funded agricultural training in the United States between 1966 and 1973, most of their studies were at the under-graduate level; the returned U.S. trained students are being used in the agricultural sector to the maximum extent but their training was not sufficient to permit them to produce, within the country, the continued output of equally qualified professionals from Dominican universities. Moreover, Dominican agricultural requirements have changed remarkably from their post-revolutionary low base and there is now an even greater need for technological improvements and understanding of planning options.

The universities which will participate in this activity are Universidad Nacional Pedro Henriquez Ureña (UNPHU) and Universidad Católica Madre y Maestra (UCMM). The latter has an integrated agricultural program with the Instituto Superior de Agricultura (ISA). These institutions realize that they are in need of wider range professional agricultural training programs but their present capacities and resources are such that plans for overcoming these deficiencies have been held back. The sector loan program will initiate the required long-range development program at the undergraduate level only. The two universities agree on the need to avoid duplication of effort; therefore, it now appears that UCMM will concentrate on scientific technological subjects while UNPHU gives emphasis to the planning/administrative side of agriculture.

The present activity plan calls for technical assistance to the agriculture departments of the universities, and graduate level training in the United States for Dominican professors and instructors. A contractual arrangement will be made with a U.S. university or universities to provide two full-time staff to work with UNPHU, UCMM and SEA in program development and curriculum planning both on present course offerings and the following probable new fields of study to be introduced:

Food Technology and Production (UCMM/ISA)
Dairy Science and Production (UCMM/ISA)
Tropical Horticulture (UCMM/ISA)

Agriculture Economics and Marketing (UNPHU)
Agricultural Education (UNPHU)

These disciplines are keyed to anticipated specialties required in support of long-range production objectives.

In addition to the full-time staff, the U.S. contractor will provide approximately 24 man-months of short-term consultant services in the fields of administration and curriculum development. (The vocational agriculture specialist services mentioned in the previous section will also provide some assistance to this activity.) The services of a part time U.S. based coordinator for the U.S. university group will also be loan-funded.

The advisors will assist the universities and SEA in the selection of candidates to be trained at the post graduate level. It is estimated that UCMM/ISA will send thirteen and UNPHU twelve participants to be trained over the course of three years. Both universities have students studying in the U.S. under the LASPAU program, but because LASPAU's selections are based on competitive examination without regard to specialty, the universities would not be able to program the training requirements for their faculty; the program, therefore, is not suitable to the universities present development needs. The U.S. advisors will attempt to develop a plan between the universities and LASPAU to accomodate the continued training requirements of the universities upon completion of the loan program. No professor exchange is desired in this program; therefore, the LATF program is inappropriate. Since training will be undertaken as a professional assignment and represents an investment in manpower on the part of the GODR, Educational Credit Foundation loans to participants are not considered an appropriate mode of financing.

4. Rural Feeder Roads

This element of the program is directed at two vital aspects of the rural development process. The first, employment generation, will result in increased incomes for a significant number of rural workers during the times that they are not otherwise productively employed in agricultural activities. The second aspect involves the integration of the small farmer into the money economy by providing increased access to markets for his products, as well as better communication with other rural communities.

Under the program, it is anticipated that a total of 82 kilometers of penetration and 55 kilometers of secondary roads will be constructed.[1/] The disbursement of program funds for the penetration and secondary roads, as well as the anticipated number of kilometers of road to be constructed during each year of the program, is shown below:

TABLE 1

	Year 1	Year 2	Year 3	Year 4	Total
$ (000)	60	660	660	620	2,000
Km. of penetration roads	-	28	28	26	82
Km. of secondary roads	4	18	18	15	55

The GODR and AID will each contribute $1.0 mil. in local currency to the program and all disbursements will reflect this equal division.

The implementation of the program will be effected by SEA in conjunction with the Rural Feeder Roads (Caminos Vecinales) Division of the Secretariat of State for Public Works (SOP). SEA has already

1/ According to GODR standards, the basic difference between rural secondary and penetration roads relates to location, rather than design.

participated, in conjunction with the Agricultural Reform Institute, IDECOOP, SOP and the National Planning Office, in the establishment of a GODR national policy for construction of feeder roads. (A two year National Rural Road Plan, resulting from this coordination, is expected to be issued shortly.) A further strengthening of SEA's coordination of agricultural policy will be provided through its primary role in the selection of the roads to be constructed under the program, as well as through its control of all merged program funds relating to feeder roads. In this way, there will be adequate assurance of an interrelationship between road construction efforts and priority agricultural activities under the Loan Program.

Caminos Vecinales was incorporated as a division of SOP in November 1970, in an effort to coordinate rural road construction activities and to establish an overall GODR policy regarding the location and construction of rural feeder (farm-to-market) and access roads. This represented a departure from the prior policy of various GODR agencies constructing their own feeder roads with no central direction or attention to overall governmental priorities.

The Sector Loan Committee has determined that Caminos Vecinales, in conjunction with other SOP divisions, has the necessary administrative and technical capacity (see SOP organization chart, Annex B, Exhibit 5, (f)) to implement the activities envisaged under the program, in addition to its normal activities. The additional number of permanent personnel to carry out these additional responsibilities is minimal and readily available.

In the case of resource allocation, however, as a result of limited budget appropriations in the past, Caminos Vecinales has had to limit its construction activities to a level considerably below the needs of the rural sector (1973 expenditures, for example, were $1.2 million, an amount which has not increased since 1970, and $180,000 for equipment maintenance). The forthcoming $2.0 million in additional resources ($1.0 million in AID loan resources, supplemented by an equal GODR counterpart contribution) from the Sector Loan Program will enable Caminos Vecinales to increase its construction activities from its present average of 160 kilometers per year to a sustained level of 210 kilometers by 1975 and beyond.

The GODR/AID rural feeder roads program will undertake over a three-year period, the construction of 82 kilometers of penetration

roads, and 55 kilometers of secondary rural roads, over and above Caminos Vecinales' present level of construction activity, and will be administered separately from Caminos Vecinales' other activities. Accordingly, separate accounting, supervisory and administrative measures will be taken. The decision reached during Intensive Review to devote the greatest percentage of Loan Program resources to penetration roads was made on the basis that this particular form of construction is the most labor intensive of all Caminos Vecinales' activities, employing approximately 134 skilled and unskilled workers per road activity. Assuming an average length of 2 kilometers per penetration road and 10 kilometers per each secondary road, 41 penetration road sections and 6 secondary roads, employing a total of 5,084 rural workers, will be built over the three years of the program. The construction of all roads will be undertaken, to the maximum extent feasible, during times when rural workers are under or unemployed in order to avoid competition with ongoing agricultural activities. The annual income of the rural worker will thus be augmented considerably, with additional secondary benefits accruing to the rural sector as a result of such increased income.

Road construction under the program will begin on a pilot basis and will be expanded progressively, based on initial experience. The labor force, with the exception of the few additional necessary permanent Caminos Vecinales professional and skilled personnel, will be recruited, as is presently the case, from inhabitants in the area in which the roads are to be constructed. All temporary labor, with the exception of skilled workers, who will be hired on a contract basis, will be paid at a monthly rate according to present practice. During Intensive Review the Sector Loan Committee explored the possibility of a piece rate basis of payment. It was found that this method was impractical in the Dominican context, partly due to the fact that workers are accustomed to monthly payments, and partly as a result of anticipated extra administrative efforts and associated costs which would result from piece-rate payments.

Maintenance of roads build by Caminos Vecinales is the responsibility of SOP. In practice, SOP does not have sufficient resources to maintain adequately the entire Caminos Vecinales network of roads and, consequently, many roads become impassible after a relatively short time. It is evident that this maintenance capacity will have to be improved. Accordingly, the Sector Loan Committee recommends, as a condition precedent to initial disbursement for the

rural feeder roads element, that the GODR furnish AID with evidence of a satisfactory feeder road construction and maintenance plan. In addition, during loan negotiation discussions the USAID will attempt to gain a GODR commitment for continuous annual funding to Caminos Vecinales beyond the program period to sustain the higher level of construction activity begun under the program.

During Intensive Review, the possibility of utilizing a disbursement mechanism based on fixed cost reimbursement was considered. After examination of this alternative, it was decided that this system would be incorporated into the overall program method of merged release of funds. Accordingly, an average fixed cost per kilometer of penetration and secondary road, will be agreed upon by the GODR and AID. An initial advance of commingled funds (50% GODR, 50% AID) will be made to Caminos Vecinales to cover the first 60-90 days operating costs. Thereafter, Caminos Vecinales, prior to receiving further advances, will present to AID proof (in the form of vouchers or similar forms of documentation) that the funds released under the prior period of advance have been expended for the intended purposes of the program. Physical verification of kilometers of road completion will be made subsequently by the USAID engineer, and the responsible officials of Caminos Vecinales.

Initial selection of individual road segments or networks has been based on a review of a draft of the National Rural Roads Plan for 1975-1976. In developing this plan, the GODR has collected information from the principal GODR agricultural agencies, which relates the needs of the rural sector for access roads in various regions to the priority crops to be emphasized during this period. Of the road networks included in the GODR plan, a number have been tentatively identified for selection under the program, (see Annex B, Exhibit 5, (a), for full list) having met the following general criteria: (1) location of the road in areas inhabited by large numbers of the target farmer group; (2) a positive relationship between the penetration road and marketing subcenters; (3) maximization of hand labor content; (4) crop production targets priorities of the GODR.

Given the budgetary constraints under the program, it becomes quite apparent that not all desirable road elements can be undertaken and that those selected must be sequenced over time. In light of this limitation, regional feasibility surveys will be performed, and a number of subregions selected, with emphasis placed on high correlation of the location of feeder roads to the other aspects of the Loan Program. This effort implies a broad range development which would open up relatively isolated farm areas to domestic market centers and consolidate the various elements of the national feeder road network. (Individual road segments are not likely to receive emphasis unless a particular road network is enhanced by such a singular link to a domestic market). This subregional approach essentially would encompass an integrated economic area in which development is depressed due in part to the lack of a system of access roads.

On the basis of the data gathered during the preliminary surveys, the elements of road access, marketing, land use, area resource endowments and production coefficients, average income levels of subregional recipients and any other applicable considerations, will be taken into account. The GODR will then employ a technique of ranking individual roads and road networks in order to measure the value added to each subregion as a result of the penetration road and the other program inputs. (See Annex B, Exhibit 5, (b), for suggested methodology.) The road selection computer model devised will attempt to show the optimum situation with respect to increases in production brought about as a result of incremental capital inputs and increased access brought about by the newly constructed road, as well as to verify that regional betterment resulting from various direct activities, such as feeder roads and credit assistance, can be effectively measured.

Accordingly, the array of road construction activities would be ranked in priority order, based on net subregional value added for each area and selected for construction within the allocative limits of funds available under the program. As a final step, the computer print-out of each selected road activity would be recorded and stored for future evaluations of effectiveness. Thus, a system of investigation, implementation and review would provide a synergetic package encompassing all aspects of the program analysis.

The design for both the penetration and secondary roads to be constructed under the program (see typical cross sections, Annex B, Exhibit 5, (c), will follow the general standards employed by Caminos Vecinales.

The roadbeds, which will vary from 6-7 meters, are primarily designed to accommodate anticipated present traffic flows, with a staged construction concept which facilitates future expansion. In areas of relatively flat terrain (natural gradients less than 1-2%) design standards regulating curveture and grades will be relaxed somewhat to facilitate labor intensive techniques while maintaining user safety criteria. On hilly terrain the roads will be constructed in the traditional side hill cut method.

The following design criteria will be employed under the program:

Secondary		Penetration
H 10 minimum	AASHO Standard Loading	H 10 minimum
7 meters	Roadway Width (turnouts on curves)	6 meters
15 cm.	Surface Thickness	15 cm.
45 km./hr.	Vehicle Maximum Design Speed	45 km./hr.
	Side Slopes	
2:1	Hill	2:1
1 1/2:1	Cut	1 1/2:1
5%	Superelevation (maximum)	5%
16%	Maximum Unpaved Vertical Grade (0.5 km. with critical length of 70 meters)	16%
	Drainage Culverts	CMP
	Bridges for shallow, generally dry gulleys	California Ford (with culvert)
H 20 (AASHO)	Bridges-composite reinforced concrete loading	

The rough road alignment will be determined by Caminos Vecinales and established as the centerline for purposes of cost estimates and economic analysis. Actual design work will be accomplished at the field engineer level and approved by Caminos Vecinales.

The average cost of constructing penetration roads to the above road standards, taking into account variations in terrain (3

categories — level, rolling and mountainous) is $9,725 per kilometer, including a 15% contingency factor to allow for inflationary considerations over the three year program period. The average cost per kilometer of secondary roads, including a 10% contingency factor, is $17,470. It is possible that, through increased organizational efficiency, these costs could be reduced, and/or the labor content increased. The development of further efficiencies will be explored with Caminos Vecinales.

The cost of maintaining the penetration and secondary roads, respectively, constructed under the program is estimated to average $600 per kilometer per year and will be provided by the GODR in addition to its contribution to the program. Equipment and vehicles needed primarily to construct secondary feeder roads, and to some extent penetration roads, will be provided by the GODR from sources outside the program. An overall plan, encompassing both construction and maintenance elements, will be provided to AID by the GODR prior to initial disbursement for rural feeder roads. In the case of both construction and maintenance, primary attention will be given to maximizing hand labor content.

The following costs of additional permanent personnel needed to administer the program, are included in the GODR counterpart contribution:

1	Engineer/Supervisor at $7,200	$ 7,200
2	Engineer/Inspectors (one for each area) at $6,000	12,000
5	Project Supervisors (one for each two projects) at $3,600	18,000
2	Mechanics at $5,400	10,800
6	Drivers at $2,400	14,400
1	Accountant at $6,000	6,000
2	Clerks at $2,400	4,800
	Total	$73,200

Taking into account a contingency factor of 10% for each of the two succeeding years, the total three year cost of additional personnel to the program is the following:

Year 1	$ 73,200
Year 2	80,520
Year 3	88,572
Total	$242,292

The total program cost breakdown by element is shown below:

	AID	GODR	Total
Personnel		$ 242,000	$ 242,000
Secondary Road Construction	$ 600,000	358,000	958,000
Penetration Road Construction	400,000	400,000	800,000
Total	$1,000,000	$1,000,000	$2,000,000

The construction of 55 kilometers of secondary roads and 82 kilometers of penetration roads will result in an estimated total of 254,195 man-days of employment over the three years of the program. The benefits of this increased employment will reach approximately 5,084 skilled and unskilled rural workers, each working an average of 50 working days per year when they are not gainfully employed in other agricultural endeavors. (It is important to note that the make-up of the work crews will change constantly as workers tend to their own lands or provide services to other farmers.) Thus a total of $778,526 in additional wages (see Annex B, Exhibit 5, (d) and (e) for methodology employed) will be attributed to the rural sector, with an average increase of $163 per year per worker. This is a significant increment to the average small farmer annual income of approximately $370, which in turn, is about one half that of the economically active farmer average of $740 per year. In addition, it is quite likely that important secondary economic benefits will accrue to rural areas as a result of the magnitude of this overall increase in rural income.

In addition to the above immediate benefits to those workers directly involved in the construction process, another important aspect of rural development must be considered: the development impact

resulting from the increased access to agricultural markets. Experience in both the Dominican Republic and other countries has shown that the overall benefits to the rural sector are magnified as a result of road access, and that significant increases in crop production result from rural feeder road construction.

C. Loan Administration

Loan Monitoring and Execution

USAID/Dominican Republic will ensure that conditions precedent, the covenants contained in the Loan Agreement, and the procedures required thereunder by Implementation Letter or otherwise will be observed. USAID personnel will make periodic inspections and reviews of the program, assisted by contract and AID/W personnel, if required.

Periodic audits of the loan will be made by AID at such times as may be deemed appropriate. Quarterly progress reports and such other reports as AID deems appropriate will be required of Borrower.

Primary responsibility for monitoring the loan rests with USAID/Dominican Republic, assisted by AID/W personnel as appropriate. Disbursement requests will be reviewed by the USAID's Agricultural Development, Capital Resources Development, and Controller Divisions. Progress of the program will be monitored by the USAID's Agricultural Development Division.

2. Financial Plan

The total cost of the Program is estimated at $33.9 million of which $12 million will be financed with loan funds and $21.9 million by the GODR. On this basis the AID loan will finance U.S. dollar costs, estimated at $1.95 million and the equivalent of $10.05 million of local currency costs of the Program. The GODR contribution will be provided on a timely basis from the annual funds allotted for investment and operating costs within the central budget of the country, and this contribution will be in addition to the GODR's normal investment and operating budget and disbursements to the implementing agencies. U.S. dollar and peso disbursements of this sector loan are planned to be effected over a 36 month period, beginning approximately November 1974. We estimate that to start up the disbursements of the $12.0 million loans, approximately $435,000 in Dominican pesos representing estimated 1974 expenditures will be advanced following satisfaction of the appropriate conditions precedent. The balance of $9,615 million in Dominican pesos and $1.95 million in U.S. dollars is anticipated to be disbursed as follows: $3.340 million during CY 1975, $3.355 million during CY 1976, and $2.920 million during CY 1977. An overall breakdown of the estimated disbursement schedule by program elements is shown in the following Table 1, and the estimated disbursement schedule by implementing agency is shown in Table 2.

Table 1

DISBURSEMENT SCHEDULE BY PROGRAM ELEMENTS
(in thousands)

			1974	1975	1976	1977	TOTAL
SMALL FARM CREDIT PROGRAM	AID Total Dollars		405	3,010	3,025	2,610	9,050
	Pesos		405	3,010	3,025	2,610	9,050
	GODR Pesos		705	5,690	6,505	6,090	18,990
		Total	1,110	8,700	9,530	8,700	28,040
MKTG. RESEARCH/FARM MGMT. PROGRAM	AID Total Dollars		———	150	150	———	300
	Pesos			150	150		300
	GODR Pesos		50	300	300	300	950
		Total	50	450	450	300	1,250
HUMAN RESOURCES PROGRAM	AID Total Dollars		———	575	575	500	1,650
	Pesos			575	575	500	1,650
	GODR Pesos		50	315	305	290	960
		Total	50	890	880	790	2,610
FEEDER/ACCESS ROADS PROGRAM	AID Total Dollars		30	330	330	310	1,000
	Pesos		30	330	330	310	1,000
	GODR Pesos		30	330	330	310	1,000
		Total	60	660	660	620	2,000
TOTAL AGRICULTURAL SECTOR PROGRAM	AID Total Dollars		435	4,065	4,080	3,420	12,000
				725	725	500	1,950
	Pesos		435	3,340	3,355	2,920	10,050
	GODR Pesos		835	6,635	7,440	6,990	21,900
		Total	1,270	10,700	11,520	10,410	33,900

Table 2

DISBURSEMENT SCHEDULE BY IMPLEMENTING AGENCY
(in thousands)

AGENCY		1974 GODR Pesos	1974 AID Pesos	1974 AID US$	1975 GODR Pesos	1975 AID Pesos	1975 AID US$	1976 GODR Pesos	1976 AID Pesos	1976 AID US$	1977 GODR Pesos	1977 AID Pesos	1977 AID US$	TOTAL GODR Pesos	TOTAL AID Pesos	TOTAL AID US$
S E A	Operating Costs	80			500			500			500			1,580		
	Input Credits	15	15		100	100		85	85					200	200	
	Mkt. Research/Farm Mgmt.	50			300		150	300		150	300			950		300
	Vocational Education	50			235		75	225		75	210			720		150
	Professional Education				80		500	80		500	80		500	240		1,500
		195	15		1,215	100	725	1,190	85	725	1,090		500	3,690	200	1,950
AgBank	Operating Costs	160			980			980			980			3,100		
	Training	60			200									260		
	Small Farm Credits															
	SEA Sup. Cred. Portfolio	95	95		475	475		485	485		445	445		1,500	1,500	
	SEA-AgBank: Caretaker Accts.	30	30		330	330		330	330		310	310		1,000	1,000	
	AgBank Portfolio	155	155		835	835		835	835		675	675		2,500	2,500	
		500	280		2,820	1,640		2,630	1,650		2,410	1,430		8,360	5,000	
D D F	Small Farm Credits	30	30		330	330		330	330		310	310		1,000	1,000	
IDECOOP	Input Credits	20	20		260	260		270	270		250	250		800	800	
Central Bank	FIDE	60	60		680	680		690	690		620	620		2,050	2,050	
	CIP				1,000			2,000			2,000			5,000		
		60	60		1,680	680		2,690	690		2,620	620		7,050	2,050	
S O P	Feeder & Access Roads	30	30		330	330		330	330		310	310		1,000	1,000	
TOTALS		835	435		6,635	3,340	725	7,440	3,355	725	6,990	2,920	500	21,900	10,050	1,950

All operational costs of the government entities involved in this program will be funded by the GODR. The U.S. dollar costs of training and technical assistance will be assumed entirely by AID.

After the fulfillment of conditions precedent, AID will process a first disbursement request, which, in concert with GODR funds, will be distributed among applicable sub-implementing agencies to meet approximately two months program requirements. However, throughout the life of the program the amount of each advance to be allocated to any implementing or sub-implementing agency is to be determined prior to each disbursement based on estimated need and the demonstration of financial and physical progress towards loan targets. The AID and GODR contributions to the program will be on a predetermined ratio, and the AID funds will be deposited to the Special Account simultaneously with or following the GODR contribution.

3. Disbursement Procedures

a) U.S. Dollar Costs

No U.S. dollar procurement of commodities is contemplated under the loan. U.S. dollar costs of the loan will be disbursed for training and technical assistance components of the sector program.

U.S. dollar disbursements will be made using standard AID procedures by issuance of Letters of Commitment and making payments through the use of Letters of Credit for dollar costs of services procured for the program in accordance with the terms of the Loan Agreement. Disbursement of dollar costs will be made exclusively to finance the procurement for the program of services having both their source and origin in countries in Code 941 of the AID Geographic Code Book as in effect at the time orders are placed or contracts are entered into for such services. All transportation financed by dollar costs under the Loan shall have its source and origin in countries included in Code 941 of the AID Geographic Code Book as in effect at the time transportation is initiated.

b) Local Currency Costs (Dominican Pesos)

(i) Loan Agreement Procedures

The Loan Agreement shall be denominated in United Stated dollars insofar as repayment to the U.S. is concerned, but will

clearly state that (except for U.S. dollar amounts set aside for procurement of dollar cost training and services directly related to the sector program) the U.S. dollars are being lent for the purpose of converting them into pesos so as to satisfy stipulated peso needs of the sector program. The agreement will also indicate the uses for which the pesos are destined, the executing agencies which will be responsible for expending them, and the time period over which they are to be expended.

(ii) Request for Disbursement

AID should receive requests for disbursements at least thirty, and preferably sixty days prior to the expected disbursement date, to assure adequate time for processing and for peso generation by both AID and the GODR. To obtain disbursements, now anticipated to be on a quarterly basis, the Secretariat of State for Agriculture will transmit to USAID/Santo Domingo a request showing the needs of the several sub-implementing agencies requiring program funds, and a report on the progress of all sub-implementing agencies toward loan goals. Each request should also provide information with respect to the flow of total resources of the implementing or sub-implementing agency for the ninety-day period prior to the proposed date of release, and for the ninety-day period subsequent thereto. These requirements will be detailed further in an Implementation Letter.

(iii) Peso Generation Procedure

(a) AID Loan Peso Generation Procedure

The direct conversion is expected to be employed in accordance with the following system:

(I) Upon AID approval of the request for disbursement, USAID/DR will prepare a D.R. pesos voucher and transmit it to U.S. Treasury for issuance of check. U.S. Treasury will issue a U.S. dollar check for deposit to GODR Free Dollar Account and in return receive a check or credit advice for an equivalent amount of D.R. pesos. This check or credit advice will be deposited with First National City Bank of New York. FNCB will immediately cable its Santo Domingo Branch to this effect and the U.S. Treasury will issue a check drown upon First National City Bank, Santo Domingo and forward it to the USAID/DR Controller.

The USAID/DR Controller will transmit the check to Banco de Reservas for deposit to the Special Segregated Account (SSA) at such time as the GODR has made its corresponding deposit.

Upon the issuance of the check, the Loan will be charged with the U.S. dollar equivalent.

(II) Upon deposit to the SSA of the Secretariat of State for Agriculture, the funds will lose their separate identity and be merged with GODR funds in the same account.

(b) GODR Peso Generation Procedure

To implement the GODR's direct budgetary contribution procedure, the following system will be employed:

(I) Simultanemously with its request for AID Loan disbursement for the local currency requirement of the Loan Program, the GODR's administrative agency, the Secretariat of State for Agriculture, will send an allotment application in an amount which covers the total AID peso contribution, as stipulated in the Loan Agreement, to the Budget Office. The Budget Office will send the authorized application to the GODR Controller's Office which will prepare a Libramiento de Pago form for the GODR Treasury Department. The GODR Treasury will issue a check for credit to the above mentioned SSA of the Secretariat of State for Agriculture in the Banco de Reservas for use in the Agricultural Sector Program in accordance with the Loan Agreement 517-L-027.

(II) Upon receipt of pesos allocated by the GODR to the SSA, the funds will then lose their separate identify and be merged with AID-disbursed funds in the same account.

(iv) The Special Segregated Account - Release of Commingled Funds

It is now anticipated that the Special Segregated Account will be established in the Banco de Reservas. Both the SSA and the implementing and sub-implementing agency accounts to which the commingled funds will ultimately flow will be current, that is, non-interest bearing accounts. Pesos deposited in the SSA account will be non-divertible from the sector loan program inasmuch as each deposit to the SSA of AID-loan-generated pesos will be accompanied by instructions from the USAID Controller to the Banco de Reservas as to the AID/GODR

agreed-upon releases of merged funds. That is to say, a specific amount of commingled funds will be designated for the use of each authorized recipient agency and no agency will be permitted to draw more than its designated amount. Each release from the SSA will require approval of the Secretariat of Agriculture.

4. Procurement Procedures

Procurement of dollar cost training and technical assistance will be made in accordance with the Capital Projects Guidelines M.O. 1442.1 as appropriate.

5. Evaluation Plan

This loan program shall be evaluated at least annually during the disbursement period to measure progress at the end of CY 1975, CY 1976 and CY 1977 plus at least one follow-up evaluation approximately one year subsequent to the Terminal Disbursement Date. The evaluation will endeavor to measure in overall terms progress toward the primary objectives of the loan a) as outlined in the loan document and b) on the basis of the progress and "end of program" indicators listed in Annex B, Exhibit 4.

It is contemplated that these evaluations will be carried out jointly by the GODR and A.I.D. (USAID/Santo Domingo or AID/Washington) plus such outside expert assistance as the evaluation team may consider necessary and appropriate at the time of preparation for the evaluation.

The GODR will have the responsibility for the collection of the data necessary to permit the annual review of the progress indicators.

Evaluation indicators will be set forth in Implementation Letters.

SECTION IV - CONDITIONS PRECEDENT AND COVENANTS

In addition to the usual conditions precedent and covenants, the Agricultural Sector Loan Committee recommends that the following be contained in the Loan Agreement:

Conditions Precedent

(1) Prior to the first disbursement or the issuance of any commitment documents under the Loan, AID shall have received in form and substance satisfactory to AID, evidence that:

(a) The Agricultural Bank has lowered its maximum loan limit to an amount not in excess of $50,000 per loan. It is the intent of the parties to this Agreement that this reduction in the maximum loan limit will result in making available RD$5,000,000 for lending to small and medium size farmers, that is, those farmers who require loans not in excess of RD$50,000. Accordingly, prior to disbursement, the Borrower shall furnish evidence of arrangements by the Agricultural Bank to insure that this maximum loan ceiling will not be circumvented by the making of multiple loans to the same subborrower, directly or indirectly; and,

(b) The Central Bank has established a discount rate for agricultural loans, which rate is lower than the discount rate for commercial or industrial loans.

(2) Prior to any disbursement or the issuance of any commitment document under the Loan for Input/Marketing Credit, AID shall have received in form and substance satisfactory to AID:

(a) The supply and inventory procedures to be followed by IDECOOP and SEA:

(b) Evidence of the designation of trained managers to administer input distribution points;

(c) Evidence of the selection of cooperatives and extension stations appropriately located pursuant to Program objectives; and,

(d) The terms and conditions applicable to input credit and prices.

(3) Prior to any disbursement or the issuance of any commitment document under the Loan for Marketing/Farm Management, AID shall have received in form and substance satisfactory to AID evidence that a Market Research/Information Office and a Farm Management Office have been created within SEA.

(4) Prior to any disbursement or the issuance of any commitment document under the Loan for Agricultural Vocational Training, AID shall have received in form and substance satisfactory to AID, a plan for the establishment on a pilot basis of an agricultural vocational training program, which plan shall include, inter alia:

(a) The organization of the training program:

(b) The personnel to be required including their qualifications;

(c) The technical assistance requirements and how said requirements will be met; and,

(d) Criteria for the selection of the people to be trained.

(5) Prior to any disbursement or the issuance of any commitment documents under the Loan for University Professional Training other than for technical assistance, AID shall have received in form and substance satisfactory to AID a plan providing for the upgrading of the professional faculty of the participating universities.

(6) Prior to any disbursement or the issuance of any commitment documents under the Loan for Feeder Roads, AID shall have received in form and substance satisfactory to AID, an agreement between SEA and SOP (acting for Caminos Vecinales), which shall set forth:

(a) The specific responsibilities of each party for the implementation of the feeder and penetration road program;

(b) The contribution of SOP to the Program, including the provision of necessary road construction equipment and additional personnel; and

(c) Plans and responsibility of SOP for the satisfactory maintenance of the feeder and penetration roads constructed under the Program.

Covenants

(1) Borrower covenants to cause the Agricultural Bank, unless AID otherwise agrees in writing, to lower its maximum loan limit to:

(a) $25,000 per loan on or before October 1, 1975; and

(b) To $10,000 per loan for agricultural production and $20,000 per loan for all other types of lending on or before October 1, 1976.

The arrangements to prevent circumvention of maximum loan limits required by Section IV (1)(a) shall be equally applicable to the maximum loan limits prescribed herein.

(2) Borrower covenants and agrees to cause the implementing agencies to seek AID written concurrence prior to effecting any changes in lending criteria which have been previously submitted to and approved by AID pursuant to the Program.

(3) Borrower agrees to undertake a systematic study of the basic problems of land tenure and use in the Dominican rural sector to examine these problems in relation to long-range production and social goals and focus on institutional and policy changes such as taxation and land transfer mechanisms which may be necessary to solve such land problems.

SECTION V - ISSUES AND DAEC CONSIDERATIONS

After the LA/DAEC consideration of the Agricultural Sector Loan IRR on April 9, 1974, comments and guidelines were given in STATE 085059 regarding a number of issues, proposed policy actions, and identified activities which were recommended to be brought to the attention of reviewers in the CAP. These items are summarized below, followed by references to the Sections of the CAP in which they are addressed.

Ability of GODR to use effectively credit content of the loan program

Analysis of the ability of the GODR to utilize effectively the magnitude of proposed credit within an expanded time frame of three years, shows that the credit can be extended and used as planned. Special emphasis has been given to small farmer group lending mechanisms. Precise criteria have been developed for small farmer lending under the program. (See Section III A and B.1.)

GODR policies affecting the loan program

During intensive review several policy questions were explored including (1) budgetary plans and allocations (see Section I B. and III B.1.); (2) pricing policies (see Section III B.2.); (3) policy shift in AgBank lending to lower loan ceiling (see Section III B.1.); (4) increase in agricultural interest rates (see Section III B.1.); (5) mechanisms to provide incentives to commercial banks (see Section III B.1.b.); (6) legal and administrative changes which are to be carried out as a Condition Precedent (see Section IV); (7) degree of planning achieved with GODR and private entities in the design of the loan program (see Section II).

Income distribution objectives

Technical and economic feasibility of the micro-economic analysis demonstrates that farm incomes will be improved and a higher level of technology will provide greater employment. Criteria for lending credit will assure a maximum participation by small farmers. Those outside the target group at a lower level are expected to be reached indirectly by the Program and directly by related programs of the GODR. (See Section III B.1. (c).)

Institutional constraints

Various elements of the loan program will address the need to strengthen institutional capabilities of GODR implementing agencies. The GODR has initiated discussions with IICA for the possible use of its management services as technical assistance for its Marketing Research/Farm Management sub-program element. (See Section II B. and Section II D. 3.)

Linkages

Selection of feeder roads will be made by SEA to correspond with the needs of farmers in inaccesible areas to receive credit and services. Regarding research, linkages have already been established by SEA with CIAT to provide technical assistance in rice and bean production efforts. (See Section III B.4 and II D.5.)

Program relationship with other donor inputs

Analysis of other donor inputs into the agricultural sector shows that while other donor organizations are providing substantial assistance to agriculture, their programs and the program of this loan are complementary and not in conflict. AID's capital assistance will fill a resource need not being met by other donors. (See Sections II D. and VI B.)

Role of cooperatives

Existing cooperatives have the capability to participate in input marketing, complementing other entities in the delivery system; Channeling of inputs through cooperatives will strengthen the viability of existing cooperatives and provide incentives to create new cooperative groups. (See Section III B.1. (b) and (d).)

Guarantee loan fund

No AID financing will be provided for a guarantee loan fund. The GODR plans to activate its existing guarantee loan fund in the Central Bank as an incentive to commercial bank lending to agriculture. (See Section III B.1.)

Rural feeder roads

The design of rural feeder roads construction will maximize hand labor content, providing employment and increased income to small farmers during the off season. Attention has been given to construction of these roads on a regional, rather than individual basis, in order to maximize the effectiveness of all elements of the loan program. Details in the narrative describe financial procedures for disbursement costs of feeder roads. (See Section III B.4.)

Higher education

This element will build upon the previous AID participant training programs and provide a continuing flow of trained people from indigenous institutions and will be limited to two Dominican universities for B.S. degree training. LASPAU-LATF alternatives and ECF funding of participants were not considered appropriate to this program element. (See Section III B.3.)

Vocational training

Analysis has been made of estimated costs and results of both formal and non-formal vocational training programs for sub-professionals and progressive small farmers. The "Radio Outreach Program" will only marginally affect the vocational training group through its dissemination of marketing and crop information and is not a component part of the vocational education program. (See Section III B.3.)

Land use

The USAID does not consider this a propitious time to deal directly with land use policy. The cadastral survey element of the current IDB PIDAGRO program is a prerequisite for land reform. It is anticipated that IDB intends to consider provision of external assistance in support of a GODR land use plan as a part of a PIDAGRO II program. The criteria for receipt of credit under the AID sector loan program will influence a more efficient use of productive resources on land tilled by the target group and set the stage for further GODR rational land use considerations. (See Section II B.1.)

Availability of fertilizer

The current policy of the Central Bank is to make foreign exchange available in whatever amounts required by input importers. Due to the

relatively small quantities needed in this Program, there is reasonable assurance that the Dominican Republic will be competitive with other countries for spot purchases of available fertilizers at world prices. Fertilizer will be available to small farmers at reasonable prices. (See Section II B.2. and III B.1. (b).)

Mechanism for Evaluation

The intensive review has developed indicators which, with baseline study data, will serve as measurements of progress annually during the disbursement period plus at least one follow-up evaluation. (See Section III C.6.)

Other than those addressed and provided for in this CAP, there are no outstanding issues.

SECTION VI - FINANCIAL, SOCIAL AND ECONOMIC CONSIDERATIONS

A. Borrower and Terms of the Loan

The Borrower will be the Government of the Dominican Republic. The executing agency will be the Secretariat of State for Agriculture. The terms recommended for the proposed loan are 40 year repayment by the Borrower, including a 10-year grace period, at an interest rate of 3% per annum during the grace period and 3% per annum thereafter. The Sector Loan Committee is of the opinion that the terms recommended are reasonable for this sectoral non-revenue producing program. The terms are legal under both U.S. and Dominican law.

B. Availability of Other External Donor Financing

IDB, IBRD, and Eximbank have been advised of the proposed loan and have indicated that they are not interested in financing this program.

C. Prospects for Repayment

The prospects for repayment of the proposed loan are excellent. The Government of the Dominican Republic will undertake the obligation and assume the exchange risk. The debt burden of the GODR is low compared to other Latin American countries of similar economic conditions. (See Section I A.)

D. Consistency With AID Agricultural Strategy

The Program is a progressive elaboration in greater depth of the objectives and analyses contained in the October 1973 DAP. The observations in the DAP Decision Memorandum and the March 1974 Agricultural Sector Assessment have been taken into account and this CAP is consistent with both. The Program is consistent with the new FAA Section 110 (A) in that the GODR has provided assurances that it will contribute substantially more than 25 percentum of the costs (an estimated 65 percent) of the entire program with respect to which this loan assistance is provided.

In addition, the CAP incorporates performance criteria to facilitate the subsequent evaluation of progress toward objectives in conformity with AIDTO CIRC A-165 dated February 26, 1974. The USAID concludes that the loan Program is consistent with and supportive of AID agricultural strategy.

E. Environmental Aspects of the Program

The activities of the Agricultural Sector Loan Program will have a positive overall impact on the environment in the sense that a more productive use of existing farm lands will result. An expert ecologist who participated in preparation of the USAID agricultural sector assessment has recommended that, if a more rational use were made of agricultural land according to land capability classifications and ecological life zones potential (shifting some rice production to more appropriate lands, for example), more efficient use could be made of such natural resources as water, land, forests and fisheries. Under the approach adopted by the Dominican Government, and supported by this Program, improved utilization of land is expected to contribute significantly to a reduction in water losses, denudation, leaching of nutrients from the soil and a general improvement of the physical environment. The result of these measures will be shown through increased food production for the rapidly growing population.

The use of fertilizers at low to moderate levels, as anticipated in the crop production activities under the Program, will not have any detrimental effect upon the environmental but rather the opposite. Technical specialists of SEA will guide the proper handling and application of insecticides and herbicides, thus minimizing any adverse effects to humans. The production and increased availability of more nutritious food to the domestic economy will help to maintain and eventually improve the general level of health of the population.

The labor intensive construction activities of penetration roads to be built under the program will result in a minimal disturbance to the surrounding terrain, as the design of such roads essentially follows the contour of the land. As the use of machinery will be kept to a minimum, and since the road design include cement culverts and river fords, little soil erosion will result.

The Borrower and sub-implementing agencies will be under an obligation to take ecological considerations into account, where appropriate, in the approval of any specific sub-project under the Agricultural Sector Loan. Accordingly, the standard environmental provisions will be incorporated in the Loan Agreement.

F. Impact on U.S. Economy

The loan program does not contemplate the creation of any

entities which would compete with U.S. enterprises. Moreover, it will not adversely affect the U.S. economy. The U.S. has traditionally enjoyed a large percentage of the Dominican market. The 1973 U.S. portion of the Dominican Republic's global import market was about 55.4%. This represents an increase from 54.0% in 1972, 52.0% in 1971 and 51.8% during 1970. As a result of the recent changes in the monetary parity of the U.S. dollar vis-a-vis other currencies, and increased promotional activities on behalf of U.S. exports, this loan, by improving the Dominican Republic's import capacity, should also help improve still further the U.S. share of the Dominican market. The very purposes for which this loan is designed should help to bring about a stable, growing economy, one which will provide a larger market for U.S. exports over the long run.

G. Title IX - Building of Democratic Institutions

The agricultural sector loan directly addresses Title IX objectives by placing emphasis on assisting to achieve maximum participation in the task of economic development on the part of the people of the Dominican Republic. The loan's effects in encouragement of private voluntary cooperative organizations, enabling additional small farmers to participate in the use of institutional credits, building strengthened government agricultural institutions, and providing vocational skills training opportunities to rural inhabitants will enable thousands of people to participate and become deeply involved in the process of building democratic institutions. It constitutes a practical basis for personal development by: (1) providing opportunities for decision making, growth of responsibility and development of economic and social skills; (2) changing individual motivation and attitudes through the outreach of trained credit agents who develop with the farmer adequate technological packages, and the dissemination to farmers of the information developed by the new Market Research/Farm Management Division of SEA; and (3) developing responsible professional leadership through university training.

H. Consistency With CIAP Reviews

The agricultural sector loan addresses one of the major findings and recommendations made by the subcommittee of the Inter-American Committee on the Alliance for Progress (CIAP) in its June 1973 review of the Dominican economy.

In this review, CIAP expressed its concurrence and support of Dominican objectives in the agricultural sector. CIAP noted with

interest, in its January 1974 preliminary report, the Dominican identification of the agricultural sector as one of the foremost features of its development policy. Included in its comments, CIAP noted the increasing interest of the GODR in making structural changes in its agricultural sector to better serve the national economy, the increased agricultural sector planning activities, and the GODR's proposal to continue priority actions to create new employment opportunities and raise the standard of living in rural areas. CIAP noted that these policy actions have been more actively pursued in recent months as a result of the pressures of the worldwide shortage of foodstuffs as related to population and inflationary pressures, as well as the international outlook for traditional agricultural exports.

I. Certification of USAID Director

The Mission Director certified on May 30, 1974, that in his opinion the Government of the Dominican Republic has demonstrated the necessary capacity to carry out this sector loan. Refer to Annex A, Exhibit 2, for the text of this certification.

CHECKLIST OF STATUTORY CRITERIA

(Alliance for Progress)

In the right-hand margin, for each item, write answer or, as appropriate, a summary of required discussion. As necessary, reference the section(s) of the Capital Assistance Paper, or other clearly identified and available document, in which the matter is further discussed. This form may be made a part of the Capital Assistance Paper.

The following abbreviations are used:

FAA - Foreign Assistance Act of 1961, as amended.

FAA, 1973 - Foreign Assistance Act of 1973.

App. - Foreign Assistance and Related Agencies Appropriations Act, 197

MMA - Merchant Marine Act of 1936, as amended.

BASIC AUTHORITY

1. *FAA § 103; § 104; § 105; § 106; § 107. Is loan being made*

a. for agriculture, rural development or nutrition;	Yes. These are the main purposes of the loan.
b. for population planning or health;	The loan program will improve health through its support of increased agricultural food production.
c. for education, public administration, or human resources development;	The loan program will assist to develop human resources through its vocational education and professional education element.
d. to solve economic and social development problems in fields such as transportation, power, industry, urban development, and export development;	The loan program will assist in solving economic and social development problems in the field of transportation through its feeder road component.

e. in support of the general economy of the recipient country or for development programs conducted by private or international organizations.	The loan program is supportive of and complementary to other donor development programs. See Section IID.

COUNTRY PERFORMANCE

Progress Towards Country Goals

2. *FAA § 208; § 251(b).*

A. Describe extent to which country is:

(1) Making appropriate efforts to increase food production and improve means for food storage and distribution.	The Dominican Republic at the present time is making a concerted effort to increase food production. (See Section I.)
(2) Creating a favorable climate for foreign and domestic private enterprise and investment.	The Dominican Republic has taken numerous steps to improve its climate for private investment as evidenced by its support for expanded industrial and agricultural credit facilities, participation in the AID investment guaranty program, the passage of an updated Industrial Incentive Law, and a new Tourism Incentive Law to encourage foreign and domestic enterprise and investment.

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(3) Increasing the public's role in the developmental process.	The public's role is increasing through the expansion of private and public development banks, savings and loan associations, credit unions, transportation and agricultural cooperatives. The Marketing Research/Farm Management element of this sector program is aimed at increasing the decision-making role of the rural community in the development process.
(4) (a) Allocating available budgetary resources to development.	The Dominican Republic is allocating substantial budgetary resources to development; its total public sector capital budget has averaged over 36% of total budgeted expenditures in 1971, 1972 and 1973.
(b) Diverting such resources for unnecessary military expenditure (See also Item No. 20) and intervention in affairs of other free and independent nations.) (See also Item No. 11)	The Dominican Republic has not been using its resources for unnecessary military expenditures nor is it intervening in the affairs of other countries
(5) Making economic, social, and political reforms such as tax collection improvements and changes in land tenure arrangements, and making progress toward respect for the rule of law, freedom of expression and of the press, and recognizing the importance of individual freedom, initiative, and private enterprise.	The Dominican Republic permits free political expression, tax collection methods are improving and revenues are up; and a land reform program is in effect; the Dominican Republic complies with the other criteria.
(6) Adhering to the principles of the Act of Bogota and Charter of Punta del Este.	The Dominican Republic adheres to the principles of the Act of Bogotá and the Charter of Punta del Este

(7) Attempting to repatriate capital invested in other countries by its own citizens.	The Dominican Republic is making reasonable efforts to encourage repatriation of capital invested in other countries by its citizens.
(8) Otherwise responding to the vital economic, political, and social concerns of its people, and demonstrating a clear determination to take effective self-help measures.	The Dominican Republic is encouraging and cooperating in the establishment of domestic and foreign investment in mining, tourism, agriculture (including the program contemplated by this Loan, with its substantial government contribution) and industry and undertaking various other self-help efforts.
B. Are above factors taken into account in the furnishing of the subject assistance?	Yes

Treatment of U.S. Citizens and Citizens of Recipient Country

3. *FAA § 620(c). If assistance is to government, is the government liable as debtor or unconditional guarantor on any debt to a U.S. citizen for goods or services furnished or ordered where (a) such citizen has exhausted available legal remedies and (b) debt is not denied or contested by such government?*	According to the best information available, the Dominican Republic is not known to be so indebted.
4. *FAA § 620(e)(1). If assistance is to a government, has it (including government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities?*	No.

5. FAA § 620(a); Fisherman's Protective Act. § 5. If country has seized, or imposed any penalty or sanction against, any U.S. fishing vessel on account of its fishing activities in international waters,	The Dominican Republic has not taken any such action.
a. has any deduction required by Fishermen's Protective Act been made?	Not applicable.
b. has complete denial of assistance been considered by A.I.D. Administrator?	Not applicable.
6. FAA, 1973 § 32. To what extent does government of recipient country practice the internment or imprisonment of that country's citizens for political purposes?	No longer applicable.

Relations with U.S. Government and Other Nations

7. FAA § 620(a). Does recipeint country furnish assistance to Cuba or fail to take appropriate steps to prevent ships or aircraft under its flag from carrying cargoes to or from Cuba?	No.

8. FAA § 620(b). If assistance is to a government, has the Secretary of State determined that it is not controlled by the international Communist movement?	The Secretary of State has determined the Dominican Republic is not controlled by the international Communist movement.
9. FAA § 620(d). If assistance is for any productive enterprise which will compete in the United States with United States enterprise, is there an agreement by the recipient country to prevent export to the United States of more than 20% of the enterprise's annual production during the life of the loan?	It is not planned that AID funds will be used to finance productive enterprises which will compete in the U.S. with U.S. enterprises.
10. FAA § 620(f). Is recipient country a Communist country?	No.
11. FAA § 620(i). Is recipient country in any way involved in (a) subversion of, or military aggression against, the United States or any country receiving U.S. assistance, or (b) the planning of such subversion or aggression?	No.
12. FAA § 620(j). Has the country permitted, or failed to take adequate measures to prevent, the damage or destruction, by mob action, of U.S. property?	Adequate measures have and are being taken by the Dominican Republic in this regard.

13.	FAA § 620(l). If the country has failed to institute the investment guaranty program for the specific risks of expropriation, in convertibility or confiscation, has the A.I.D. administration within the past year considered denying assistance to such government for this reason?	The Dominican Republic has in fact signed and instituted such an agreement.
14.	FAA § 620(n). Does recipient country furnish goods to North Viet-Nam or permit ships or aircraft under its flag to carry cargoes to or from North Viet-Nam?	No.
15.	FAA § 620(q). Is the government of the recipient country in default on interest or principal of any A.I.D. loan to the country?	No such default exists.
16.	FAA § 620(t). Has the country severed diplomatic relations with the United States? If so, have they been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption?	No.
17.	FAA § 620(u). What is the payment status of the country's U.N. obligations? If the country is in arrears, were such arrearages taken into account by the A.I.D. Administrator in determining the current A.I.D. Operational Year Budget?	The Dominican Republic is not known to be in arrears in payment of its U.N. dues and its voting rights are unimpaired.

18.	FAA § 481. *Has the government of recipient country failed to take adequate steps to prevent narcotic drugs and other controlled substances (as defined by the Comprehensive Drug Abuse Prevention and Control Act of 1970) produced or processed, in whole or in part, in such country, or transported through such country, from being sold illegally within the jurisdiction of such country to U.S. Government personnel or their dependents, or from entering the U.S. unlawfully?*	The Government has instituted adequate measures for the control of narcotics and other controlled substances.
19	FAA, 1973 § 29. *If (a) military base is located in recipient country, and was constructed or is being maintained or operated with funds furnished by U.S., and (b) U.S. personnel carry out military operations from such base, has the President determined that the government of recipient country has authorized regular access to U.S. correspondents to such base?*	Not applicable.

Military Expenditures

20.	FAA § 620(s). *What percentage of country budget is for military expenditures? How much of foreign exchange resources spent on military equipment? How much spent for the purchase of sophisticated weapons systems? (Consideration of these points is to be coordinated with the Bureau for Program and Policy Coordination, Regional Coordinators and Military Assistance Staff (PPC/RC).)*	Total defense expenditures as percentage of total expenditures were 10.4% in 1971 and 9.8% in 1972. As a percentage of GDP, defense expenditures were 2.4% in 1971 and 2.0% in 1972. Expenditures for 1973 are expected to demonstrate similar percentages. The amount of foreign exchange resources spent on military equipment is small. None is spent for sophisticated weapons. U.S. development assistance and P.L. 480 sales are not being used for military purposes.

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CONDITIONS OF THE LOAN

General Soundness

21.	FAA § 201(d). Information and conclusion on reasonableness and legality (under laws of country and the United States) of lending and relending terms of the loan.	Terms are legal and reasonable under both U.S. and Dominican law.
22.	FAA § 251(b)(2); § 251(e). Information and conclusion on activity's economic and technical soundness. If loan is not made pursuant to a multilateral plan, and the amount of the loan exceeds $100,000, has country submitted to A.I.D. an application for such funds together with assurances to indicate that funds will be used in an economically and technically sound manner?	The economic and technical soundness of this loan program are analyzed and confirmed in the body of the loan paper. The GODR has submitted an application to AID (see Annex B, Exhibit 1). The GODR has given assurances that the funds will be used in an economically and technically sound manner.
23.	FAA § 251(b). Information and conclusion on capacity of the country to repay the loan, including reasonableness of repayment prospects.	The terms of the loan are felt to be within the capability of the GODR to repay and there are reasonable prospects of repayment (See Section III B and IV G.)
24.	FAA § 251(b). Information and conclusion on availability of financing from other free-world sources, including private sources within the United States.	Financing from other free-world sources, including other U.S. sources, has been determined as not available at terms necessary for this program. See Section IV F.

25. FAA § 611(a)(1). Prior to signing of loan will there be (a) engineering, financial, and other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the United States of the assistance?

a) Since this loan is executed by an entity of the GODR, acting as financial intermediary by redistributing the proceeds of the loan to other agencies, engineering plans are not required. Financial plans to carry out the program have been made and are included in Sections II and IV. Organizational plans are set forth in Sections I, II and Annex B, Exhibit 2. Preliminary implementation plans are contained in Sections II, VI and Annex B, Exhibit 2. b) A reasonably firm estimate of the cost of the program is set forth in Sections II, IV and VI.

26. FAA § 611(a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of loan?

No further legislative actions require

27. FAA § 611(e). If loan is for Capital Assistance, and all U.S. assistance to project now exceeds $1 million, has Mission Director certified the country's capability effectively to maintain and utilize the project?

Yes, the certification prescribed by this section is attached as Annex A, Exhibit 2.

Loan's Relationship to Achievement of Country and Regional Goals

28. FAA § 207; § 251(a); § 113. Extent to which assistance reflects appropriate emphasis on: (a) encouraging development of democratic, economic, political, and social institutions; (b) self-help in meeting the country's food needs; (c) improving availability of trained manpower in the country; (d) programs designed to meet the country's health needs;

a) The proposed program is intended to strengthen the national institutions responsible for agricultural research and training, and which provide financial assistance to help small farmers improve their participation in these institutions.
b) The primary purpose of the program is to assist the GODR to carry out it program to meet its food needs.
c) Part of the loan will be used to train manpower for the country's agricultural needs.
d) The program will contribute to improvement of nutrition and health by increasing incomes and food

(e) other important areas of economic, political, and social development, including industry; free labor unions, cooperatives, and Voluntary Agencies; transportation and communication; planning and public administration; urban development, and modernization of existing laws; or (f) integrating women into the recipient country's national economy.	e) The program will strengthen the cooperative movement and assist in upgrading of technology, availability of credit, and increased production in the agricultural sector. f) The program will further the integration of women into the Dominican national economy. Women are eligible and are expected to participate in the implementation of the program and to share in the benefits of the program.
29. FAA § 209. *Is project susceptible of execution as part of regional project? If so why is project not so executed?*	No.
30. FAA § 251(b)(3). *Information and conclusion on activity's relationship to, and consistency with, other development activities, and its contribution to realizable long-range objectives.*	The activity will have a basic significance for all of Borrower's development efforts and will play an essential part in the realization of its long range objectives in agriculture as discussed in Section I A.
31. FAA § 251(b)(7). *Information and conclusion on whether or not the activity to be financed will contribute to the achievement of self-sustaining growth.*	The program will contribute to the country's self-sustaining growth by providing the most essential basis (research, education, credit and technology) to continued development of the agricultural sector.
32. FAA § 209; § 251(b)(8). *Information and conclusion whether assistance will encourage regional development programs, and contribute to the economic and political integration of Latin America.*	The program does not relate directly to regional activities.

33. FAA § 251(g); § 111. Information and conclusion on use of loan to assist in promoting the cooperative movement in Latin America.	Loan activity concerned with inputs envisages the use of these funds for cooperatives as well as for other types of enterprises.
34. FAA § 251(h). Information and conclusion on whether the activity is consistent with the findings and recommendations of the Inter-American Committee for the Alliance for Progress in its annual review of national development activities.	The proposed loan is consistent therewith. See Section VI H.
35. FAA § 281(a). Describe extent to which the loan will contribute to the objective of assuring maximum participation in the task of economic development on the part of the people of the country, through the encouragement of democratic, private, and local governmental institutions.	The program contributes to these objectives through the expansion and improvement of GODR marketing and farm management services and of credit which assists farmers in the establishment of production and marketing cooperatives and farmers associations.
36. FAA § 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civic education and training in skills required for effective participation in governmental and political processes essential to self-government.	The program is designed to address the research, technology and production needs of small farmers and train technicians, professionals, and farmers to develop the human resources necessary for the continuing task of agricultural and social development.

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

a) The loan will increase the flow of international trade by making free dollars available to the GODR with which it can continue a substantial importation of necessary goods. See Section II B and VI.
b) The program will provide resources and incentives to small farmers to enable them to take advantage of competitive opportunities presented.
c) The program contains an element to strengthen the cooperative movement.
d) The loan will discourage monopolistic practices by helping to provide to many small farmers the independence to make their own production decision.
e) The loan is designed to improve the technical efficiency of farmers by providing marketing, credit, and farm management services and will also improve the technical efficiency to small to medium marketers and agro-industry.
f) N.A.

38. FAA § 619. If assistance is for newly independent country; is it furnished through multilateral organizations or plans to the maximum extent appropriate?

The Dominican Republic is not a newly independent country.

Loan's Effect on U.S. and A.I.D. Program

39. FAA § 251(b)(4); § 102. Information and conclusion on possible effects of loan on U.S. economy, with special reference to areas of substantial labor surplus, and extent to which U.S. commodities and assistance are furnished in a manner consistent with improving the U.S. balance of payments position.

The Mission does not contemplate any adverse effect on the U.S. economy. See Section VI H.

40. FAA § 252(a). Total amount of money under loan which is going directly to private enterprise, is going to intermediate credit institutions or other borrowers for use by private enterprise, is being used to finance imports from private sources, or is otherwise being used to finance procurements from private sources.

None of the funds made available under this loan, except for technical assistance, will go directly to private enterprise. The loan will be disbursed directly to the government, whose agencies in turn will supply funds to large numbers of individuals in the private sector who will procure from private sources.

41. FAA § 601(b). Information and conclusion on how the loan will encourage U.S. private trade and investment abroad and how it will encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).	It is anticipated that a substantial number of the dollars expended under this loan to purchase local currency will return to the U.S. in payment for U.S. exports to the Dominican Republic.
42. FAA § 601(d). If a capital project, are engineering and professional services of U.S. firms and their affiliates used to the maximum extent consistent with the national interest?	No procurement of engineering services is contemplated under the loan. Professional services of U.S. technical assistance will be used to the maximum extent feasible, consistent with current AID policy.
43. FAA § 602. Information and conclusion whether U.S. small business will participate equitably in the furnishing of goods and services financed by the loan.	To the extent possible, small business notification in accordance with AID procedure will be complied with.
44. FAA § 620(h). Will the loan promote or assist the foreign aid projects or activities of the Communist-Bloc countries?	No.
45. FAA § 621. If Technical Assistance is financed by the loan, information and conclusion whether such assistance will be furnished to the fullest extent practicable as goods and professional and other services from private enterprise on a contract basis. If the facilities of other Federal agencies will be utilized, information and conclusion on	Under technical assistance, the loan will utilize the services of private enterprise to the maximum extent possible. Non-private technical services are not contemplated.

whether they are particularly suitable, are not competitive with private enterprise, and can be made available without undue interference with domestic programs.	
Loan's Compliance with Specific Requirements	
46. *FAA § 110(a); § 208(c). Has the recipient country provided assurances that it will provide at least 25% of the costs of the program, project, or activity with respect to which the Loan is to be made?*	Yes. See Section III C3 and Annex B, Exhibits 1 and 2.
47. *FAA § 112. Will loan be used to finance police training or related program in recipient country?*	No.
48. *FAA § 114. Will loan be used to pay for performance of abortions or to motivate or coerce persons to practice abortions?*	No.
49. *FAA § 201(d). Is interest rate of loan at least 2% per annum during grace period and at least 3% per annum thereafter?*	Yes.
50. *FAA § 604(a). Will all commodity procurement financed under the loan be from the United States except as otherwise determined by the President?*	No commodity procurement is envisaged under the loan.
51. *FAA § 604(b). What provision is made to prevent financing commodity procurement in bulk at prices higher than adjusted U.S. market price?*	N.A.

52.	*FAA § 604(d). If the cooperating country discriminates against U.S. marine insurance companies, will loan agreement require that marine insurance be placed in the United States on commodities financed by the loan?*	N.A.
53.	*FAA § 604(e). If offshore procurement of agricultural commodity or product is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity?*	N.A.
54.	*FAA § 604(f). If loan finances a commodity import program, will arrangements be made for supplier certification to A.I.D. and A.I.D. approval of commodity as eligible and suitable?*	The loan will not finance a commodity import program.
55.	*FAA § 606(a). Information on measures to be taken to utilize U.S. Government excess personal property in lieu of the procurement of new items.*	N.A. No procurement of property will be made from loan funds.
56.	*FAA § 611(b); App. § 101. If loan finances water or water-related land resource construction project or program, is there a benefit-cost computation made, insofar as practicable, in accordance with the procedures set forth in the Memorandum of the President dated May 15, 1962?*	The loan is not made to finance water or water-related land resource construction projects or programs.

57. FAA § 611(e). If contracts for construction are to be financed, what provision will be made that they be let on a competitive basis to maximum extent practicable?

N.A.

58. FAA § 612(h); § 636(h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the United States are utilized to meet the cost of contractual and other services.

The GODR is financing the major portion of the cost of the program for which this loan is made; this financing includes the cost of contractual and other services. No U.S. owned foreign excess currency is available for these purposes.

59. App. § 113. Will any of loan funds be used to acquire currency of recipient country from non-U.S. Treasury sources when excess currency of that country is on deposit in U.S. Treasury?

No.

60. FAA § 612(d). Does the United States own excess foreign currency and, if so, what arrangements have been made for its release?

No.

61. FAA § 620(g). What provision is there against use of subject assistance to compensate owners for expropriated or nationalized property?

The loan agreement will not permit such use.

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62.	FAA § 620(f). If construction of productive enterprise, will aggregate value of assistance to be furnished by the United States exceed $100 million?	No.
63.	FAA § 636(i). Will any loan funds be used to finance purchase, long-term lease, or exchange of motor vehicle manufactured outside the United States, or any guaranty of such a transaction?	No motor vehicles are to be obtained under this loan.
64.	App. § 103. Will any loan funds be used to pay pensions, etc., for military personnel?	No.
65.	App. § 105. If loan is for capital project, is there provision for A.I.D. approval of all contractors and contract terms?	The Loan Agreement will require procurement of technical service contractors and contract terms to be subject to AID approval.
66.	App. § 107. Will any loan funds be used to pay UN assessments?	No.
67.	App. § 109. Compliance with regulations on employment of U.S. and local personnel. (A.I.D. Regulation 7).	N.A.

68.	App. § 110. Will any of loan funds be used to carry out provisions of FAA §§ 209(d) and 251(h)?	No.
69.	App. § 114. Describe how the Committee on Appropriations of the Senate and House have been or will be notified concerning the activity, program, project, country, or other operation to be financed by the Loan.	A description of the loan propos was included in the FY 1974 Congressional Presentation. As appropriate, further notification will be furnished by the AID Legislative Affairs Office.
70.	App. § 601. Will any loan funds be used for publicity or propaganda purposes within the United States not authorized by the Congress?	No.
71.	MMA § 901.b; FAA § 640C.	
	(a) Compliance with requirement that at least 50 per centum of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed with funds made available under this loan shall be transported on privately owned U.S.-flag commercial vessels to the extent that such vessels are available at fair and reasonable rates.	(a) N.A. No commodities will be funded by the loan.
	(b) Will grant be made to loan recipient to pay all or any portion of such differential as may exist between U.S. and foreign-flag vessel rates?	(b) No.

CERTIFICATION PURSUANT TO SECTION 611 (e) OF THE FOREIGN ASSISTANCE ACT OF 1961, AS AMENDED

SUBJECT: DOMINICAN REPUBLIC - Capital Assistance - Agriculture Sector Loan.

I, John B. Robinson, as Director of the United States A.I.D. Mission to the Dominican Republic, having taken into account, inter alia, the maintenance and utilization of projects in the Dominican Republic previously financed or assisted by the United States, do hereby certify that in my judgment the Dominican Republic has both the financial capability and the human resources to maintain and utilize effectively the proposed Agriculture Sector Loan.

This judgment is based primarily on the facts developed in the Capital Assistance Paper for the proposed loan of $12.0 million, A.I.D.'s analysis and evaluation of the Dominican Agricultural Sector contained in the document entitled "Agricultural Sector Analysis", and a careful review of the financial assistance previously provided the Dominican Republic for agricultural programs.

John B. Robinson
Mission Director

May 30, 1974
Date

(unofficial translation)

JOAQUIN BALAGUER
PRESIDENT OF THE DOMINICAN REPUBLIC

Santo Domingo, D.N.

May 24, 1974

His Excellency
Mr. Robert A. Hurwitch
Ambassador of the United States
of America
Calle Dr. Pedro Henríquez Ureña
Ciudad.-

His Excellency:

The Government which I preside is presently developing an Analysis of the Agriculture and Cattle Sector directed towards the establishment of a strategy which will permit it to increase the agricultural production, improving at the same time the living conditions of the rural population.

The Dominican Government does not have at the present time the total amount necessary for the fulfillment of this project, for which it needs additional resources. It is for this reason that it requests from the Government of the United States of America, through the Agency for International Development (A.I.D.), a loan amounting to US$12,000,000.00, which will be complemented by the Dominican Government with the contribution of the necessary counterpart funds.

The loan funds requested will be utilized in programs and activities which will be put into effect by the government and the private sector, both interested in increasing the agricultural productivity and the improvement of the socioeconomic condition of the small farmers, basically by channeling, in greater scale, the production

resources, through the credit field, the generation of employment which will result in higher income, the improvement of the production and business infrastructures, and the training of the necessary technical assistance.

The attached schedule presents the preliminary disbursement plan of both the national and foreign funds, in pesos and dollars, by institutions and categories, programmed for a period of three years, that would be initiated in the second semester of this year.

The counterpart local funds of this sector loan will be channelled on annual basis through the general budget of the Nation, and will be added to the operational expenditures and the customary allotments assigned to the Secretariat of State of Agriculture or to the other institutions of that sector.

If the Government of the United States of America, through the Agency for International Development, would grant the loan requested herein by the Dominican Government, the Dominican Government would, as complementary measures and in assistance to the enumerated objectives, take steps of great importance in the priority reorientation to be initiated by the Dominican Government with greater government resources for the small farmers, such as the following:

The Secretariat of State of Agriculture would commit itself to:

a) Establish an efficient purchase, distribution and control system of agricultural commodities, together with the Central Bank, the Agricultural Bank, and the Institute for Development and Cooperative Credit, and the Dominican Development Foundation.

b) Program, through the General Office of Rural Roads, the construction of rural roads using the local manual labor available to the maximum.

c) Restructure and reinforce its Department of Agriculture and Cattle Economy in order to enable it to supply continuous and reliable agriculture and cattle statistics to all the sector institutions.

d) Improve the agricultural and cattle extension service in order to give a more effective technical assistance, especially to the small farmers.

e) Organize the small and medium farmers in associations to facilitate credit, commercialization, and technical assistance.

The Central Bank would commit itself to:

a) Provide the Commercial Bank with facilities and incentives in order to channel a greater quantity of its resources to agriculture and cattle credit, especially to the medium and large farmer, as a complement to the financing program of the Agricultural Bank which will be strengthened in this program for the small farmers.

b) Establish the rediscount rates for specific agriculture and cattle projects at a lower percentage than the present.

c) Study, in conjunction with AID, the Secretariat of State for Agriculture, and the Agricultural Bank the creation of an insurance or guarantee mechanism for the investments of the Private Banks in the priority crops specified by the Secretariat of Agriculture.

The Agricultural Bank would commit itself to:

a) Gradually decrease the maximum loans within a period of three years, by establishing, on an annual basis, the decreases of these maximum ceilings and the dates in which these will be put into effect, in order that at the end of the third year the maximum amounts to be lent to individuals will be $10,000 for crops and $20,000 for cattle.

b) Orient its financing preferably toward small farmers' associations.

c) Improve its administrative and operational system in order to timely process requests and disbursements and offering a more adequate supervision.

d) Train the necessary number of new administrative personnel agents and supervisors for this program, chosen from the candidates with the highest academic degree available.

e) Include the Secretary of State for Agriculture on its Board of Directors, and, in addition, at the farm level, will include qualified representatives from the Secretariat of Agriculture in its decision mechanisms.

With the assurance that His Excellency The Ambassador of the United States of America will mediate with the Agency for International Development for the approval of the requested credit, I take this opportunity to present to you the feelings of my highest consideration and appreciation.

JOAQUIN BALAGUE

DRAFT ANNEX TO THE LOAN AGREEMENT

I. Background and Objectives

A. Background

The agricultural sector assessment developed by the Secretariat of State for Agriculture (SEA) lists five major constraints for the sector. This Program is designed to assist in progressively overcoming four of these constraints, namely:

- Limited use of modern inputs.
- Inequities in credit availability in comparison with other sectors and between farm groups.
- Deficiencies in the marketing system.
- Underutilization of human resources due to lack of basic skills, and an inadequate base of qualified agriculturalists at the professional level.

The agricultural sector assessment has provided confirmation that development prospects in the Dominican agricultural sector have progressively and materially improved over the past several years as a result of a series of institutional and policy changes and specific regional projects. SEA has been strengthened, especially with respect to professional personnel, planning and program coordination. As a result, SEA has developed a sectoral program to (1) establish more effective policies, (2) increase needed allocations of resources to the agricultural sector, and (3) strengthen agricultural institutions and the process of coordination between them.

B. The Program

The major objectives of this program, which is designed to assist SEA in alleviating constraints on the sector and improve the quality of rural life, are to:

1. Increase food production for domestic consumption.

2. Facilitate a more equitable distribution of rural income.

3. Increase employment in rural areas.

The primary beneficiaries or target group of the Program's institutional credit, technical assistance and other farm services are farmers on farm units having an area of less than 32 hectares in size, who are not presently receiving institutional credit, but which have profitable production potential.

The Program to be carried out pursuant to this Agreement will support actions to: (1) significantly increase availability and quantity of credit; (2) make inputs more available; (3) improve the marketing system, including the rural road network; (4) develop better institutional services and coordination; and (5) widen the human resource base of basic farm skills and professional agriculturalists, all of which actions are designed to better serve the small farmers. Acceleration of this Program will be provided by the establishment of key policies or policy changes in the institutional structures serving agriculture. Selection of the specific activities for financing has been done on the basis of the continuing sectoral assessment process and the objectives listed above.

II. Implementation of the Loan

The Program to be carried out in relation to this loan will be implemented by those agencies and organizations specified in Section of the Loan Agreement.

The AID contribution to the discrete activities to be funded under the Program shall be as follows:

PROGRAM ELEMENT	ACTIVITY	AMOUNT OF LOAN FUNDS (US $000)	
(1) Credit	(a) Small Farm Credit		
	SEA	1,500	
	Caretaker	1,000	
	AgBank	2,500	
	DDF	1,000	6,000
	(b) Input Credit		
	SEA	200	
	IDECOOP	800	
	Central Bank	2,050	3,050
(2) Marketing Research/ Farm Management	SEA Mktg.Research Division		300
(3) Human Resources	(a) SEA-Vocational Education		150
	(b) SEA-Professional Education		1,500
(4) Feeder Roads	SOP - Caminos Vecinales		1,000
			12,000

In the event that the Borrower should deem that a change is necessary or desirable in any of the above amounts allocated to each activity, Borrower shall submit to AID, for AID's written concurrence, a request in writing, specifying the change requested, its anticipated effect on the Program, and any accompanying shift of GODR funds.

Moreover, commingled Pesos scheduled for disbursement in any given calendar year pursuant to the provisions of this Annex, may be disbursed in a previous or a subsequent calendar year, provided that: (1) such change is in accordance with the needs of the Program; (2) the general relationship between Borrower and AID contributions to the Separate Special Account is maintained; and (3) all disbursements under the Loan are completed within 36 months from the date of the execution of the Loan Agreement.

For purposes of implementation of the Program in general, the activities of SEA and sub-implementing agencies shall be as follows:

Implementing and Sub-Implementing Agencies	Activity
Secretariat of Agriculture (SEA)	a. Direct and indirect operating costs.
	b. Input credits through SEA regional extension stations.
	c. Development of Market Research/Farm Management Division.
	d. Creation of pilot vocational education program.
	e. Development of professional education program.
Agricultural Bank (AgBank)	a. Direct and indirect operating costs.
	b. Credit personnel training.
	c. Credit for small farmers (loans of $1-1000) through AgBank direct channels and through SEA supervised credit activities.
Dominican Development Foundation (DDF)	a. Direct and indirect operating costs.
	b. Credit for small farmers (group loans of from $1 to $1,000 per farmer benefitted).
IDECOOP	a. Input credits to agricultural cooperatives.

Implementing and Sub-Implementing Agencies (Cont.)	Activity
Central Bank	a. FIDE input, marketing and equipment/ machinery credits.
	b. Guarantee Loan Fund.
Secretariat of Public Workds (SOP) (Feeder Roads Division)	a. Construction of feeder and access roads through Caminos Vecinales.

I. SECRETARIAT OF AGRICULTURE (SEA)

(in thousands)

a) Financial Target - To make available for expenditure by the implementing agency in 1974, 1975, 1976 and 1977 the following amounts to be financed as follows:

	CY 1974		CY 1975		CY 1976		CY 1977		TOTAL	
	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$
GODR	195		1,215		1,190		1,090		3,690	
AID	15		100	725	85	725		500	200	1,950
Total	210		1,315	725	1,275	725	1,090	500	3,890	1,950

b) Activity Targets - The Program calls for the expenditure of DR Pesos and U.S. dollar funds in the approximate amounts shown:

	CY 1974		CY 1975		CY 1976		CY 1977		TOTAL	
	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$
Operating Costs	80		500		500		500		1,580	
Input credits through SEA Local and Reg. Extension Stations	30		200		170				400	
Dev. of Market Research/ Information Division	50		300	150	300	150	300		950	300
Creation of a Pilot Vocational Educ. Prog.	50		235	75	225	75	210		720	150
Dev. of Professional Education Program			80	500	80	500	80	500	240	1,500
	210		1,315	725	1,275	725	1,090	500	3,890	1,950

SEA Direct and Indirect Operating Costs

The funds shown for this activity are to be used by SEA for personnel and related costs to enlarge its credit capabilities by adding to its staff approximately 100 field credit/extension agents, 10 clerical/ bookkeeping workers, and 5 supervisors by the end of CY 1975.

Inputs Credits Through SEA Regional or Local Extension Stations

The funds allocated for this activity will be used by SEA to purchase inputs and distribute them through its local and regional extension/ research stations to the target group by sales to small farmers in areas where private channels are inadequate and suitable cooperatives do not exist.

Development of Market Research/Farm Management Division

The purpose of this activity is to improve the efficiency of the marketing system by establishing within SEA a division of Market Research and Information to be staffed at the national level with a minimum of seven specialized professionals, plus a full clerical and support complement by October 1, 1976. The unit must be staffed regionally with 22 professionals with agricultural degrees by 1975. Technical Assistance consisting of approximately 11 man years of specialized technician time will be contracted by SEA from U.S. or Latin American sources. It is anticipated that SEA will conclude arrangements satisfactory to AID by December 31, 1974. In addition, it is anticipated that graduate level training will be provided for approximately five market specialists.

Creation of a Pilot Vocational Education Program

The funds allocated for this activity will be used to establish a pilot institution under SEA administration by providing for instructional staff of 20, headed by five supervisors by December 1974. This staff will determine regional training requirements and develop training programs for initiation of training in June of 1975. The pilot project is expected to reach 3,000 rural people in each of three years, 1975, 1976 and 1977 through training at approximately five regional extension centers.

Baseline Studies

SEA will create baseline studies establishing data to show changes in small farm income.

Financing for the pilot project is estimated as follows:

(In Thousands)

	1974		1975		1976		1977		Total	
	RD$	US$	RD$	US$	RD$	US$	RD$	US$	RD$	US$
Equipment	30		15						45	
Salaries										
Project Direction	20		60		60		60		200	
Instructors			65		70		70		205	
Tech. Assistance				40		40		40		120
Staff Training			15	20	15	10			30	30
Operating Costs			80		80		80		240	
	50		235	60	225	50	210	40	720	150

Development of Professional Education Program

The purpose of this activity is to begin development of a national capacity to provide its university students, degree training in specialized agricultural disciplines consistent with production and manpower requirements. Disciplines, levels of study and faculty requirements will be determined by an in-depth evaluation of future faculty and curriculum needs made by SEA prior to November 1974.

The program contemplates U.S. based, graduate training studies for approximately 25 Dominican University Faculty members from UCMM and UNPHU and technical assistance to these universities in administration and curriculum development to be provided through a U.S. university, such technical assistance arrangements to be concluded in a manner satisfactory to AID by January 31, 1975. Graduate level training will be initiated in June of 1975.

II. AGRICULTURAL BANK (AgBank)

(in thousands)

a) Financial Target - To make available for expenditure by the implementing agency in 1974, 1975, 1976, and 1977 the following amounts to be financed as follows:

	CY 1974		CY 1975		CY 1976		CY 1977		TOTAL	
	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$
GODR.....	500		2,820		2,630		2,410		8,360	
AID	280		1,640		1,650		1,430		5,000	
Total.....	780		4,460		4,280		3,840		13,360	

b) Activity Targets - The Program calls for the expenditure of DR Pesos and U.S. dollar funds in the approximate amounts shown:

	CY 1974		CY 1975		CY 1976		CY 1977		TOTAL	
	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$
Operating Costs	160		980		980		980		3,100	
Credit Personnel Training	60		200						260	
Credit for Small Farmers Through:										
SEA Supervised Credit	190		950		970		890		3,000	
SEA/AgBank Caretaker Accounts	60		660		660		620		2,000	
AgBank Reg. Portfolio	310		1,670		1,670		1,350		5,000	
	780		4,460		4,280		3,840		13,360	

AgBank Direct and Indirect Operating Costs

The funds shown for this activity are to be used by the AgBank for personnel salaries and related costs to enlarge its credit delivery capabilities by adding to its staff approximately 150 field credit agents, 80 clerical/bookkeeping workers, and 15 supervisors. Within 90 days of the date of the execution of the Loan Agreement, the Bank shall have hired and trained the additional staff required to initiate group lending and by December 31, 1975 shall have hired and trained the full complement.

Credit Personnel Training

These funds will be utilized to provide intensive training for the necessary additional field credit agents and clerical/bookkeeping workers, mentioned above, as well as formal training in credit analysis, personnel management and collections for the additional supervisors, bookkeepers and credit/extention agents of SEA; total new personnel is estimated at 250 credit agents, 90 clerical personnel and 20 supervisors.

Credit for Small Farmers

The funds indicated above for this activity will be used to make up to 28,300 loans of approximately $350 each to small farmers. A portion of these loans will be made through the SEA's supervised credit system in concert with the extension service of SEA, and a portion will flow through Caretaker Accounts in commercial banks. The total amount of these loans financed by the Program is expected to be divided over 36 months in approximately the following amounts:

	(In Thousands)				
	1974	1975	1976	1977	Total
SEA	190	950	970	890	3,000
Caretaker Accounts	60	660	660	620	2,000
AgBank	310	1,670	1,670	1,350	5,000
	560	3,280	3,300	2,860	10,000

No later than 30 days after the date of the execution of the Loan Agreement, SEA in consultation with the AgBank and DDF will develop and furnish to AID for its approval: (1) detailed criteria to be followed in lending to small farmers pursuant to the Program, including: term of loans, interest rates, eligible crops and enterprises; and (2) the relationships between the AgBank, SEA, and DDF for the selection and monitoring of credit recipients, and the administration of loan funds. SEA will adopt DDF procedures to its supervised credit operations and SEA and the AgBank will establish mechanisms to effect a mutually administered group lending operation within 90 days of the date of execution of the Loan Agreement.

Furthermore, during 1975 the Borrower will complete an evaluation of the effects resulting from the AgBank's reduction of its maximum loan limit. A copy of the Borrower's evaluation will be provided to AID no later than February 15, 1976. A similar evaluation will be effected by the Borrower in 1976 and a copy of such evaluation will be provided to AID not later than February 15, 1977.

III. DOMINICAN DEVELOPMENT FOUNDATION (DDF)

(in thousands)

a) Financial Target - To make available for expenditure by the implementing agency in 1974, 1975, 1976, and 1977 the following amounts to be financed as follows:

	CY 1974		CY 1975		CY 1976		CY 1977		TOTAL	
	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$
GODR	30		330		330		310		1,000	
AID	30		330		330		310		1,000	
Total.....	60		660		660		620		2,000	

b) Activity Targets - The Program calls for the expenditure of DR Pesos and U.S. dollar funds in the approximate amounts shown:

	CY 1974		CY 1975		CY 1976		CY 1977		TOTAL	
	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$
Credit for Small Farmers	60		660		660		620		2,000	

DDF Credit for Small Farmers

The funds assigned to this activity are to be expended to make loans in the DDF's small farmer group loan program averaging approximately RD$350 per farmer benefited. Such loans shall be made in accordance with its established lending criteria, which criteria shall be furnished to AID prior to November 1, 1974.

IV. INSTITUTE OF COOPERATIVE DEVELOPMENT AND CREDIT (IDECOOP)

(in thousands)

a) Financial Target - To make available for expenditure by the implementing agency in 1974, 1975, 1976, and 1977 the following amounts to be financed as follows:

	CY 1974		CY 1975		CY 1976		CY 1977		TOTAL	
	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$
GODR	20		260		270		250		800	
AID	20		260		270		250		800	
Total	40		520		540		500		1,600	

b) Activity Targets - The Program calls for the expenditure of DR Pesos and U.S. dollar funds in the approximate amounts shown:

	CY 1974		CY 1975		CY 1976		CY 1977		TOTAL	
	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$
Input Credits to Agr. Cooperatives	40		520		540		500		1,600	

Inputs Credits for Agricultural Cooperatives

The funds allocated for this activity will be used to: (1) purchase and warehouse inputs, e.g., fertilizers, plant protection chemicals, plant materials, and improved seed; and (2) provide these to cooperatives as loans in kind, monetarily denominated, for the establishment of input stocks and systems for sale through approximately 20 cooperatives to members and non-members. IDECOOP, in consultation with SEA, will furnish criteria for the sale or loan of inputs to farmers, such criteria to establish norms and procedures to ensure availability of inputs to the target group.

V. CENTRAL BANK

(in thousands)

a) Financial Target - To make available for expenditure by the implementing agency in 1974, 1975, 1976, and 1977 the following amounts to be financed as follows:

	CY 1974		CY 1975		CY 1976		CY 1977		TOTAL	
	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$
GODR	60		1,680		2,690		2,620		7,050	
AID.....	60		680		690		620		2,050	
Total	120		2,360		3,380		3,240		9,100	

b) Activity Targets - The Program calls for the expenditure of DR Pesos and U.S. dollar funds in the approximate amounts shown:

	CY 1974		CY 1975		CY 1976		CY 1977		TOTAL	
	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$
FIDE-Input, Machinery and Marketing Credit	120		1,360		1,380		1,240		4,100	
Guarantee Loan Fund			1,000		2,000		2,000		5,000	
	120		2,360		3,380		3,240		9,100	

FIDE Input, Marketing and Equipment/Machinery Credits

The funds provided for this activity will be used by FIDE to make loans through commercial banks and financieras to small and medium private sector marketing enterprises including merchants, processors, and wholesalers to help the marketing system reduce uncertainties for producers and wholesalers as well as to stimulate healthy competition, higher volumes and lower price margins. The funds will be used to maximum extent for storage, refrigeration and handling facilities and to expand or create new facilities where economically feasible.

SEA will establish a committee including representatives of SEA and the Central Bank which will develop detailed criteria for the use of marketing and machinery credits of the Program, including term of loans, interest rates, and eligible enterprises as appropriate. These criteria will include provision for an upper lending limit of approximately $50,000 to any single enterprise directly or indirectly, and shall include provision of up to 50% of the Program funds for this activity to be lent as working capital to eligible recipients. The conclusions of this committee and related documents, e.g., memoranda of understanding between SEA and Central Bank, will be embodied in a report which is to be submitted to AID for consideration not later than October 1, 1974.

VI. SECRETARIAT OF PUBLIC WORKS (SOP)

(in thousands)

a) Financial Target - To make available for expenditure by the implementing agency in 1974, 1975, 1976, and 1977 the following amounts to be financed as follows:

	CY 1974		CY 1975		CY 1976		CY 1977		TOTAL	
	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$
GODR.....	30		330		330		310		1,000	
AID.....	30		330		330		310		1,000	
Total.....	60		660		660		620		2,000	

b) Activity Targets - The Program calls for the expenditure of DR Pesos and U.S. dollar funds in the approximate amounts shown:

	CY 1974		CY 1975		CY 1976		CY 1977		TOTAL	
	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$	DR Pesos	US$
Development of Feeder and Penetration Rds. Through Caminos Vecinales	60		660		660		620		2,000	

Development of Feeder and Access Roads (through Caminos Vecinales)

The objective of this activity is to support the infrastructure requirements of the program by constructing or improving approximately 137 kms. of secondary and penetration roads during the three years of the program. Of this number, approximately 4 kilometers of secondary roads will be built in 1974, 28 kilometers of penetration and 18 kilometers of secondary roads in 1975 and 1976, respectively, and 26 kilometers of penetration and 15 kilometers of secondary roads in 1977.

For the total 137 kms. to be constructed or improved under the program, a labor intensive method will be employed, using to the maximum extent rural hand labor, largely drawn from the areas of the small farmer target group. Construction will occur, to the maximum extent feasible, during times of the year when rural workers are under unemployed.

Prior to the first disbursement of any funds designated for this activity, the Borrower will develop a work plan acceptable to AID for the implementation of the roads program to be carried out in 1974 and 1975 by the Caminos Vecinales Division of the Secretariat of Public Works. Areas of high small farmer population density and greatest need will be identified by SEA in cooperation with SOP, and the work plan will include the specific types, areas and length of roads to be built. The roads selected will be based on economic feasibility studies and the roads or road networks will be ranked in priority order. A similar work plan for 1976 and 1977 will be developed by the Borrower not later than November 1, 1975.

The joint program will be in addition to Caminos Vecinales' normal construction activities. Accordingly, separate accounting, supervisory and administrative measures will be taken. The costs of additional personnel needed to administer the program will be included in the Borrower's contribution. Equipment and vehicles related to program activities will be contributed by the Borrower from sources outside the program.

TABLE I

Annual Percentage Increases in GDP and its Sectoral Components 1963-1972

at Constant 1962 Prices

	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	Average 67-72
Total GDP	6.5	6.7	-12.4	13.4	3.4	0.5	12.2	10.2	9.9	12.5	8.2
Agriculture	1.6	4.7	-7.2	7.2	-0.3	0.8	11.3	6.2	5.6	5.5	4.8
Mining	-0.9	12.9	-0.8	1.6	30.2	-0.5	14.9	6.5	0.2	215.2	44.4
Manufactory	7.6	-7.0	-21.0	28.5	10.2	-9.7	24.1	18.0	14.4	13.6	11.7
Commerce	5.3	6.7	-24.4	26.5	2.1	0.2	13.2	13.2	13.5	12.9	9.1
Transport & Comm.	14.6	18.1	-15.4	15.5	2.2	6.0	6.9	17.5	8.8	6.9	8.0
Other	12.7	11.3	7.9	6.4	3.2	4.1	8.6	8.1	8.2	11.2	7.2

Source: Central Bank

TABLE II

Gross Agricultural and Livestock Production
at Constant 1962 Prices

	1971 Weight	Percentage Annual Change							
		1963-64	1965-66	1967-68	1969-72	1969	1970	1971	1972
Total agriculture	100.0	2.3	-1.2	-1.4	8.3	15.1	6.7	6.7	3.9
Main export crops	41.8	3.6	-7.6	-5.4	12.9	30.0	5.9	9.1	3.6
Sugarcane	(26.1)	(-1.7)	(-4.6)	(-6.5)	(18.2)	(46.3)	(4.0)	(15.3)	(1.0)
Tobacco	(3.8)	(7.4)	(-11.9)	(-9.6)	(11.4)	(28.8)	(5.9)	(2.2)	(8.7)
Coffee	(7.9)	(7.3)	(-8.0)	(-1.3)	(3.7)	(12.3)	(-2.7)	(6.7)	(2.6)
Cacao	(4.0)	(11.4)	(-13.8)	(-1.0)	(10.4)	(-4.9)	(39.7)	(-12.0)	(18.8)
Cereals	16.1	11.5	10.9	1.0	4.5	7.3	7.4	1.8	1.6
Rootcrops and tubers	10.6	3.9	2.0	-	5.5	6.4	3.9	5.0	6.7
Other	31.5	-1.7	3.5	2.1	6.1	6.4	8.2	5.5	4.5
Total livestock	100.0	5.2	3.2	3.5	5.0	4.1	4.8	5.4	5.7
Cattle	20.8	4.6	1.6	7.3	8.9	6.0	0.6	12.6	16.2
Eggs and fowl	40.3	6.0	4.3	2.0	4.9	4.5	7.5	3.7	3.9
Other	38.9	4.8	2.8	3.4	3.4	2.9	4.0	3.8	2.6

Sources: IMF Reports

TABLE III

Balance of Payments of the Dominican Republic
1971 - 1974
(RD$ millions)

Items	1971[1/]	1972[2/]	1973[2/]	1974[3/]
Exports (FOB)	243.0	347.6	442.1	561.4[a)]
Imports (FOB)	311.1	337.7	421.9	563.0[b)]
Trade Balance	- 68.1	+ 9.9	+ 20.2	- 1.6
Net Services	- 75.4	- 84.7	-148.6	-157.0[c)]
Net Transfers	+ 22.4	+ 30.6	+ 30.5	+ 30.0[c)]
Current Balance	-121.1	- 44.2	- 97.9	-128.6
Official Capital (Net)	14.9	12.4	14.0	42.0[d)]
Private Capital (Net)	109.1	99.2	73.1	70.0[c)]
Balance on Capital Acct.	+124.0	+111.6	+ 87.1	+112.0
Balancing factors:				
SDR's	4.6	4.6	-	-
Errors, ommission & other	- 8.2	- 60.3	+ 15.7	-
TOTAL	+120.4	+ 55.9	+102.8	112.0
Net Change in Reserves (- = increase)	+ 0.7	- 11.7	- 4.9*	+ 16.6

1/ Central Bank: revised actual data
2/ Central Bank estimates
3/ USAID-Central Bank projection
*According to the Central Bank official net foreign exchange reserves at the end of 1973 amounted to $38.9 million.
a) The report figure same as in Santo Domingo 777, para 6.
b) The import figure shown in Santo Domingo 777 has been reduced by $17.7 million to conform to Central Bank estimate that imports of petroleum and petro chemicals would increase by $94.3 million during 1974 rather than $112 million.
c) USAID projection
d) IBRD

TABLE IV

External Public Debt
(In millions of SDR units)

	End of Period							Undisbursed on 12/31/72
	1966	1967	1968	1969	1970	1971	1972	
Total (by source)	87.6	141.0	176.1	213.1	261.7	264.7	291.2	53.8
U.S. Government	73.5	122.9	153.6	179.9	201.5	188.2	200.3	24.1
PL 480	(12.6)	(16.4)	(26.1)	(31.2)	(38.8)	(43.3)	(51.0)	(7.0)
AID supporting assistance	(44.5)	(76.9)	(83.5)	(84.6)	(91.1)	(87.1)	(85.7)	(---)
AID project loans	(4.3)	(14.0)	(24.5)	(40.3)	(45.7)	(37.4)	(43.1)	(17.1)
Export-Import Bank	(12.1)	(15.6)	(19.5)	(23.8)	(25.9)	(20.4)	(20.5)	(---)
IDB	6.2	9.6	13.4	24.5	33.1	38.5	42.0	20.1
IBRD	---	---	---	---	10.6	23.0	23.0	---
IDA	---	---	---	---	---	---	0.3	4.4
Suppliers' credits and bank loans	7.9	8.4	9.2	8.7	16.5	15.0	25.6	5.2
France	(0.4)	(0.2)	(0.1)	(---)	(---)	(---)	(---)	(---)
Spain	(2.5)	(3.7)	(5.0)	(4.0)	(3.4)	(4.7)	(3.2)	(5.2)
United Kingdom	(3.7)	(3.6)	(3.6)	(3.6)	(2.7)	(4.1)	(6.0)	(---)
United States	(1.3)	(0.9)	(0.5)	(1.1)	(10.4)	(6.2)	(16.4)	(---)
Total (by borrower)	87.6	141.0	176.1	213.1	261.7	264.7	291.2	53.8
Central Government	67.5	110.3	134.2	148.9	167.5	160.8	170.9	13.3
Direct loans	(63.7)	(102.8)	(122.9)	(131.4)	(148.4)	(141.7)	(151.0)	(13.3)
Two-step loans1/	(3.8)	(7.5)	(11.3)	(17.5)	(19.1)	(19.1)	(19.9)	(---)
Other general government	1.4	2.3	2.6	3.7	4.1	3.7	4.4	2.2
Public enterprises	11.0	15.0	20.0	39.9	54.1	52.5	64.2	17.2
Public financial intermediaries	7.7	13.4	19.3	20.6	22.2	21.6	25.6	15.9
Private sector (with government guarantee)	---	---	---	---	13.9	26.1	26.1	5.2

Source: International Monetary Fund

1/ Comprises four loans from U.S. AID to the Agricultural Bank, the National Housing Bank, the Industrial Development Corporation, and the Dominican Finance Corporation repayable to the Dominican Government for further utilization of the funds, and ultimately repayable by the Government to U.S. AID at lower interest and on longer terms than those granted to the original user.

TABLE V

External Public Debt Service

	Total (In millions of SDR units)	Amortization	Interest	Total (As per cent of GDP)	Total (As per cent of exports of goods and services)
1965	3.3	2.4	0.9	0.3	2.3
1966	3.3	2.0	1.3	0.3	2.1
1967	6.8	4.9	1.9	0.6	3.6
1968	7.5	5.0	2.5	0.6	3.7
1969	12.1	7.6	3.9	0.9	5.3
1970	16.2	9.8	6.4	1.1	6.2
1971	27.9	20.7	7.2	1.7	9.5
1972	18.8	10.6	8.2	1.0	5.0
Projected					
1973	22.5	14.9	6.8	-	-
1974	20.3	13.5	6.7	-	-
1975	20.2	13.7	6.5	-	-
1976	19.1	12.9	6.2	-	-
1977	20.4	13.9	6.5	-	-

Sources: International Monetary Fund

TABLE VI

Factors Influencing Expansion and Contraction of the Money Supply*

1968 - 1973

(RD$ millions)

		1968	1969	1970	1971	1972	1973
A.	Expansion Factors - Total	374.4	427.8	466.0	556.4	651.6	803.7
	International Assets[1/]	53.3	58.9	56.1	84.2	82.2	103.5
	Seignorage Value	3.6	3.8	3.8	4.0	4.3	4.6
	Banking Loans	145.3	177.6	211.3	256.6	317.0	430.1
	Investment in Stocks	172.2	182.5	194.8	211.6	248.1	265.5
B.	Contraction Factors - Total	211.3	245.8	259.6	330.3	384.9	489.2
	Time & Savings Deposits	72.2	93.7	118.1	144.9	188.2	244.8
	Other[2/]	139.1	152.1	141.5	185.4	196.7	244.0
C.	Total Money Supply (A-B)	163.1	177.0	206.4	226.1	266.7	314.5

*Including Official Deposits

1/ Include international assets of Central Bank, Commercial Banks and Value of money coining.
2/ Include changes in capital, banking reserves etc.

Source: Central Bank Bulletin

TABLE VII

Total Public Sector Agricultural Expenditures

As Compared to Total Public Sector Expenditures 1/

	Total 2/ Public Sector Expenditures (1)	Total 3/ Agricultural Expenditures (2)	Agriculture (3)	Irrigation (4)	Agriculture Expenditures As % of Total (5 = 2/1)
1968	246.9	31.8	27.9	3.9	12.9
1969	283.1	38.7	27.6	11.1	13.7
1970	316.7	35.4	24.9	10.5	11.2
1971	363.1	41.7	28.2	13.5	11.5
1972	422.7	49.0	31.2	17.8	11.6
1973	486.1	63.3	48.1	15.2	13.0

1/ From all resources (domestic and foreign).
2/ Data obtained from AID Form 10-74. No actual available after 1972. Figure for 1972 represents USAID estimates on preliminary data received from Budget Office. Data for 1973 calculated on basis of 15% increase per year, based on trend during last 3 years.
3/ Total and breakdown classification for years 1968-1972 are actuals. Total for 1973 is on preliminary actual expenditure.

Source: 1968-1972 National Budget Office and AID Form 10-74
1973 Preliminary actuals - ONAPRES

TABLE VIII

Total Agricultural Financing[1/]
(RD$ millions)

	1968	1969	1970	1971	1972	1973
Total Agriculture Financing[2/]	31.8	38.7	35.4	41.7	49.0	63.3
1. Sec. of Agriculture	9.9	11.9	12.1	11.6	12.3	23.6
2. Other Central Government	11.6	15.6	15.5	18.2	17.5	16.0
3. Decentralized Agencies	10.3	11.2	7.8	11.9	19.2	23.7
a) IAD	(0.8)	(1.6)	(1.5)	(1.2)	(2.8)	(3.7)
b) IDECOOP	(1.1)	(0.4)	(0.4)	(0.2)	(0.2)	(1.4)
c) Tobacco Institute	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
d) Valdesia Corp.	(-)	(0.5)	(0.6)	(0.8)	(4.2)	(4.6)
e) INDRHI	(0.3)	(0.2)	(0.5)	(0.7)	(4.0)	(2.3)
f) Inazucar	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
g) Banco Agrícola	(779)	(8.3)	(4.6)	(7.1)	(6.0)	(6.9)
h) INESPRE	(-)	(-)	(-)	(1.8)	(1.8)	(4.6)

1/ From domestic and foreign resources.
2/ Data through 1972 are actuals. Data for 1973 are preliminary actuals. The irrigation component does not match with the breakdown used in Table VII, since different sources were used.

Source: Ejecuciones del Presupuesto 1968-1973, National Budget Office

TABLE IX

Current and Capital Breakdown of the

Public Sector Agricultural Expenditures*
(RD$ millions)

	Total Agricultural Expenditures	Current	Capital
1968	31.8	N/A	N/A
1969	38.7	N/A	N/A
1970	35.4	18.9	16.5
1971	41.7	26.3	15.4
1972	49.0	25.8	23.2
1973	63.3	N/A	N/A

* No breakdown available for the years 1968-1969 and 1973 on the desired basis. Figures for other years were calculated from budget execution reports and are not official.

Source: Basic data obtained from ONAPRES.

TABLE X

Total Agriculture Sector Financing by Source[1/]

	Total Agric. Financing	Domestic Resources		Foreign Resources	
		Millions	% of Total	Millions	% of Total
1968	31.3	24.7	79.0	6.6	21.0
1969	38.7	33.5	86.5	5.2	13.5
1970	35.4	31.5	88.9	3.9	11.1
1971	41.7	37.9	90.9	3.8	9.1
1972	49.0	44.2	90.2	4.8	9.8
1973	63.3	57.4	90.6	5.9	9.4

1/ Total and breakdown classification for years 1968 through 1972 are actuals. Totals for 1973 are actuals, but component breakdowns have been estimated on the basis of expenditure trend.

Source: 1968-1973 National Budget Office

TABLE XI

Functional Classification of
Central Gov't. Expenditures
from Domestic Resources
(RD$ millions)

	1966		1967		1968		1969		1970		1971		1972		1973	
	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual
Social Services	66.1	57.4	55.2	59.0	61.2	61.8	70.1	70.7	76.7	85.8	96.0	97.8	106.4	109.0	131.3	NA
1. Education	37.1	28.0	29.2	29.3	31.3	29.9	35.3	35.4	41.5	40.8	46.0	43.4	53.6	46.2	59.7	-
2. Health	26.0	27.7	23.1	22.2	23.1	22.0	26.2	25.4	26.5	28.9	33.3	32.2	38.2	33.4	59.3	-
3. Housing	-	0.6	1.2	4.7	2.5	4.4	4.7	5.0	3.3	9.1	4.1	13.0	6.0	13.1	6.8	-
4.	3.0	1.1	1.7	2.8	4.3	5.5	3.9	4.9	5.4	7.0	12.6	9.2	8.6	16.3	5.5	-
Economic Services	58.3	38.4	34.6	37.6	33.5	49.9	62.6	63.0	48.9	71.2	55.1	96.2	68.3	113.1	69.4	NA
1. Agriculture	19.7	11.4	10.9	10.0	13.1	13.6	12.5	15.1	12.3	12.7	12.5	13.1	16.9	14.3	25.5	25.5
2. Irrigation	NA	NA	NA	2.6	NA	3.1	9.4	9.2	4.8	8.7	9.6	12.2	10.7	12.1	7.3	-
3. Industry & Commerce	2.0	1.7	0.8	0.9	1.6	0.8	1.1	1.0	1.2	1.8	1.5	1.8	4.1	2.6	2.8	-
4. Transportation & Com.	30.1	19.3	20.5	20.4	16.7	26.3	31.3	31.8	27.1	40.9	25.7	57.5	29.5	48.6	26.8	-
5. Urbani & Public Bldgs.	NA	NA	NA	NA	NA	3.6	4.4	4.3	3.4	4.9	2.4	8.1	5.1	30.7	5.2	-
6. Other	6.5	6.0	2.4	3.7	2.1	2.5	3.9	1.6	0.1	2.2	3.4	3.5	2.0	4.8	1.9	-
General Services	111.3	84.9	88.4	80.7	82.1	85.6	84.0	91.7	88.6	95.4	90.9	98.1	100.9	105.8	102.0	NA
1. General Admin.	25.0	16.6	17.7	14.1	14.2	17.0	16.5	20.4	19.5	22.9	19.9	23.8	22.1	29.1	23.0	-
2. Defense	35.0	32.6	29.6	30.8	29.0	35.0	29.1	29.8	29.4	30.8	30.0	31.2	29.2	32.5	30.2	-
3. Justice & Police	18.0	17.2	17.3	16.5	16.7	17.6	17.3	17.6	17.8	17.0	19.4	17.7	19.9	18.6	20.3	-
4. Public Debts	5.5	6.3	6.2	6.5	8.8	6.5	7.9	10.7	9.0	11.8	18.5	12.3	14.5	13.0	14.3	-
5. Other	27.8	12.2	17.6	12.8	13.4	14.0	13.2	13.2	12.9	12.9	3.1	13.1	15.2	12.6	14.2	-
Total	235.7	180.7	178.2	177.3	176.8	197.4	216.7	225.4	214.2	252.4	242.0	292.1	275.6	327.9	302.7	362.3

Source: 1966-1974 Ejecuciones del Presupuesto, and Presupuestos y Ley de Gastos Públicos, ONAPRES

TABLE XII

Agricultural Credit in Relation to Total Credit
(RD$ millions)

	Total Banking Credit	Agricultural Credit[1/]		Origin of Agricultural Credit	
		Total	As % of Total Banking Credit	Commercial Banking[2/]	Agricultural Bank
1968	203.5	67.4	33.1	10.7	56.7
1969	240.4	67.6	28.1	9.8	57.8
1970	278.9	72.5	26.0	11.3	61.2
1971	327.5	74.3	22.7	11.6	62.7
1972	350.6	72.7	20.7	14.0	58.7
1973	506.8[3/]	85.6	16.9	21.6	64.0

1/ Excluding Agribusiness Credits made by the two private Financing Companies (Financiera and COFINASA).
2/ Includes FIDE direct financed and through commercial banks.
3/ Totals for Financieras and Housing Associations have been estimated based on last years figures.

Source: 1968-1973 - Central Bank Bulletins

EVALUATION INDICATORS 1/

a. Small Farm Credit Element

(1) Number of recipients benefiting from AgBank/SEA loans in the category of RD$1-500 loans changes from 60% of total loans in 1973 to 62% in 1975, 65% in 1976 and 68% in 1977.

(2) Number of recipients benefiting from AgBank/SEA loans in the category of RD$501-1000 loans changes from 15.5% of total loans in 1973 to 18.7% in 1975, 19.0% in 1976 and 20.0% in 1977.

(3) Amount of AgBank/SEA agricultural loans which benefit individuals in the range of RD$1-500 changes from 13% of total loan amount in 1973 to 18.4% in 1975, 26.9% in 1976 and 30.3% in 1977.

(4) Amount of AgBank/SEA agricultural loans which benefit individuals in the range of RD$501-1000 changes from 11% of total loan amount in 1973 to 15% in 1975, 16.5% in 1976 and 18% in 1977.

(5) In base year 1973 AgBank/SEA closed 39,746 loan transactions benefiting individuals. As a result of the loan Program funds, AgBank portfolio shifting, rollovers and multiple cropping within the calendar year, it is anticipated that the number of farmers benefiting from AgBank/SEA lending should reach 50,000 in 1975, 60,000 in 1976 and 65,000 in 1977.

(6) Average length of time for processing loan document from application to first disbursal not exceeding 15 days beginning 1976.

(7) AgBank/SEA AID-supported portfolio:

0-60 days overdue not exceeding 15%
61-180 days overdue not exceeding 10%
over 180 days overdue not exceeding 5%

1/ These indicators have not been negotiated with the individual implementing agencies. Therefore, the magnitude of any individual indicator may be subject to change as the result of detailed implementing negotiations.

(8) Breakdown of AgBank/SEA loan Program beneficiaries as follows:

75% operate 80 tareas or less
15% operate 81-250 tareas
10% operate 251-500 tareas

60% (by amount) operate 80 tareas or less
30% (by amount) operate 81-250 tareas
10% (by amount) operate 251-500 tareas

Note: One acre equals 6.5 tareas.
One hectare equals 15.9 tareas.
Land area measurement kept by AgBank/SEA will be in tareas.

(9) Annual turnover of professional AgBank staff does not exceed 10%.

(10) AgBank operating expenses can be met from operating income beginning 1975.

(11) One field credit agent per 200 borrowers by 1976.

(12) Each borrower visited 3 times (average) during crop season by field credit/extension agent.

(13) Commercial bank credit to agriculture changes from RD$20 million in 1973 to minimum of RD$37 million in 1977.

(14) In base year 1973 DDF closed loans benefiting approximately 6,000 farmers. As a result of the loan Program funds, rollovers and multiple cropping within the calendar year, it is anticipated that the number of farmers benefiting from DDF lending should reach 8,500 in 1975, 10,000 in 1976 and 12,000 in 1977.

(15) DDF's AID-supported portfolio:

0-60 days overdue not exceeding 5%
61-180 days overdue not exceeding 5%
over 180 days overdue not exceeding 5%

(a) For sector program small farm credits 75% of the total amount goes to groups averaging 10 borrowers.

(16) Breakdown of DDF loan Program beneficiaries as follows:

75% operate 80 tareas or less
20% operate 81-250 tareas
5% operate 251-500 tareas

60% (by amount) operate 80 tareas or less
35% (by amount) operate 81-250 tareas
5% (by amount) operate 251-500 tareas

(17) Annual turnover of DDF professional staff does not exceed 10%.

(18) One field credit agent per 200 borrowers by 1976.

(19) Each borrower visited 3 times (average) during crop season by field credit/extension agent.

(20) Average length of time for processing loan document from application to first disbursal not exceeding 15 days beginning 1976.

b. Input Credit Element

(1) SEA input sales as follows: $200,000 by 1976
(was zero in base year 1973) $400,000 by 1977 (cumulative)

(2) IDECOOP input sales (through agricultural coops only) as follows: (was zero in base year 1973):

$ 500,000 by 1976
1,100,000 by 1977
1,600,000 by 1978

(3) Agricultural coop membership as follows:

6,000 in 1973 (actual)
7,000 by 1976
8,000 by 1977
9,000 by 1978

c. Market Research/Farm Management Element

(1) Unit staffed nationally with 7 professionals with B.S. or M.S. degrees by 1976.

(2) Unit staffed regionally with 22 professionals with agricultural degrees by 1978.

(3) Each regional unit with minimum of one professional and one support personnel by 1978.

(4) Annual turnover among professional personnel (nation and regional) limited to 10%.

(5) First micro-economic production packages developed and disseminated for key crops at regional and sub-regional level at 22 regional centers by 1976.

(6) First area-specific market information data developed and being disseminated by 22 regional centers by 1976.

(7) Production and marketing related information being broadcast to farmers beginning in 1975.

(8) SEA marketing unit has established close working relationship with CEDOPEX and INESPRE.

d. Human Resources Element

(1) 70% of recipients of vocational training earning at least 20% of annual income from learned skills by 1978.

(2) 80% of recipients of vocational training still resident in same area 2 years after completion of training.

(3) GODR undertakes (without AID assistance) vocational program covering at least 3,000 persons per annum by 1978.

(4) GODR announces (approves) plans to grant B.S. (Agriculture) by academic year 1976/77.

(5) Dominican university grants equivalent to a U.S., B.S. (agriculture) degree at the end of academic year 1977/78.

e. Feeder Roads Element

(1) Net economic value added to areas of concentration as a result of feeder road being constructed.

(2) Number of additional acres put into production in the area served by the feeder roads being built is 20% higher than prior to construction.

f. General Goal Indicators

(1) Imports of staple food crops (rice, beans, etc.) increase at a rate of less than 3%.

(2) Food production per capita (based on standard index) increasing at accelerated rate, e.g., greater than the current 4%.

Rural Feeder Roads Tentatively Identified for Selection under GODR/AID Sector Loan Program

No.	Name of Road	Number of Kilometers	Principal Crop	Type of Terrain 1/
1	Mencía - La Altagracia	7	Coffee	M
2	Aguas Negras - Las Mercedes	13	"	M
3	El Manguito - Avila - Aguas Negras	10	"	M
4	Paso del Jobo - Firme del Manaclal	5	"	M
5	Cruce de Galeón - Matadero	8	"	R
6	Ciénaga - Manaclal - Los Anones	5	"	M
7	Descubierta - Guayabal - Los Bolos	20	Fruit	M
8	Polo - La Lanza - Los Lirios	10	Coffee	M
9	Las Aullamas - Los Charquitos	5	Fruit	M
10	Polo - Monteada Nueva	3	Coffee	M
11	Platón - Lanza Arriba	4	Coffee, Fruit	M
12	Barrio Nuevo - La Víbora	12	Fruit	M
13	Río Caño - Santa Elena	14	Coffee	M
14	La Guázara - Santa Elena	9	"	M
15	El Portón - El Llano - Palo Seco	5	Fruit	M
16	Elías Piñas - El Pino - Sabana Larga	12	"	R
17	Sabana Larga - Hato Viejo	6	"	R
18	Cambita - Garabito - El Tablazo	15	Coffee, Cacao	M
19	Ingenio Nuevo - Cruce de Nolasco De León	2	Sugar	R
20	Cambita - Garabito - El Majagual - Manomatuey	8	Fruit	M
21	Cambita - Arroyo María	5	Coffee	M
22	La Toma de Cambita - El Deboronao	10	"	M

1/ M = Mountainous
R = Rolling
L = Level

No.	Name of Road	Number of Kilometers	Principal Crop	Type of Terrain
23	Hato Damas - Limón Dulce	3	Coffee	M
24	Hato Damas - Dasa	2	"	M
25	Borbón - Naranjo Dulce	6	Coffee, Fruit	R
26	Santa María - Mata Palomo	7	" "	R
27	Maluco - Los Pomos	6	" "	L
28	Los Pomos - Cabeza de Toro	10	" "	R
29	La Gina - El Cuanse	5	Rice, Cattle, Fruit	L
30	Esperalvillo - Dionisio - La Guázuma	4	" " "	L
31	Recta Serrallés - Mata de Plátano	5	" " "	R
32	Gina al Río Higuero	3	Sugar, Cattle	L
33	Yayal - La Catalina - Los Guayabitos - Higuerito	12	Rice, Fruit, Cattle	R
34	Ojo de Agua - La Jaguita - Los Pinitos	9	" " "	R
35	La Vereda - La Capilla	8	" " "	R
36	La Capilla - Pozo Hondo - Los Cacaos	6	" " "	R
37	Río San Juán - Pozo Prieto	10	Cattle	R
	Total	284		

RURAL FEEDER ROADS

The Development Model: Net Subregional Value Added and Ranking Methodology.

In dealing with developmental benefits often associated with feeder roads, the analyst is confronted with two basic issues: (1) defining the possible barriers or bottlenecks to development (e.g., economic, political, institutional or socological)[1/] and further defining "the level at which these potential bottlenecks exist: national, regional or local". (2) What is the nature of the changes induced by a feeder road? How do these changes lead to an increase in production?

The first issue has been covered in the CAP quite extensively. It should be noted, however, that feeder roads, and the developmental benefits stemming from these roads do not take into account the increased savings of present road users. What little vehicular traffic exists on the present trails is assumed to be negligible or measured with respect to present animal traffic. Mixing of the two net benefit streams (i.e., user savings, however little, and development benefits) is not only a difficult task of disaggregation of transportation factors, but runs the risk of doublecounting the direct benefits of development. Clearly, the avoidance of these conflicts are best treated by neglecting existing motor traffic, when present peak traffic counts are less than 2 vehicles per week in the harvest seasons. Assumptions of the transport model are geared toward the aggregation of the small farmers and the increased production induced by the total investment package (i.e., credit extension services, road betterment, etc.), but for analytical purposes the package is defined under the program activity of TRANSPORT. Only credit is handled separately to ascertain and develop that given budget constraint.

Interdisciplinary feasibility surveys will be accomplished mainly at the local level and compiled to formulate the various activities within the project area. Strictly addressing the structure of the model, the evaluation aspects of the program could be recorded and filed to later appraise the agri-sector programs. It is also worth mentioning that during the analysis and evaluation periods cottage industries and certain support activities could be included, to ascertain the secondary benefits which were too small to measure in the "without project" case at the analysis stage.

1/ Appraisal Methodology for Feeder Road Projects
March 19, 1970, Arturo Israel, IBRD, WP 70.

However spin off or supportive industries will not be included in this more general analysis. Nor will the regional commercial farms represented in the activities, because of the unequal mix of commercial to small farms, and the complexity of separating out the various advantages, if any, of the investment packages. While cognizant of the conservative results, the activities were felt to be representative of the characteristics, the region and development based upon the small farmers.

The activities used to describe the project development will be based mainly on the production conditions of the activities induced by the investment package and the road, the relative prices, restrictions on resources such as labor and animal power, and transport supply conditions both in truck and animal transport.2/

The premise for this transport model is based largely upon a subregional test representing the "without project" situation compared to the "with project". As mentioned earlier, the project, essentially directed toward the agricultural sector, provides a road network, the required road administrative structure, credit, and extension services.

Based upon measured constraints, a minimum level of diet needs shall be incorporated to demonstrate the basic consumption requirements. These constraints, combined with the typical unskilled farm labor, animal power, seasonally hired labor, fertilizers and insecticides, are then equated to typical farm activities. The basis of the model utilizes a linear programming framework as the tool in which maximization of the value added objective can be easily found. Accordingly, accounting items 3/ will then be combined with the activities and used as the basis for the cost profile of the various crops and cropping pattern. In the "without case", as suggested in the project description, only roads in disrepair, trails, and penetration areas presently exist, impeding commercial truck transport.

2/ During the exercise, it may be determined that certain accounting items useful to the overall problem should be incorporated mainly to facilitate an easy accounting system of the various restrictions.

3/ It is interesting to note that the choice of transport mode is always present.

Present traffic patterns in the penetration areas will be measured, largely by estimating animal power or head loads.

It is considered important on the other hand, that the road provide additional choices to the farmer not only in the transport mode for his marketable surplus (e.g., animal or truck) but also a new array of crops, possibly including perishables, and processible items. The inclusion of perishable crops implies that a derived demand may exists because of the new road network.

Inasmuch as the road makes the area accessible to a large market, it also triggers an additional demand for hired labor to tend extended farmlands. Credit is introduced which exposes the small farmers to the program services included in the "with road" test. Accordingly, the extension services will transfer knowledge and techniques to the small farmer especially with regard to use and advantages of fertilizer, pesticides and insecticides.

Table I, attached, illustrates the basic assumptions utilized in the Linear Programming Model.

Equating the activities with the natural constraints to resources produces a maximization of the value added to the region. The net value added between the two alternatives (with and without) is then treated more specifically as the net benefit to the subregion. Subsequently, adding the project cost (algebraically) to the net benefit streams results in the net cash flow, yielding the economic benefit-cost ratio. Thus in a repetitive fashion, single roads, or minor road networks may be ranked according to their respective worth. In this manner, the projects are given an uncompromised base, for comparison which requires nothing more than simple budget allocation technique to ascertain the physical extent of total road construction.

The Benefit Cost Analysis

The feasibility of the investment package is supported through the value added by the combination of activities and the interplay of the rural farms, and transport mode, and marketing components. Therefore, the net value added represents a discrete maximization which is converted into annual benefit resulting from the government investment.

The initial project costs, along with annual recurrent costs, are then compared to the benefits. However, at this juncture the equivalent uniform annual costs must first be estimated, and the time of construction, gestation period, etc., be considered in the annual benefit stream if the two equivalent uniform annual values are to be comparative.

The model portrays that, as the newly assigned feeder road is constructed, providing all weather access to the market, labor, land and credit within the model are soon exhausted to their respective limits.

At this juncture, animal power longer required for transport, shifts into the subsistence agriculture, permitting more use of land and labor in that section. For instance, if it previously required one laborer to guide his animal to market, the truck alternative now frees him from that activity adding to the farm labor force. As unskilled labor requirements increase, toward their upper limits, the scarcity of farm land is realized, and is treated as such rather than a surplus input. As the farm develops, resources become more fully utilized. As credit is introduced, an even greater shift in the productive structure will occur through increased production and hired labor inputs. Finally, the marginal returns of various crops are projected identifying the unit value of each incremental investment. In the general model, the trucking function requires one skilled laborer (the driver) with two unskilled cargo loaders. Once the new zone of influence is made accessible by truck, the truckers then join the regional labor force. Since there is no objective criterion for determining what proportion of the increased value added corresponds to each component in the investment package, it should be clearly understood that all the components contribute together. It follows, logically, that extension services and technological betterment will not advance sufficiently without good access. As the maximizing process takes place, we see a multiplier effect occurring, intensified by the road investment package.

Technical Inputs

While cognizant of the data requirements for a model such as this, it has been designed such that simple questionnaires could supply the majority of the activities described. Accordingly, field data, such as the Transport Marketing Activity, are described in relative terms

of walking time to market and return (i.e., animal-hours and man-hours); the market price; the number of loads required to haul the seasonal production; its worth in the market (as compared to the farm-gate price); and, the man-hours required to achieve that production. The small farmer is represented through consumption and nutritional constraints which must be met to feed the farm family. The insurance plot (or garden) is identified as agri-subsistence; or the basic farm. To illustrate, in Table I under the heading "Agri Sub", the subsistence level activity suggests (reading down the column) that with 910 man-hours of unskilled labor and 15 hours of skilled labor on 1 hectare of farm, plus 108 animal-hours produces 3,600 kgs. of vegetables, using 165 kgs. of insecticides and $8.85 of credit/ha, resulting in a value added to the region which required $10 of production inputs for each hectare.

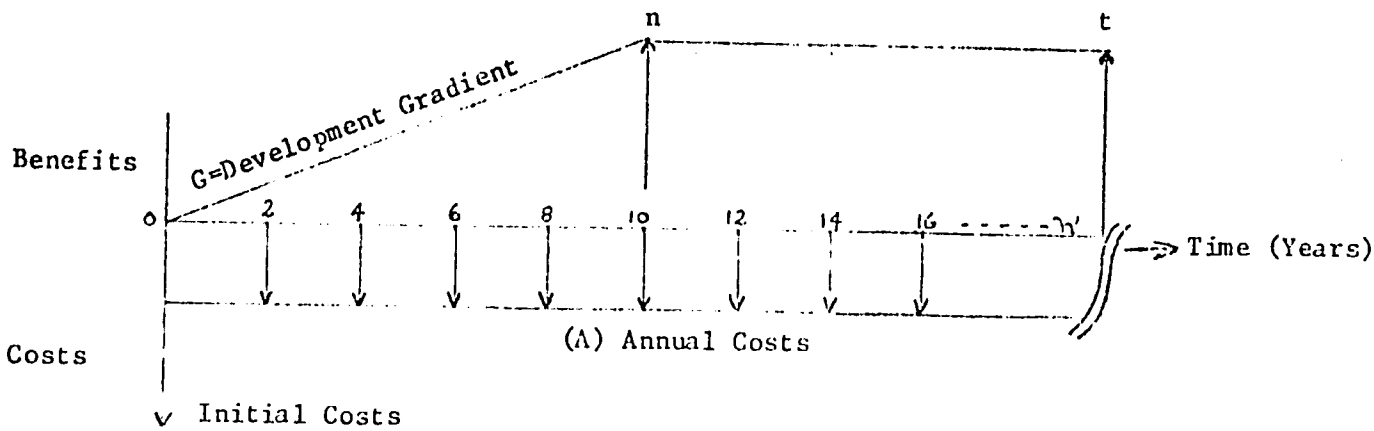
Completion of the run yields a maximum value added for one small family. Aggregating the subregion then results in the regional value. Subsequently, the value is then placed within the time frame of project development. More specifically, the net maximum value is placed at the discrete point in time when full development will be realized.4/ Simple discounting techniques are then applied to develop a benefit stream which best approximates the likely events and project objectives.

If in the agri-sector scheme of ten years were determined to be the most likely timing of full development, a linear growth pattern could be assumed (exponential growth could also be used), which would best approximate the rate of growth from year one to full development.

Then, given a discrete level of net benefits at year ten and presumably none at year one, the linear relationships are tabulated (shown graphically below) and netted against the initial project expenditures and annual operating or maintenance costs.

4/ Project objectives should be designated such that a 65% achievement goal could be attained within the road's economic life.

In essence the discounted cash flow would appear as the following:



Once the net cash flow is established a benefit cost ratio is calculated in the following manner:

$$\Sigma \text{Benefit Stream (PW)} = G\frac{(1+i)^{n+1}}{i} - (n+1)\frac{G}{i(1+i)^{n}} + A\frac{(1+i)^{t-n}-1}{i(1+i)^{t-n}} \cdot \frac{1}{(1+i)^{n}}$$

OBJECTIVE IS VALUEADD

	AGRISUB	CORN	POTATO	RICE	SOYBEANS	WHEAT	HLABOR	TRANSAN	
FARMLAND	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000			FARMLAND
FFLABOR	910.00000	128.00000	270.00000	257.00000	250.00000	128.00000	1.00000-	26.00000	FFLABOR
UNLABOR							1.00000		UNLABOR
ANIPOWER	106.00000	96.00000	40.00000	96.00000	80.00000	120.00000		26.00000	ANIPOWER
ANIBALNC								26.00000-	ANIBALNC
RAGRISUB	3000.0000								RAGRISUB
RCORN		2500.0000							RCORN
RPOTATO			2000.0000						RPOTATO
RRICE				1200.0000					RRICE
RSOYBEAN					1150.0000				RSOYBEAN
RWHEAT						1100.0000			RWHEAT
YIELD	3000.0000	2500.0000	2000.0000	1200.0000	1150.0000	1100.0000			YIELD
VALUEADD				.87000-			.15000-		VALUEADD

OBJECTIVE IS VALUEADD

	LIVESTK	HLABOR	TRACSERV	TRKVEG	TRKCORN	TRKPOT	TRKRICE	TRKBEAN	
CLAND	1.00000								CLAND
FFLABOR	36.50000	1.00000-							FFLABOR
UNLABOR		1.00000							UNLABOR
TRLABBAL			1.00000-						TRLABBAL
TRLABOR			1.00000						TRLABOR
RAGRISUB				5000.0000-					RAGRISUB
RCORN	600.00000-				5000.0000-				RCORN
RPOTATO						5000.0000-			RPOTATO
RRICE							5000.0000-		RRICE
RSOYBEAN								5000.0000-	RSOYBEAN
INSECT	1.82000								INSECT
TRANSPORT	13.30000								TRANSPORT
CREDIT	1.50000								CREDIT
YIELD	100.00000								YIELD
VALUEADD	52.68000	.15000-	5.50000-	1000.0000	660.00000	1000.0000	1000.0000	833.00000	VALUEADD

OBJECTIVE IS VALUEADD

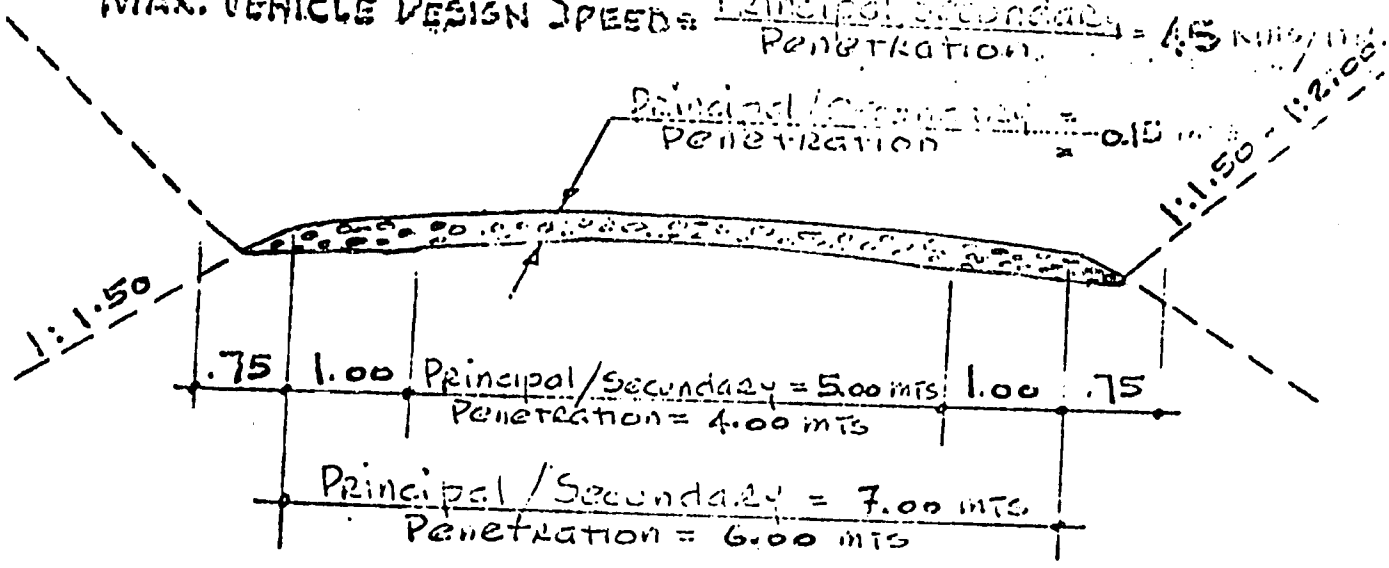
	TRKWHEAT	TRANSAN	MKTVEG	MKTCORN	MKTPOTAT	MKTRICE	RESOURCE	
FARMLAND							33.00000	FARMLAND
CLAND							10.00000	CLAND
FFLABOR		26.00000					4365.0000	FFLABOR
UNLABOR							3955.0000	UNLABOR
TRLABOR							84.00000	TRLABOR
ANIPOWER		26.00000					2920.0000	ANIPOWER
ANIBALNC		26.00000-	26.00000	26.00000	26.00000	26.00000		ANIBALNC
RAGRISUB			150.00000-				568.00000	RAGRISUB
RCORN				150.00000-			637.00000	RCORN
RPOTATO					150.00000-		865.00000	RPOTATO
RRICE						150.00000-	262.00000	RRICE
RWHEAT	5000.0000-							RWHEAT
CREDIT							250.00000	CREDIT
VALUEADD	463.00000		32.30000	21.40000	32.30000	32.30000		VALUEADD

TYPICAL ROAD CROSS SECTION

PRINCIPAL/SECONDARY AND PENETRATION ROADS.

MIN. AASHO STD. LOADING = $\frac{\text{Principal/Secondary}}{\text{Penetration}}$ = H-10

MAX. VEHICLE DESIGN SPEED: $\frac{\text{Principal/Secondary}}{\text{Penetration}}$ = 45 KMS/HR.



Penetration Roads
Methodology for Measuring Increases in Income to Rural Workers

(Average Construction Time of 15 Working Days per Kilometer with Present Labor Intensive Technology; Average Length of Road of 2 Kilometers)

Type of Labor	Number	Cost per Day	Total Labor Cost
Section Boss	10	$ 4.00 x 15 days per km.	$ 600
Unskilled Workers	100	$ 2.00 x " " "	3,000
Cement Masons and Carpenters	4	$ 4.00 x " " "	240
Drivers	7	$ 6.00 x " " "	630
Helpers	7	$ 3.50 x " " "	368
Surveyors	5	$ 6.00 x 6 days per km.	150
Technical Supervisor ($300 per month)	1	$12.00 x 15 days per km.	180
Total per kilometer	134		$5,168

134 workers x 82 kilometers x 15 working days = 164,820 man/days of employment over the life of the Program, thus creating temporary employment opportunities for 3,296 rural workers and a total of $423,776 in increased income ($5,168 x 82 kilometers).

Assumptions:

1) Construction will occur during the relatively dry months of June, July, August, January, February and March.

2) A heavy turnover rate due to workers tending their own plots or being engaged in other agricultural work.

3) An average of two months employment (50 work-days) at an average daily wage of $2.57 (total labor cost divided by 134 workers, divided by 15 days, the average length of time required to construct one kilometer). Thus, the average incremental earnings per worker per year becomes $128.56.

Principal/Secondary Rural Roads
Methodology for Measuring Increases in Income to Rural Workers

(Average Construction Time 25 Working Days per Kilometer with Present Technology; Average Length of Road of 10 Kilometers)

Type of Labor	Number	Cost per Day	Total Labor Cost
Section Boss	1	$ 4.00 x 25 days per km.	$ 100
Unskilled Workers	15	$ 2.00 x " " "	750
Machine Operators (front end loaders, tractors, etc.)	5	$ 8.40 x " " "	1,050
Operator Assistants	5	$ 3.50 x " " "	450
Cement Masons and Carpenters	34	$ 4.00 x " " "	3,400
Drivers	4	$ 4.00 x " " "	400
Technical Supervisor ($300 per month)	1	$12.00 x " " "	300
Total per Kilometer	65		$6,450

65 workers x 55 kilometers x 25 working days/km. = 89,375 man/days of employment over the life of the Program, thus creating temporary employment opportunities for 1,788 rural workers and a total of $354,750 in increased income ($6,450 x 55 kilometers).

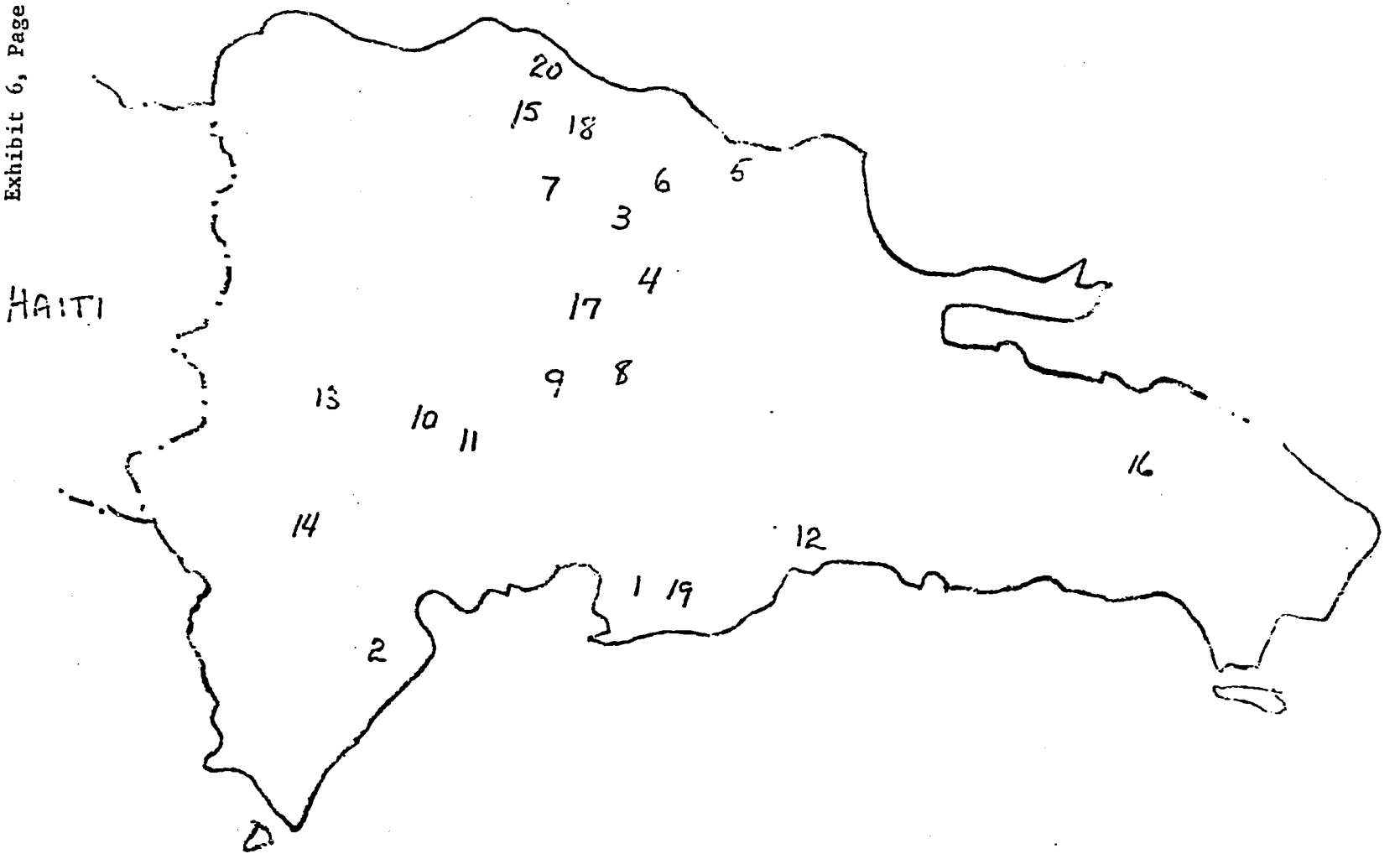
Assumptions:

1) Construction will occur during the relatively dry months of June, July, August, January, February and March.

2) A heavy turnover due to workers tending their own plots or other agricultural work.

3) An average of two months employment, 50 work days per worker at an average daily wage of $3.96 (total labor cost divided by 65 workers divided by 25 days, the length of time required to construct one kilometer). Thus, the average incremental earnings per worker per year becomes $198.46.

ORGANIGRAMA DE LA SECRETARIA DE ESTADO DE OBRAS PUBLICAS Y COMUNICACIONES



LOCATION OF [illegible] COOPERATIVES AND FEDERATIONS

Cooperative (1)

Name: Caficultores de Baní

Location: Baní

Members: 1,200

Administration: Excellent -- coffee assembly, grading, packing and export.

Warehousing Capacity: 20,400 cwt of which approximately 8,000 cwt could be used for inputs.

Loan Experience L-020: None

Cooperative (2)

Name: El Amparo

Location: Barahona

Members: 800

Administration: Average -- receives peace corps assistance.

Warehousing Capacity: 35,000 cwt.

Loan Experience L-020: None

Cooperative (3)

Name: Criadores del Cibao

Location: Moca

Members: 300

Administration: Very Good -- operates a very successful feed mill operation and has business experience.

Warehousing Capacity: 12,400 cwt.

Loan Experience L-020: None

Cooperative (4)

Name: San Isidro

Location: La Vega

Members: 400

Administration: Average/poor -- management permitted loss of some RD$35,000 in 1971 through misuse of loan funds for pignoration of rice from members.

Warehousing Capacity: 14,400 cwt.

Loan Experience L-020: Very poor -- one of only two probable losses under Loan 020 to date.

Cooperative (5)

Name: Río San Juán

Location: Río San Juán

Members: 300

Administration: Very good

Warehousing Capacity: 5,000 cwt.

Loan Experience L-020: None -- net-worth picture good.

Cooperative (6)

Name: Espaillat

Location: Villa Trina, Moca

Members: 1,300

Administration: Very good -- past two years operations profitable.

Warehousing Capacity: 14,700 cwt.

Loan Experience L-020: Excellent -- two matured loans paid in full.

Cooperative (7)

Name: FETAB

Location: Santiago

Members: 3,000 in 38 member cooperatives

Administration: Excellent -- unquestionably the best cooperative operation in the Dominican Republic.

Warehousing Capacity: 30,500 cwt for inputs. Much more for crops.

Loan Experience L-020: Excellent -- repayment of RD$16,000; RD$250,000.

Cooperative (8)

Name: La Altagracia

Location: Bonao

Members: 132

Administration: Very good.

Warehousing Capacity: 10,400 cwt.

Loan Experience L-020: Excellent.

Cooperative (9)

Name: Productores del Valle

Location: Constanza

Members: 300

Administration: Average -- newest cooperative in the Dominican Republic -- formed for vegetable production and export to the United States.

Warehousing Capacity: 4,000 cwt.

Loan Experience L-020: Good -- only loan matured was paid in full.

Cooperative (10)

Name: Santa Cruz

Location: San José de Ocoa

Members: 800

Administration: Average -- receives peace corps assistance.

Warehousing Capacity: 9,500 cwt.

Loan Experience L-020: Very poor -- the first subloan made under Loan 020 and thus far one of only two probable losses.

Cooperative (11)

Name: Padre Las Casas

Location: Padre Las Casas

Members: 307

Administration: Average -- receives assistance from IDECOOP.

Warehousing Capacity: 14,400 cwt.

Loan Experience L-020: Five loans matured, four paid in full. The other small loan set up as a workout over two years. Weather influenced repayment.

Cooperative (12)

Name: FENACOOP

Location: Santo Domingo

Members: A Federation

Administration: AID has no experience with this Federation. IDECOOP rates them very good.

Warehousing Capacity: 14,100 cwt.

Loan Experience L-020: None.

Cooperative (13)

Name: Macasias

Location: Las Matas de Farfán

Members: 283

Administration: Average to good - New cooperative receives IDECOOP assistance, Peace Corps assistance and also assistance from Redemptionist Fathers.

Warehousing Capacity: 10,100 cwt.

Loan Experience L-020: No loans matured (one granted).

Cooperative (14)

Name: Mi Propio Esfuerzo

Location: Los Ríos, Neiba

Members: 67

Administration: Average

Warehousing Capacity: None

Loan Experience L-020: Three small loans, two paid in full, and one with over 50% payback and a workout on balance due (less than RD$2,000).

Cooperative (15)

Name: Guanico

Location: Puerto Plata

Members: 89

Administration: Average -- primarily a swine production cooperative.

Warehousing Capacity: 3,800 cwt.

Loan Experience L-020: Excellent -- three loans paid on schedule.

Cooperative (16)

Name: El Centro

Location: El Seybo

Members: 300

Administration: Very good -- the best individual cooperative in the Dominican Republic. Receive Peace Corps assistance.

Warehousing Capacity: 8,900 cwt, however, none for inputs -- cacao operation precludes utilizing existant capacity for pesticides or fertilizer. They plan to build additional capacity this year.

Loan Experience L-020: Excellent -- paid in full all matured loans.

Cooperative (17)

Name: Desarrollo de Jarabacoa

Location: Jarabacoa

Members: 297

Administration: Average -- new (2 years) cooperative -- receives Peace Corps assistance.

Warehousing Capacity: 3,100 cwt.

Loan Experience L-020: Very good. One loan -- paid as agreed but not totally matured.

Cooperative (18)

Name: Palmar Grande

Location: Altamira

Members: 600

Administration: Good -- receives IDECOOP and Peace Corps assistance.

Warehousing Capacity: 12,800 cwt, but only about 8,000 cwt usable for inputs due to conflict with coffee and cacao operations.

Loan Experience L-020: Excellent -- on one loan to [illegible]

Cooperative (19)

Name: El Roblegal

Location: Baní

Members: 200

Administration: Very good -- has additional IDECOOP support in this respect -- has marketing contract with U.S. firm.

Warehousing Capacity: 30,100 cwt.

Loan Experience L-020: Excellent -- matured loans paid in full.

Cooperative (20)

Name: Prof. Roberto Elías Blondet

Location: Sabaneta de Yásica

Members: 280

Administration: To new to rate. This is a savings and loan cooperative that is in rural area with 020 subloan for swine productior and marketing.

Warehousing Capacity: 2,800 cwt.

Loan Experience L-020: Only one loan matured -- paid in full.

ALLIANCE FOR PROGRESS
LOAN AUTHORIZATION

Provided From: FAA Sec. 103 Funds (Food Production and Agricultural Development)

Dominican Republic: Agricultural Sector Loan

Pursuant to the authority vested in the Administrator, Agency for International Development ("A.I.D."), by the Foreign Assistance Act of 1961 ("Act"), as amended, and the Delegations of Authority issued thereunder, I hereby authorize the establishment of a Loan ("Loan") pursuant to Section 103 of the Act and in furtherance of the Alliance for Progress, to the Government of the Dominican Republic ("Borrower") of not to exceed twelve million United States dollars ($12,000,000) to assist in financing the United States dollar and local currency costs of goods and services needed to support Borrower's program ("Program") directed toward: (1) increasing agricultural production for domestic consumption; (2) increasing the productivity of small farmers; (3) increasing employment in agriculture in the rural areas; (4) developing the institutional and human resources needed to sustain agricultural growth and development; and (5) raising and more equitably distributing rural income.

The Loan shall be subject to the following terms and conditions:

1. Interest and Terms of Repayment

a. Borrower shall repay the Loan to A.I.D. in United States dollars within forty (40) years from the first disbursement under the Loan, including a grace period of not to exceed ten (10) years. Borrower shall pay to A.I.D. in United States dollars, interest at the rate of two (2) percent per annum during the grace period, and three (3) percent thereafter on the disbursed balance of the Loan and unpaid interest.

b. Goods, services (except for ocean shipping) and marine insurance financed under the Loan shall have their source and origin in the Dominican Republic or any country included in Code 941 of the A.I.D. Geographic Code Book. Marine insurance may be financed under

the Loan only if it is obtained on a competitive basis and any claims thereunder are payable in freely convertible currencies. Ocean shipping financed under the Loan shall be procured in any country included in Code 941 of the A.I.D. Geographic Code Book.

c. United States dollars utilized under the Loan to finance local currency costs shall be made available pursuant to procedures satisfactory to A.I.D.

2. Other Terms and Conditions

a. Prior to the first disbursement or the issuance of any commitment documents under the Loan, A.I.D. shall have received in form and substance satisfactory to A.I.D., evidence that:

(1) The Agriculture Bank has lowered its maximum loan limit to an amount not in excess of $50,000 per loan; and

(2) The Central Bank has established a discount rate for agricultural loans, which rate is lower than the discount rate for commercial or industrial loans.

b. Prior to any disbursement or the issuance of any commitment document under the Loan for Marketing/Farm Management, A.I.D. shall have received in form and substance satisfactory to A.I.D. evidence that a Market Research/Information Office and a Farm Management Office have been created within Secretariat of Agriculture ("SEA").

c. Borrower covenants to cause the Agricultural Bank, unless A.I.D. otherwise agrees in writing, to lower its maximum loan limit to:

(1) $25,000 per loan on or before October 1, 1975; and

(2) To $10,000 per loan for agricultural production and $20,000 per loan for all other types of lending on or before October 1, 1976.

d. Borrower covenants and agrees to cause the implementing agencies to seek written A.I.D. concurrence prior to effecting any changes in lending criteria which have been previously submitted to and approved by A.I.D. pursuant to the Program.

e. Borrower agrees to undertake a systematic study of the basic problems of land tenure and use in the Dominican rural sector to examine these problems in relation to long-range production and social goals and focus on institutional and policy changes such as taxation and land transfer mechanisms which may be necessary to solve such land problems.

f. The Loan shall be subject to such other terms and conditions as A.I.D. may deem advisable.

_____
Administrator

_____
Date