

AGRICULTURE IN LATIN AMERICA AND THE CARIBBEAN

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**Present status, future prospects
and the current crisis**

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INTER-AMERICAN INSTITUTE FOR COOPERATION ON AGRICULTURE
DIRECTORATE OF POLICY ANALYSIS, STUDIES AND PROJECTIONS



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AGRICULTURE IN LATIN AMERICA AND THE CARIBBEAN:
PRESENT STATUS, FUTURE PROSPECTS AND THE CURRENT CRISIS

EDI-IICA SYMPOSIUM

X "The Agricultural Sector in Latin America and The Caribbean
and the International Financial Crisis"

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INDEX

| | |
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| PREFACE | i |
| INTRODUCTION | iii |
| 1. DEVELOPMENT STRATEGY. EVOLUTION AND CRISIS | 1 |
| Development strategy and efforts towards integration | 1 |
| The international picture and Latin American solidarity | 4 |
| 2. THE SITUATION IN THE REGION | 12 |
| Economic indicators | 12 |
| Sectorial indicators | 14 |
| Population and the labor force in the agricultural sector | 16 |
| 3. THE FINANCIAL CRISIS AND AGRICULTURE | 19 |
| The foreign debt | 20 |
| The balance of payments | 22 |
| Options for dealing with the crisis | 23 |
| National alternatives | 27 |
| 4. MAJOR BARRIERS TO AGRICULTURAL DEVELOPMENT | 31 |
| Problems of access to the land | 31 |
| Limited financial resources and farm credit | 34 |
| Farm price trends | 35 |
| 5. FAVORABLE FACTORS | 38 |
| Natural resources | 38 |
| Land | 38 |

| | |
|--|----|
| Water resources | 41 |
| Forest resources | 42 |
| Fisheries and agriculture | 44 |
| Productivity and technological potential | 44 |
| 6. CONDITIONS FOR DEVELOPMENT OF THE AGRICULTURAL SECTOR | 49 |
| Institutional and managerial structures | 49 |
| Strengthening the public agricultural sector | 49 |
| Private initiative and organization for production | 50 |
| Conservation of natural resources and the environment | 53 |
| 7. TOWARDS A LATIN AMERICAN SOLUTION | 56 |
| NOTES | 59 |
| BIBLIOGRAPHY | 61 |

PREFACE

During its Fifth Regular Meeting, the Executive Committee of the Inter-American Institute for Cooperation on Agriculture (IICA) advised that a symposium be given at the upcoming meeting of the Inter-American Board of Agriculture to be held in Montevideo in October 1985. The symposium, which fits into the terms of an agreement between the World Bank's Economic Development Institute (EDI) and IICA, will discuss Latin America's agricultural sector and the international financial crisis. The Committee hopes to use the contributions to and conclusions resulting from this Symposium as the basis for developing the 1988-1992 Medium Term Plan.

In support of this gesture, the General Directorate signed a second letter of understanding with EDI, proposing that the symposium be sponsored in conjunction with the government of Uruguay and that the base documents be prepared. IICA's Directorate for Policy Analysis, Studies and Projections was assigned the responsibility of coordinating the Symposium and developing IICA's document.

As requested by the Executive Committee, the document is designed to present ideas that will help give the participants a picture of the crisis, of the response of the agricultural sector to present conditions, and of the role the sector can play in solving today's problems. The results of this Symposium will be used as the basis for a new updated document to be presented at the Ninth Inter-American Conference on Agriculture, to be held in 1987, and for the development of IICA's 1987-1992 Medium Term Plan.

Due to space limitations and the nature of the subject matter being discussed, this document is of a comprehensive nature; it deals with Latin America and the Caribbean as a unit, with references to specific countries when necessary. Careful attention has been paid to the heterogeneous nature of the countries, which is a point of major importance in the design, programming and implementation of programs, projects and actions oriented towards agricultural development and rural well-being.

IICA's actions in practice focus on this diversity, and the Institute has begun to perform tasks which cast special light on the countries' lack of homogeneity. As a result, the Institute identified and tested a classification of the countries into groups or types, based on maximizing the similarities of countries in each group, as well as the differences among groups. Countries in the region tend to differ not only in the conditions and trends of their economies and their natural resource endowments, but also in the approach of their development strategies. This is why specific options cannot easily be discussed at this point. Instead, the discussion will focus on broader, more important subjects related to the crisis and the possible strategies and useful policies to be considered by the countries.

It is the Institute's sincere hope that the Symposium presented in Uruguay, in which this and other documents will be discussed, will generate valuable observations and lead to the formulation of guidelines for future use by international organizations in general and IICA in particular.

INTRODUCTION

This document begins by illustrating how the region's development strategy was based on the drive for industrialization prevalent after World War II, and how agriculture, especially the subsector of small food producers for internal consumption, has been neglected.

It continues by describing efforts toward integration and the successful exchange of manufactured products. It explains how strategies for market expansion, industrialization and the use of the agricultural sector as a supplier of foreign exchange confronted mounting difficulties and eventual deterioration.

Later, the document analyzes the present international situation, the east-west conflict and the north-south dialogue, and the economic revitalization of the industrialized countries in 1983. The study also indicates how and why the continued deterioration of the terms of trade, especially for agricultural products, does not permit this economic revitalization to carry over to the Latin American and Caribbean countries.

A summary of leading economic indicators, especially those relevant to agriculture, is included along with specific information on the population and labor force in the agricultural sector.

The document's general analysis singles out the foreign debt as the main factor in the present crisis, a factor which makes it more complex than previous crises. It also attempts to demonstrate how present economic, social and political problems lead to capital flight, reduced investments, and a negative net transfer of capital.

The abovementioned problems are shown to limit capital accumulation within the countries and, consequently, hold back public and private investment, which

has not gathered force in spite of foreign loans and investments. Additionally, there is discussion of measures taken to adjust the present structure, which have reduced public spending and helped to weaken internal demand.

These facts emphasize the need for efforts to improve the balance of payments, and by extension to promote exports. If the international economy continues to revitalize, and the terms of trade improve, this means that export agriculture could play a more important role in the procurement of foreign exchange and in the servicing of the debt, elevating agriculture's position in the overall economy. Agriculture will acquire a new level of prestige in the general economy only to the degree that it takes full advantage of the above-mentioned opportunities, gaining relative political and economic ascendancy in relation to other sectors. Similarly, special note is made of actions the countries should take in the present context.

The document proceeds with an analysis of the problem of land distribution and land access as the major causes of rural poverty in the region and as barriers to agricultural development. The limited available financial resources and unstable agricultural price trends are also examined as obstacles to rapid agricultural development and as causes of the shrinking purchasing power of rural populations.

The study goes on to analyze some factors that would allow for the reactivation of the agricultural sector. This hypothesis is backed up with evidence of productivity increases during the last fifty years and of the high potential for substantially improving production and productivity by taking full advantage of existing technology and new developments in the region, which could be made available to farmers by strengthening the pertinent institutions. This would facilitate better exploitation of comparative advantages and natural resources, which are enjoyed in greater abundance in Latin America and the Caribbean than in other geographic blocs.

In order to round out and complete the study, different facets of the institutional and managerial structures are discussed. The public agricultural sector must be strengthened and support efforts for the private sector must be well orchestrated if agriculture is help overcome the crisis. The public agricultural sector is weak and lacks political support. This is why it is unable to shape the decisions affecting agriculture, a situation compounded by ineffective structures and poorly coordinated institutional efforts.

The public agricultural sector can strengthen the private sector by negotiating and supporting public policies tailored to the specific needs of each individual producer category. It is also important to recognize the role played by different associative forms of production which, with their strong growth, have come to stand as an economic sector of social importance ("the third sector"). Some of the problems associated with environmental protection and conservation of natural resources are also studied.

Finally, guidelines are given for a unified Latin American response and for the institutionalization of a regional approach to complement efforts made at the national level to strengthen the agricultural sector.

1. DEVELOPMENT STRATEGY. EVOLUTION AND CRISIS.

Development Strategy and Efforts Towards Integration.

The structure of the countries of the region was shaped, almost without exception, by two basic factors: a highly centralized state apparatus and an economy based on primary exports. Consequently, and this is particularly true of the agricultural sector, those producers with the greatest amount of resources concentrated their efforts on exports, reaping not only economic and social benefits, but political advantages as well, as they came to constitute one of the most important pressure groups wielding political clout in the region.

The exports of most of these countries are confined to a limited number of products, for the most part mineral and agricultural. This has been the source of a high degree of economic instability fueled by frequent and substantial international price swings for primary commodities. This concentration on a small number of products and markets has made these countries extremely dependent.

In 1930, some countries initiated an economic diversification process; this trend became widespread in many countries of the region following World War II. Subsequently, the support of international organizations, such as the Economic Commission for Latin America (ECLA), laid the groundwork for the creation of a development strategy which, in time, would set aside the traditional model of exporting unprocessed agricultural and mineral products, and replace it with a model of exports containing a greater degree of value added, along with import substitution through gradual industrialization. In 1950, the contribution of the manufacturing sector to the GDP of Latin America and the Caribbean nearly equaled that of the agricultural sector. By 1983, it had doubled that of the agricultural sector.

In many countries, the agricultural subsector, especially the segment which supplied the domestic market and was largely composed of small-scale farmers, received less and less attention in such vital areas as agricultural credit

and support services furnished by the public agricultural sector. In some instances, this subsector was even obliged to subsidize other sectors. Out of necessity, small farmers began to intensify the use of their limited productive resources, which even proved counterproductive. Hillside farming proliferated and the use of fertilizers, irrigation and new varieties became widespread (where credit or financial resources were available). As a result, even the Green Revolution, which in general had an extremely positive impact, in many cases proved detrimental.

The cities, because of their greater political influence, benefited from the surplus produced by the agricultural and rural sector, through low prices and/or food subsidies for the urban sector. This phenomenon joined forces with the industrialization process, which was concentrated in the cities, and the lack of basic social services in the rural areas, and nurtured rural to urban migration. It should be pointed out that in many instances attempts were made to correct this imbalance by subsidizing agriculture through lower interest rates on loans, minimum purchase price guarantees, subsidies for fertilizers and other policies. As the normal rural to urban migration process stepped up, the economically active population of the agricultural sector, which in 1950 accounted for 54 percent of the labor force in the region, whittled down to a bare 35 percent in 1980. However, in spite of this steady erosion during three decades, agriculture's contribution to GDP increased by an encouraging average annual rate of 3.3 percent. This growth can be attributed to such factors as the increase in land under cultivation, mechanization, more efficient use of resources, technological developments, etc.

In 1950 there were 146,000 tractors in the region. By 1980 this figure had risen to 890,000. Likewise, the area under cultivation doubled between 1950 and 1979, having risen from 53.1 million hectares to approximately 105 million hectares.

Two thirds of the increased production in the sixties was due to an increase in area cultivated in the region as a whole, and one third was the result of higher yields per production unit. The ratio in the seventies changed

somewhat, as yields per cultivated unit improved rapidly. During that decade, total land under cultivation expanded at an annual rate of 1.7 percent, while yields rose annually by 1.4 percent.

Despite support to industry and to the growth of the secondary sector (which increased its contribution to GDP in the region from 18.7 percent in 1950 to 22.9 percent in 1984), agriculture continues to be the backbone of the region's development. It is a source of employment for roughly one third of the labor force and generates, on the average, more than thirty percent of the foreign exchange in the trade balance.

The variety of climates and other natural resources in many countries of the region, together with human resources and managerial skills, have afforded the agroexporting sector a certain comparative advantage. Its comparative advantage has given these exports, which are known to react rapidly to price increases, greater access to international markets. Because they constitute one of few sources of hard currency for many countries, agricultural exports are today the fundamental means of servicing the overwhelming foreign debt.

One support mechanism for development strategy has been the move towards integration, beginning with the Latin American Free Trade Association (LAFTA), reorganized in 1980 as the Latin American Association of Integration (ALADI). This was followed by other regional and subregional integration efforts designed to facilitate interregional trade agreements, such as the Central American Common Market (CAQM), the Caribbean Free Trade Association, which later became the Caribbean Community (CARIFTA/CARICOM), and the Cartagena Agreement (JUNAC).

These integration schemes created over the last 25 years to liberalize and expand national markets have been fruitful but somewhat slow-moving. This is due to the different degrees of relative development in the countries concerned, the problems inherent in harmonizing thousands of items on the tariff nomenclature and the different policies practiced by the countries for accepting foreign investment. In certain cases, this can be attributed to political disputes between countries.

The success of these efforts at integration is reflected, for example, in the fact that the member countries of the Central American Common Market (CACM) increased their level of trade 38 times between 1950 and 1980, 95 percent of this activity consisted of manufactures primarily produced by new industries.

Intraregional trade within the LAFTA/ALADI grew significantly between 1966 and 1982. During this period imports rose from US\$ 785 million to US\$9.8 billion and exports climbed from US\$ 676 million to US\$9.8 billion. Financial arrangements were established to streamline intraregional trade by facilitating transactions, providing short-term credit and reducing the need to use foreign exchange through the introduction of clearing houses.

The strategy of economic growth based on expanded markets, industrialization and import substitution and the maintenance of an agroexporting sector to procure foreign exchange was relatively successful between 1960 and 1973. Following 1973, the countries were hit by the hike in oil prices, a general increase in the price of imports, protectionist and self-sufficiency policies adopted by the developed countries, rising costs of technology and the economic recession of 1981-1983. The strategy became increasingly difficult to sustain and gradually lost momentum. This situation became even more critical with the excessive servicing of the foreign debt and austerity programs launched in 1980, which also restricted internal demand.

Efforts to overcome the crisis have imposed a very high social cost, which is reflected in such factors as a per capita income equivalent to that of 1977. In brief it can be said that today, in 1985, the overall economic picture for Latin America continues to be critical.

The International Picture and Latin American Solidarity

As a result of World War II and the subsequent cold war of the fifties, many industrialized countries began to devote a greater part of their resources to their war efforts, appreciably altering their productive structure.

The alliances of countries with opposing political and economic systems not only changed during and after the war (1939-1945), but exacerbated the ideological differences and political and economic interests of the countries involved. This produced an even greater polarization which was at the source of the East-West confrontation.

This period witnessed the beginning of a strong decolonization movement, due to the growing nationalistic spirit in many countries and the resolute support of the United Nations. Between 1950 and the present, dozens of armed conflicts took place both between countries and internally. As a result, the majority of these countries either maintained or strengthened their military budgets, regardless of whether they were involved in internal or foreign wars. It should be noted that armament policies have become increasingly costly, partly due to the sophistication of modern weaponry.

Following 1950 many of the developing countries in the region began to enter the western economy, and by the sixties, cooperation between the developed nations and regions such as Latin America served to forge a relationship which in fact or in theory benefited both sides. Financial cooperation and loans granted by international lending institutions and by the industrialized countries allowed for a considerable annual increase in imports to Latin America from these countries, at a cost exceeding the value of loans received. The sixties brought radical changes both at the international and hemispheric levels. On the continent the Alliance for Progress was introduced and the long-standing Latin American desire to establish a regional development organization was articulated in the creation of the Inter-American Development Bank.

It should be recalled that when the Inter-American Development Bank was first created, the six largest countries of the region were the ones to benefit from long-term, low interest credit, with resources from the FFPS and FOE. This was because the smaller countries lacked the know-how to prepare, negotiate and implement projects.

The decade of the seventies marked the beginning of the North-South dialogue, and the Brandt Commission was set up and issued its report, North-South: A Program for Survival. This period held out the hope of establishing a more just relationship between the industrialized and the developing countries. By 1980, however, the North-South dialogue had fallen apart and tensions mounted as relations became confused and intertwined with East-West frictions.

During the early years of the last decade, a large group of oil-producing countries formed a cartel which between 1973 and 1974 was able to raise the price for oil and oil derivatives. In one year's time, pre-1973 average prices quadrupled. This brought an end to the era of low-cost energy, and perhaps all too quickly, as prices continued to rise and in 1979/80, jumped sharply. The oil-importing countries suffered from these sizeable increases, and this phenomenon critically affected international trade and finance. The costs of producing and transporting manufactures increased appreciably in the industrialized countries, giving rise to serious disequilibria in the trade balances of the non oil-producing countries. Oil bills rose dramatically, as did the total value of imports and income from primary commodity exports, but to a degree which could not match the exploding price of oil and oil derivatives and manufactures. In addition, the prices of some items (copper, fish meal, sugar, etc.) rose initially (after 1973), only to fall shortly thereafter.

This situation grew even more critical after 1980 as a new hike in oil prices that year led to a recession which seriously affected the economies of the different ideological blocks between 1981 and 1983, particularly in the countries having to service a soaring foreign debt.

In several Latin American countries whose chief economic activity is agriculture and whose economies are extremely dependent on the external sector --as attested to by the value of the exports and imports of goods and services in comparison with the gross domestic product-- the effect of the international situation has been highly unfavorable.

The recovery in the economies of the industrialized countries towards the end of 1983 and the slumping price of oil and oil derivatives in 1984 and 1985 have allowed for a mild economic recovery to take hold in some of the developing countries. However, this rebound has not been widespread.

In 1984 industrial production in the developed countries rose by six percent in the United States of America and by three to five percent in Canada, Japan and the United Kingdom. These growth rates reflect a trend towards significant economic recovery from the 1980-1983 levels. Industrialized countries hope that the steady recovery of these economies will in turn serve as a catalyst to reactivate the economies of the countries of the region. This possibility is by no means certain, and for some countries is unlikely to come about.

The rate of inflation declined in the industrialized countries, particularly in those with strong currencies: in the United States from six percent in 1982 to 3.9 percent in 1984, in Germany from 4.8 percent to 2.3 percent and in Japan from 1.7 percent to 0.8 percent. By 1984, inflation in the industrialized countries as a whole was only 4.3 percent, contrasting sharply with inflation levels in Latin America and the Caribbean which, on the average, tended to be from twenty to 25 times higher and, in some countries, exceeded annual levels of one thousand percent. In 1984 the average price increase in the region was 184 percent, and this figure is expected to be higher for 1985.¹ Economic recovery in the developing countries is linked, to a large degree, to an improvement in the prices for primary export commodities, agricultural products in particular, and to a greater demand for these products on the part of the industrialized countries. In the case of coffee alone, a twenty cent increase per pound would have meant an additional 190 million dollars of income annually for the six countries of Central America and approximately 230 million dollars for Colombia (1982).

However, despite the economic recovery in the industrialized countries, which began in 1983, the prices for primary export commodities from Latin America increased only moderately from an index of 75 in 1978 to 85 in 1983 (base 1975:100). The rate of exchange was twenty percent lower in 1984 than in 1980

and has continued to decline (up until August 1985) by close to ten percent of the 1984 level. Accordingly, even though the industrialized countries increased their volume of imports by three percent in 1983, import value decreased by two percent.

At the summit meeting of the seven most economically developed nations of the West, held in Bonn in May 1985, the only issues on which the participants were in agreement concerned the need to maintain the process of reactivating the economies of the industrialized nations in order to overcome the economic problems on a world scale, including the debt crisis of the Third World. To that end they agreed to promote a neoliberal economic approach including stringent policies and fiscal corrective measures to reduce the role of the State and "eliminate all types of barriers which impede free trade".²

It appears that this last objective will be difficult to achieve since the EEC maintains neoprotectionist measures and the United States Congress in 1985 was also discussing policies of this kind. Unlike the industrialized nations, the countries of Latin America and the Caribbean encounter difficulties in adopting joint policies to make optimum use of their comparative advantage. They have also been unable to establish associations to create a more balanced supply which would improve international prices for their basic commodities and ensure more equitable terms of trade. Perhaps a joint strategy would allow the developing countries to reach an agreement with the developed countries regarding commercial and financial cooperation to improve the monetary yield of trade in agricultural products. Accordingly, the need for greater solidarity and concerted interests constitutes one of the vital points of the analysis which ought to be conducted.

It is fitting at this time to mention some factors which have strengthened this sense of Latin American solidarity, such as the emergence and political consequences of the conflict over sovereignty for the Falkland Islands, the worsening problems of critical economic and political instability facing most of the countries of Central America, foreign debt, and other issues examined below. Because of the importance of these factors, a brief analysis follows of the situation in Central America and the Caribbean, a subregion which has

become a focal point of international tension and has caused the internal problems of some countries in this area to extend beyond national borders and take on hemispheric and extracontinental dimensions.

In terms of geopolitics, factors including the wealth of oil resources in neighboring countries such as Venezuela and Mexico, the geographic coordinates of Central America and the Panama Canal and the movement of oil and other imports and exports between the United States and Latin America via this area make the subregion one of strategic importance.

A major concern of the United States is that of uncontrolled migration in some countries of the region. This trend is expected to increase appreciably as a result of the grave conflicts both within and among the countries, which appear to be growing more intense with time. Due to a certain degree of concurrence among the Executive Branch, the Congress and United States public opinion, a strategy has been devised which appears to be consistent. Within this framework it appears feasible to implement such measures as the Caribbean Basin Initiative and to adopt the recommendations of the Bipartisan Commission, better known as the Kissinger Report. Said policy measures will generally benefit the countries of the Caribbean and Central America and are aimed at stimulating the economy, achieving a certain degree of political stability and strengthening free enterprise in the area.

The Caribbean Basin Initiative is one of the many diverse approaches to international cooperation which are either underway or have been proposed for the immediate future. The initiative launched by the European Economic Community is also viewed with optimism, and has prompted the countries of Central America, with the support of the Inter-American Development Bank, to prepare a project for discussion. Several meetings have already taken place. The technical and financial assistance programs promoted by various governments, including the United States' program to develop the countries of the region, and the Integrated Cooperation Plan of the Spanish Government, are among some of the major cooperation efforts.

In addition, Latin America as a whole is the target of a wide range of hemispheric and regional programs. Financial assistance has been provided by the Inter-American Development Bank, the World Bank, the Central American Bank of Economic Integration and the Andean Development Corporation.

In the commercial sphere, there are several instances of economic integration systems in the region, principally those which seek the liberalization and expansion of intraregional trade. Examples include the Latin American Association of Integration, and others of a subregional order, such as the Cartagena Agreement (JUNAC), the Caribbean Community (CARICOM) and the Central American Common Market (SIECA and BCIE).

In the domain of technical support for the agricultural sector, IICA operates in 29 countries of Latin America and the Caribbean to strengthen the public agricultural sector institutions in close cooperation with the Tropical Agriculture Research and Training Center (CATIE). The FAO provides regional cooperation, and other specialized agencies, such as the International Center for Tropical Agriculture (CIAT), are providing similar support. The Organization of American States (OAS) and its different agencies play an important role in providing consulting services and hemispheric cooperation, and the Inter-American Development Bank and the World Bank are active in a variety of projects.

In the field of economic analysis and research, the Economic Commission for Latin America (ECLA) provides consulting services, coordination and cooperation. The Latin American Economic System (SELA), the Latin American Association of Development Financing Institutions (ALIDE) and other specific regional training and research programs such as INCAE and CUFAIN in Costa Rica, INCAP in Guatemala, CIDIAT in Venezuela, INDES and INTAL in Argentina and ILPES in Chile, are also working in this domain. The importance of taking maximum advantage of the cooperation efforts in different and complementary fields in order to support the development of the countries of the region should be underscored. Special mention should also be made of the Contadora Group, with the support of the Lima Group -- a new element of Latin American identity and a point of converging interests as well as diverging opinions

between the United States and Latin America, with all the consequences which this entails.

The democratization process in Latin America and the Caribbean is yet another instance of solidarity which is associated with the conviction that the foreign debt poses a common problem which should be approached jointly, as prescribed by the Cartagena Agreement.

In addition, the countries of the region have joined the Third World in the search for a new international economic order which seeks to close the gap between the industrialized and the developing countries.

2. THE SITUATION IN THE REGION

Economic Indicators

Existing information on economic and social conditions in Latin America reveals the presence of the following characteristics common to all of the countries in the region:

- A high fiscal deficit which in 1983 affected all the countries of the region. Twenty of the 25 countries ran up deficits which ranged from one to ten percent and which, in some instances, reached veritable extremes: from one fifth to slightly over one third of the national product.
- After two consecutive years of serious decline in per capita product in the region, 1984 experienced a modest recovery which meant a slight increase over 1977 levels, still eight percent short of 1980 figures.
- Capital flight. Despite the fact that pertinent data are incomplete and provide only rough approximations, estimates regarding the outflow of private capital from the countries of the region to the United States and other industrialized countries in the western hemisphere indicate that the flow is sizeable.*

* While it is difficult to arrive at a precise figure, researchers acquainted with the problem estimate that, by mid 1984, approximately US\$120 billion (equivalent to one third of the entire foreign debt) had been deposited in private bank accounts in the United States of America and other countries in the western hemisphere, and that said practice had increased of late. It is estimated that since 1979 approximately US\$70 billion have left the countries of the region for foreign banks and accounts.

- Pronounced variations from year to year in international currency reserves. In 1980, reserves registered negative levels on the order of -US\$ 2.2 billion. This figure jumped to US\$2.1 billion in 1981 and to US\$16.8 billion in 1982, plunging to US\$3 billion in 1983.
- A heavy monetary burden to service the foreign debt, at an estimated 1984 average of approximately US\$30 billion.*
- A declining net balance in the capital account. This figure totalled US\$35.2 billion in 1980 and shrank to US\$6.3 billion in 1983.

In 1981 the GDP growth rate in Latin America declined drastically from 5.4 percent to 1.3 percent. In 1982 and 1983, the variation of the product was negative, -0.8 percent and -3.0 percent, respectively. The year 1984 experienced economic recovery at a rate of 2.6 percent.**

International economic recession was coupled with the serious foreign debt crisis which shook all the countries of the region to varying degrees. This, together with a variety of other factors, resulted in declining GDP in nine of the countries in the region in 1981.

In 1982 the situation grew even more critical; fifteen countries saw their production levels shrink, in some instances by as much as ten or fourteen percent. This deterioration bottomed out in 1983 but rebounded in 1984 due to an improvement in the balance of payments attributed to the increase in exports to the United States and Japan, adjustments in exchange rates and moderate recovery with respect to imports.

* While this average represents close to five percent of GDP for the region, it accounts for two fifths to one half of the total value of exports, with even higher percentages in many of the countries.

** The IDB established the rate of growth for 1984 at 3.1 percent.³

This stagnation in some cases was observed as an actual downturn, and it translated into an even more sizeable decline in per capita product, on the order of -1.1 percent in 1981, -3.1 percent in 1982 and -5.3 percent in 1983. The limited growth experienced in the region in 1984 (2.6 percent) while varying from country to country, was slightly higher than the average rate of population growth estimated at 2.45 percent. As such, it was insufficient to reverse the decline in per capita product and to decrease the high index of open underemployment and unemployment affecting a large part of the labor force, which in 1984 recorded the highest figures since 1970.

Sectorial Indicators

The following are the most outstanding features characterizing the status of agriculture in the region:

- While the contribution of the agricultural sector to total GDP dropped from 16.3 percent in 1960 to 10.7 percent in 1982, rising to 11.2 percent in 1983, in absolute terms the sector's aggregate value rose from US\$32.6 billion in 1960 to US\$68.1 billion in 1983, having grown at an average rate of 3.3 percent in the 1950-1980 period and by only 1.6 percent in 1980-1983. In 1984 this figure rose to 3.4 percent, contrasting sharply with the behavior of the GDP, which showed -0.8, -3.0 and 2.6 percent for 1982, 1983 and 1984 respectively.
- Agricultural exports are concentrated on six products (coffee, sugar, beef, corn, cotton and soybeans), which account for eighty percent of total exports. These same exports are concentrated in a limited number of markets, reflecting the vulnerability of the agroexporting sector.
- Similarly, agricultural imports are also concentrated on only seven items: wheat, edible oils, corn, sorghum, rice, dairy products and millet, which account for ninety percent of total imports.

- Food production declined between 1975 and 1982 in eleven countries of the region; however, food imports also decreased due to the crisis, falling from US\$ 9.7 billion in 1980 to US\$ 6.1 billion in 1982 (1980 dollars).
- Low production and slumping imports have affected nutritional levels and it is estimated that at least fifteen percent of the population suffers from serious calory and protein deficiencies. Based on the poverty index, 34 percent of the rural population is classified as "very poor."
- Measured in terms of value, the ratio of exports over imports has decreased from 3.78 in 1970 to 2.16 in 1980 and 2.11 in 1981, with an upturn to 2.32 in 1982 and to 2.41 in 1983. This shows how the ratio deteriorated up until 1981 and moderately improved in 1982 and 1983. The value of agricultural exports totalled US\$ 20.3 billion in 1983, while that of imports totalled US\$ 8.5 billion (both in 1980 dollars).
- Agricultural exports accounted for 50.3 percent of total exports in 1970, dwindling to 29.7 percent in 1980 and 27.6 percent in 1983.
- The economically active population engaged in the agricultural sector slipped from 54 percent in 1950 to 35 percent in 1980, reflecting the transformation of what was once a rural society into an urban society with all the consequences that implies.

It is essential to point out that there are vast differences between countries with respect to the averages presented here; nevertheless, these figures are indicative of general trends, which to greater or lesser degrees, can be found in all of the countries.

A study of the status and trends of agriculutre in Latin America⁴ shows that in the mid-seventies, approximately 13.5 million production units, representing 36 percent of total arable land and equivalent to 57.6 million hectares, provided half or more than half of the region's supply of such crops

as corn, beans, potatoes, yams, cassava, plantains, fruits and vegetables. In addition, depending on the country, between 25 and 75 percent of produce for export (such as coffee, cacao, cotton and bananas) is grown on small production units.

Population and the Labor Force in the Agricultural Sector

The countries of this region occupy approximately 15.1 percent of the total world surface area; as of mid-1985, the population of this part of the world accounted for 8.2 percent of the world population. At present, the population in the region is estimated at a total of 390 million. Worldwide population density averages 35 people per square kilometer; in the countries of Latin America, population density per square kilometer is close to nineteen inhabitants. However, if the temperate subregion of South America (Argentina, Chile and Uruguay), is discounted, with its density of fifteen inhabitants per square kilometer, the rest of the region reveals higher averages: forty for the countries of Central America and Mexico and 130 for the Caribbean. Likewise, figures tend to vary radically from one region to another within the same country.

The concentration of population in the region as a whole is considered high, as approximately four fifths of the population is estimated to inhabit one fourth of the territory. In addition, somewhat in excess of 25 percent lives along a strip of land measuring no more than 240 kilometers inland.

In light of this phenomenon, it is fitting to study the possibilities of redistributing the population within individual countries and, in some specific instances, within the Latin American region, so as to benefit those countries which either gain or lose population.

Mean demographic growth rates for selected periods were 1.86 for 1920/25, improved health care services steadily upped this figure to 2.85 for the 1960/65 period. Thereafter it fell gradually until it reached 2.40 percent in 1980/85.⁵

This pace is expected to slow down with increased economic and social development and the expansion of family planning programs with the help of external funding or greater acceptance, although this issue continues to be controversial in some of the countries of the region.

One important feature of the Latin American population, which in turn affects the use of natural resources, is the rapid growth of the urban sector as compared with the rural population. While in 1900 only one out of every ten persons lived in the city, by 1980 this ratio rose to 6.4. Projections suggest that this rural-to-urban migration can be expected to increase in all the countries of the region. The urban-rural ratio will rise to 7:1 by the end of the century, reaching close to 8:1 by the year 2020.*

These ratios also tend to vary considerably inside the countries of the region. An average of 85 percent of the population in Argentina, Chile, Uruguay and Venezuela is urban. In Bolivia, Guatemala, Haiti, Honduras and Trinidad and Tobago, only forty percent or less of the population lives in the cities.

Another important factor is the change in the composition of the labor force by economic sectors, particularly in the more developed countries of the region. This can be attributed to the transformation of predominantly agricultural economies into industrial and service economies. In 1925, slightly more than three fifths of the economically active population was engaged in agriculture; by 1980 this proportion fell to approximately one third.

* Projections furnished by CELADE concerning demographic growth for the years 1995/2000, indicate that the mean annual rate of growth for the total population will be 2.0 percent, with 2.6 percent for the urban population and only 0.6 percent for the rural population.

The decline in the labor force engaged in agriculture reflects the degree of socioeconomic development in this sector. In 1980, the average figure for the region was 34.7 percent. However, less than twenty percent of the labor force in Argentina, Chile, Uruguay and Venezuela is engaged in agriculture. In Central America and the Caribbean, fifty percent or more of the population participates in this activity, especially in the Dominican Republic, El Salvador, Guatemala, Haiti and Honduras. Of the South American countries, Bolivia registers the highest proportion of the population working in the sector (fifty percent).⁶

These changes in the productive structure, rapid demographic growth and an accelerated urbanization process all have economic consequences which in turn affect the use and conservation of resources.

3. THE FINANCIAL CRISIS AND AGRICULTURE

Over the last century, a period in which Latin America and the Caribbean have achieved a greater degree of participation in the world economy and greater interdependency, the cyclical pattern of economic crises and social and political conflicts has been largely associated with international recession and falling prices of primary export commodities from the region. This was clearly the case in the crises of 1900, 1914, 1929, during World War II, during part of 1960, subsequently in 1974-75 and during the most recent recession of 1981-83. This most recent period featured the problem of foreign debt and the burden of debt servicing as well as a decrease in export earnings, all of which are threatening the social and political stability of many of the countries.

International recession hit Latin America and the Caribbean following a long period of steady economic growth, which made the region as a whole somewhat resistant to the impending crisis in its first phase (1973). However, by the beginning of the eighties the region found itself totally submerged in the crisis.

The moderate optimism with respect to a relative easing up of the world crisis, as witnessed in 1982 and 1983, is disappearing in 1985. The current crisis features certain elements which make it more difficult to understand and more alarming. Inflation in the region is spiralling, capital flight is also increasing, the level of basic imports is rising only moderately, export income has not increased sufficiently and a fiscal deficit continues to afflict many countries, while savings and investment decline. This series of problems seriously affects debt-servicing capacity and employment levels which, in countries such as Costa Rica, Venezuela, Uruguay, Bolivia and Chile, have either doubled or quadrupled since 1970.⁷ In 1983, the average rate of open unemployment in the region as a whole registered 10.4 percent, while the average ratio of underemployed was one third of the economically active population.

In brief, the gravity of the current situation, the fragile nature of the economies of many countries in the region and the problems of dealing with this crisis point to a precarious future plagued with unemployment, poverty and the frustration of the growing population of Latin America and the Caribbean.

The Foreign Debt

The foreign debt soared during the 1980-1982 period, rising to approximately US\$ 365 billion by mid 1985. It has become a geopolitical reality which is strongly motivating a feeling of Latin American solidarity. The payments, the economic burden and the servicing of the foreign debt in 1984 demanded a net outflow of foreign exchange totalling US\$ 29 billion for the region. For the majority of the countries in the region, this situation is probably the most difficult challenge they face today.

The cumulative annual rates of growth in the payment of principal (1.26 percent), service charges (2.81 percent), interest (7.47 percent) and the balance of the debt (8.18 percent) during the seventies were relatively low. However, during the 1970-1980 period they reached levels which reflected unprecedented growth in the debt of many of the countries, resulting in a veritable crisis during the first years of the current decade.

While the decrease in interest rates has brought about a savings in terms of servicing the foreign debt burden, this decrease has not compensated for the loss of income resulting from lower prices fetched for exports in 1984.

In order to procure funds to service the foreign debt, personal savings had to be transferred either to the public sector, the business sector or to both. According to the IDB⁹, "The mechanism used most frequently to effect this transfer is a reduction in wages." Other economic policies adopted to overcome this situation include domestic measures such as austerity programs for public spending, and external measures such as the search for options to service the foreign debt. At the same time, in most of the countries incentives

have been provided for export promotion (especially for non-traditional exports), and this practice has become widespread in the Caribbean and Central America so as to take advantage of such mechanisms as the Caribbean Basin Initiative.

This indebtedness reflects the fact that the need for financing has been greater than the level of domestic savings; in effect, between 1960 and 1980 the rate of growth of gross domestic investment totalled approximately seven percent annually. Between 1981 and 1983 the average annual variation for the region as a whole was -8.4 percent.

The lack of liquidity, making some countries in the region incapable of meeting their financial commitments, stems not only from the servicing of the debt, but also from the interest payments, which in some countries such as Costa Rica, amount to ten percent of the GDP or one third of the value of total exports. This suggests that the restructuring of the debt is not enough to solve the problem of interest.

The composition of the sources of loans to Latin America has undergone a marked change. In 1980, seventy percent of the public external debt was in the hands of private creditors (suppliers, banks and bonds), and thirty percent was in the hands of lending institutions (multilateral and bilateral) By contrast, in the year 1960 the breakdown was roughly fifty percent for each group. Furthermore, the private banks were creditors for sixteen percent of all loans to cover the public external debt of Latin America and the Caribbean in 1960. This figure rose to 55 and sixty percent respectively in 1980 and 1982. Beginning in 1975, the private banking sector began to play a more pronounced role in financing the countries of the region, due to the need to recycle petrodollars.

This structural change in the sources of financial resources reflects the dynamic growth of international mechanisms and financial markets and the entry of Latin America and the Caribbean into these international money markets. At the same time, it reflects a decrease in the resources available to international lending institutions. This change in strategies and operations takes

its toll on the terms and conditions of loans, the accumulation of the external debt, and thus the countries' capacity to pay, when the creditors decide simultaneously to restrict the money markets.

An outgrowth of the crisis has been the decline in net transfer of external financial resources to the countries of the region, which in 1982 and 1983 recorded negative levels of US\$ 16 billion and US\$27.7 billion respectively. In essence, several countries became net capital exporters.

This is due in part to the increase in expenditures to service the foreign debt, capital flight, repayment of private investments and a decrease in income due to reduced external investments, as the countries decided to avoid becoming indebted, and the financial institutions worried that they would be unable to collect or recover their loans.

This net transfer of resources away from the region is a serious problem and a clear and distinct obstacle to development which has led to the need for undertaking serious efforts to demonstrate greater payment capacity, particularly via internal restrictions and export promotion.

The Balance of Payments

Empirical evidence reveals that during the 1960-1970 period exports grew at a faster rate than imports, while it is true that this phenomenon made an about-turn in the 1970-1980 period, this was due to the increase in the oil bill for the non oil-producing countries and the disproportionate increase in imports from the oil-producing countries prompted by the substantial increase in income.

During the 1980-1981 period the trade balance began to deteriorate swiftly. Imports fell at a slower rate than exports. This was because the adjustment process for imports lagged behind the effects of the international financial crisis. The situation improved in 1983-1984. However, a positive trade balance meant neither a rise in exports over imports nor increased economic activity. In fact, the surplus of the last years leading up to 1984 in Latin America and the Caribbean is the product of a greater contraction in imports.

It is possible that these problems are due to the fact that the renewed economic activity in the industrialized countries has not been sufficient to bring about a substantial increase in their primary commodity imports or the prices they fetch (in 1984 these prices fell by nearly 9.5 percent). They are also partially due to the fact that overvalued currencies in some countries of Latin America have made it impossible to take advantage of the international economy through more exports.

The contraction of imports reflects the magnitude of the cost of the internal adjustment efforts undertaken by the countries to reduce external imbalances. This constitutes a critical decision, in that said adjustments lead to underutilization of operating capacity and economic contraction which could undermine the social and political stability of many countries in the region.

This widespread situation reflects economic deterioration, lack of liquidity and a shortage of surplus foreign exchange in the countries of the region. Likewise, the very countries that have a higher percentage of total foreign debt as a ratio of GDP (not including Venezuela) also show greater participation of the public sector in foreign indebtedness.

Options for Dealing with the Crisis

Given that the likelihood of achieving substantial rates of economic growth over the course of the next few years (five percent per year or more) is extremely low, the external resources required for productive investment are lacking and it is thus impossible for Latin America to productively employ its principal resource--human resources. This would be feasible only if a large number of small production and infrastructure projects were launched which did not require foreign exchange. Such projects would more efficiently tap the vast potential of the growing population of productive age, currently unemployed or underemployed.

The financial crisis is being carefully analyzed by different international institutions and hemispheric, regional and subregional cooperation agencies, in an effort to seek alternative solutions. These measures frequently include

reducing the payment on the debt to a fixed percentage of the value of exports, and adopting agreements to renegotiate long term loans.

Several countries have negotiated agreements with governments with whom they share amicable relations, with commercial banks and with the International Monetary Fund, to inject their economies with the funds so urgently required. In exchange, the countries, in many instances, commit monies between the different creditors through cross conditioning mechanisms in order to restructure their economic policies (particularly their exchange policies) and cut back on public spending. To that end, they eliminate different subsidies, particularly for the prices of certain foodstuffs, fuel and public transport.

The solutions adopted in some countries on their own initiative, as a consequence of agreements to renegotiate the debt or as prescribed by the International Monetary Fund, are sowing much popular discontent and eroding the political animus to implement said measures. Above all they are rendering the administration of economic policy extremely difficult.

To date there does not appear to be a satisfactory solution to the problem. As long as the countries need to generate resources to pay off their debt through primary exports, a simple solution to the problem of foreign indebtedness cannot be expected. The prices for these products do not always compensate for increases in the prices of imported goods, and the effects of a rising external demand are partially offset by the deterioration in the prices for some of the region's primary exports (i.e. sugar).

With respect to the long term, it is advisable to redouble efforts to strengthen the contribution of the agricultural sector to the rest of the economy, thus optimizing the comparative advantage existing in the region through the more intensive and efficient use of available natural and human resources.

During this period of economic stagnation and crisis, which for many countries has also produced spiralling inflation, the behavior of the agricultural sector has been favorable when compared with that of the other economic sectors and with the economy in general. As a result, agriculture, to a greater or

lesser degree and depending on its importance in each country, has mitigated the grave crisis and its negative social impact. This factor should be carefully analyzed as it reflects the pressing need to maintain a technically and economically viable agricultural sector which, in most cases, can bolster the rest of the economy and, in those countries with a larger industrial, mining or oil-producing sector, attenuate the negative effects of the crisis in such ways as reducing inflationary pressure through a larger domestic agricultural supply.

In order to delve into an analysis of this kind, certain factors enumerated in the foregoing chapters must be taken into account, and some basic indicators need to be repeated. The most pertinent include the following:

- Despite the decrease in the economically active population engaged in agriculture from 54 percent in 1950 to 35 percent in 1980, the contribution of this sector to GDP rose during this same period at an average rate of 3.3 percent annually. This reflects its potential for the long term and the possibility of a substantial boost in per capita productivity.
- While the ensemble of economic sectors in the countries continued to grow at a faster annual rate during the 1974-1980 period than the agricultural sector (5.1 and 3.5 percent per year respectively), the economic recession of 1981-1983 had a more injurious effect on the other sectors (primarily mining, industry and construction). Between 1980 and 1983, the economies of the region experienced an annual cumulative decrease equivalent to -2.58 percent while the rates of growth in the agricultural sector between 1980 and 1983 achieved a cumulative net increase of 5.3 percent annually.
- The change in the productive structure and the rapid growth of the population, coupled with the estimated annual increase of 1.5 percent in per capita income and a high coefficient of income elasticity for foodstuffs on the order of 0.7 percent, have meant annual growth of 3.5 percent per year or more in the demand for foodstuffs, taking

- into account the fact that in eleven of the 25 countries the average annual figures for demographic growth are greater than 2.4 percent and in some cases as high as three percent.

For many of the countries of the region, the capacity of the agricultural sector to absorb the unfavorable effects of the current economic recession is due in part to its internal structure and the division of production into many small enterprises. Estimates prepared by L. López Cordovez¹⁰, based on information garnered from the agricultural census, only constitute indications of the general status of agriculture; nonetheless, they afford the reader a first approximation and confirm the impression that small-scale producers provide a substantial percentage of certain agricultural products.

In brief, this positive behavior trend in domestic demand, together with the need to maintain or expand the volume of food and agricultural raw material exports, calls for considerable volumes of agricultural production and supply at competitive prices and affords the agricultural sector greater possibilities. This phenomenon has very important implications for development strategy.

Moreover, as compared with other large geographic blocs, Latin America and the Caribbean boast sufficient natural resources and display the lowest proportion of cultivation of potentially arable land (16.7 percent versus 70.8 percent in Asia). In addition, the region has the highest ratio of potentially arable land to total surface area (36 percent versus twenty percent for the other large blocs). This phenomenon allows the region to devise innovative and decisive policies and means of implementation which underscore the role to be played by agriculture and the rural sector.

This issue can be approached at the national level only by analyzing the interrelationship and the tradeoffs between modern technology and improved services on the one hand, and changes in the structure of land tenure and campesino organization on the other. Likewise, natural and human resources may

be assessed, analyzing all those factors which concern the agricultural sector, so as to harmonize the different development strategies and policies in the context of each country.

National Alternatives

In theory it is understood that the government in each country caters to the interests of the different groups, arbitrates conflicts and takes decisions, giving precedence to national interests. Accordingly, it is fitting to study the appropriateness and feasibility of taking decisions at this time which commit the society as a whole, so as to give more priority to agriculture. This is particularly important for those countries in which the sector has a greater possibility of helping to solve the crisis.

At the end of the seventies, J.H. Adler, an economist from the World Bank, discussed the experience accumulated over the course of that decade. He observed that stimuli to sustain and improve rural productivity had been generally ineffective, and added that economic development not only meant industrialization, but also called for expansion of agricultural production.

For the long term, it appears advisable, particularly in those countries with agriculture-based economies, to redouble efforts for invigorating agriculture's contribution to the rest of the economy, despite doubts concerning the likelihood that a reactivated economy will significantly bolster the demand for agricultural products. It is wise to adopt policies and measures in each country to improve the competitiveness of these exports and increase the prospects for non-traditional exports, taking full advantage of the natural resources and comparative advantages in each country.

Import substitution could be achieved successfully with agricultural products; this would require the formulation of policies not only in each country, but through coordination at the subregional and regional levels. The purpose would be to trade among the Latin American countries through a joint effort to substitute agricultural imports which, in 1983, totalled US\$ 8.5 billion.

The increased ability for agricultural products to compete in the international marketplace, the prospective substitution of these imports at the national and regional levels, and the increase in real internal demand will, to a large extent, shape the role of the agricultural sector in the future. The potential of this sector resides in its natural and human resources. However, these resources require financial and technological support. In light of current circumstances, all the countries of Latin America and the Caribbean are in a position to take advantage of their natural resources and a labor force which today is partially marginalized or underemployed, through investments and labor-intensive technologies. In some cases, or over the long term, modern technology and major investments prove more advantageous.

In times of crisis such as this, the agricultural sector is expected to generate the additional resources required to service the foreign debt, improve the balance of payments, increase fiscal revenues, retain the rural population in the countryside, provide employment to an idle work force, diversify exports and substitute imports. In short, the desire is to see the agricultural sector as the chief asset in revitalizing the economy and sustaining development in those countries where agriculture has always been of major importance.

Policies to revitalize agriculture should place greater emphasis on the pressing need to exploit natural resources in the context of a system which ensures their conservation and will protect the environment--a consideration which, in many instances, has been neglected.

The reformulation of agricultural policy should furthermore give priority to the role of human resources in agriculture. Maximum advantage should be taken of the experience of more developed societies where this factor has played an important role in development strategy. At the same time, efforts should be made to ensure that agricultural activities will generate income and distribute it equitably to compensate and motivate the different factors of production in the agricultural sector.

Should the sector respond to these contributions and meet these expectations, the resulting economic transformation will improve the standing of agriculture

in the overall economy and elevate its economic and political impact in relation to other sectors.

Other sections of this document cite some of the unfavorable factors which, to different degrees in each country, affect the performance of agriculture in the region.

In addition, a brief account is provided of the positive aspects which give us cause to remain optimistic about a brighter future for Latin American agriculture. Inventory of a variety of factors reveals the need to strengthen some basic elements vital to agricultural development. These factors are outlined below.

Given that myriad studies have been conducted at the country level on approaches to and strategies for agricultural development, the following simply enumerates, without further analysis, the pertinent topics and approaches expected to be examined by a large number of countries in the region in light of the current situation. These include:

- A development strategy which places greater emphasis on agriculture.
- Modifications to overall policy, so as to stimulate agriculture.
- Technological modernization.
- Increased production and productivity.
- Land tenure and agrarian reform.
- Expansion of the agricultural frontier.
- Rural well-being, regionalization and decentralization.
- Agricultural price policies.
- Legal framework and more coordination and support to the private sector.
- Training of technical cadres.
- Strengthening of the public agricultural sector.
- Interinstitutional coordination.
- Focus on small projects.
- Specific support to cooperatives, community and other associative enterprises, which comprise a sector of the economy of social interest.

- Policies tailored for different types of producers, including large-, medium and small-scale, and organized sectors.
- Democratization of credit to the agricultural sector.
- Import substitution.
- Export promotion and incentives.
- Balance between growth and income redistribution.
- Vertical integration and support to agroindustry.
- Improved marketing procedures and reduction in post-harvest losses.
- Use of computer technology.
- Improvement of managerial skills in all types of enterprises.

All of the above, in addition to other items which emerge from analysis of each country, should be included in national development strategies, so as to meet the growing expectations of a better life for farmers and the rural population.

4. MAJOR BARRIERS TO AGRICULTURAL DEVELOPMENT

Economic policies in the countries frequently produce a negative effect on agriculture. This is why a comprehensive development strategy is so important, and efforts should be made to influence it in such a way that credit, wage, monetary and fiscal policies may be favorable to farmers.

The countries of the region do not practice deliberate policies for the appropriation of surplus. However, the benefits of agriculture in some way revert primarily to the benefit of non-agricultural sectors of the economy.

This happens because the relationship between prices paid by the consumers and prices received by the farmers is generally unfavorable to farmers due in large part to market imperfections, for both inputs and products, inefficient marketing channels, lack of information on supply and demand conditions in the agricultural market, and problems of transportation.

This section will present a brief discussion of three unfavorable factors which, to varying degrees in the different countries, are considered to affect the patterns of agriculture in the region. The major factors which restrict agricultural development include the problem of land tenure and concentration of arable land, which is of a structural nature, and problems of inadequate resources for investment and credit and declining price trends, both of which are circumstantial.

These three items will be singled out for study in this part of the document. There are clearly other important problem areas in certain countries, but because they have been discussed on other opportunities, they will not be included here.

Problems of Access to the Land

A number of studies on poverty in Latin America show that approximately one fourth of the urban population and 62 percent of the rural population are

living below the poverty line. This averages out to two of every five families at the beginning of the past decade.

No country of the region has a rural poverty rate below twenty percent, and in some, it is higher than sixty percent. Rural poverty is partly a result of the structure of small farms with little investment capacity, and the high number of peasants with too little land or none at all.

At the beginning of this decade, 78 percent of the agricultural production units in the region belonged to small scale farmers, using property size as a yardstick. However, only eighteen percent of the land was included in these units, and only one third of this land was considered arable. At the same time, 22 percent of all farming units classified as commercial agriculture owned 82 percent of the total land, of which approximately two thirds was arable.

Most of the region's countries have problems with land resources. This is not because land is unavailable or scarce, but because access to the land requires an institutional, legal and economic climate favorable to a high proportion of the rural population. Economic employment and life style for these people depend on land resources.

During the early years of the 1950's, the index of land concentration (comparing percent of farm acreage with the percent of number of owners) was equal to or greater than 0.80 in seventeen countries of the region. The average was 0.86, indicating extreme inequality in land distribution.

From 1970 to 1979, ten countries of the region (four in Central America, two in the Caribbean and four in South America) had a concentration coefficient of 0.81, slightly less than in the same countries 20 to 25 years earlier.

At the end of the last decade, from 55 percent to 85 percent of the rural families in these ten countries owned little or no land. These percentages were found even in countries which had carried out profound agrarian reform processes.

By the end of the past decade, approximately 95.2 million people in the rural population had insufficient land or none at all. It is also important to understand that any discussion of access to the land must examine not only quantity, but also quality. This means fertility, access to water, topography, location with respect to markets, etc., all of which make it possible to intensify and diversify production.

The level of agricultural underemployment also stems partially from the limited access to land resources. In 1980, it was estimated that underemployment in the traditional agricultural subsector ranged from relatively low indices of six percent to ten percent for the countries of the Southern Cone, to nearly 75 percent in countries where agricultural activities provided a major source of employment in the rural sector.

This limited access to the land, coupled with the lack of production support services such as technical assistance, credit, marketing facilities, unfavorable terms of trade, etc., is responsible for the massive rural exodus. The result has been exploding urban populations as the urban-to-rural population ratio soared from one out of ten residents at the beginning of the century, to approximately seven out of ten by the middle of this decade. Other factors spurring this process include inadequate physical and monetary resources, limited institutional support, and weak economic incentives. These structural problems affecting agriculture are shared by the vast majority of small and medium scale farm producers in Latin America, and are largely responsible for the emigration of millions of rural dwellers toward urban centers, drawn by real and sometimes illusory promises.

One of the implied objectives of agrarian reform programs is to keep people in rural areas by expanding their resource base and employment security. This objective can be met through the adoption of policies that will provide access to land possessing favorable natural and economic characteristics, thus solving some of the serious and growing problems that are affecting agriculture in most of the countries of the region. Otherwise, rural poverty will continue to be shifted to urban centers, where social demands and pressures are even more difficult to satisfy.

Limited Financial Resources and Farm Credit

The lack of investment capital in developing countries has long been a subject of concern, especially for the relatively less developed countries. The shortage of capital for productive investment in most of the countries of Latin America has emerged as one of the major barriers to achieving full economic and social progress.

A study of government expenditures in nine countries of the region from 1950 to 1978 reflects the scope and impact of investments: "Government expenditures in agriculture (excluding expenditures for education and health) rose at an annual rate of eight percent on the average, with considerable variation among countries. These expenditures represent an average of one percent of GDP, and range from three to two percent of aggregate value. Total expenditures were equal to US\$ 200 million in 1950 and US\$ 2.1 billion in 1978, expressed in constant 1960 dollars." ¹²

Agricultural loans from international funding organizations, especially the IDB, from 1961 to 1977 accounted for approximately 8.8 percent of the total average expenditures by the nine governments included in the study (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Mexico, Peru and Venezuela).

Any strategy for economic reactivation must place a heavy emphasis on capital movement in the region. This will promote better options to attract investment resources, favoring the overall economy and strengthening the ability of the agricultural sector to supply needed products. The international situation is highly fluid. The world capital market, the floating of national currencies, economic and political stability, and many other factors drive the movement of capital. This topic merits careful analysis.

It should also be noted that farm credit from public and private institutions is one of the major sources of investment and working capital for farm units. Farm credit runs high risks, especially for medium and small scale producers who have a narrow resource base, little market negotiating power, and generally low productivity. As a result, most of the countries of the region

have established development banks to focus attention on these producers as a high priority.

However, credit programs have extremely poor coverage. A number of studies have shown that on the average, only one of every seven producers receiving credit obtains it from institutional sources. The rest often take out loans under highly unfavorable conditions for the farmer, with extremely high real interest rates and short repayment periods.

Farm Price Trends

Agricultural production for domestic and export markets is subject to considerable seasonal and year-to-year price swings.

The long-term price increases registered for farm produce have been lower than those of manufactured goods. This means that the terms of exchange are unfavorable for primary goods.

The World Bank has prepared indices of purchasing power for 33 different primary products exported by developing countries for the years 1948 to 1984, including foodstuffs, agricultural raw materials, metals and minerals. The study shows that, for all products with the exception of petroleum (which experienced rising trends after 1974 and fell off only slightly in the past two years), the values experienced declining trends for the years under study. Only two periods showed price upswings for all categories of products: in the early years of the 1950's (during the Korean war) and in 1974, as a consequence of drastic oil price rises. ¹³

The major shift was found for foodstuffs and agricultural raw materials. For agriculture, total estimated purchasing power for the products in 1984 was only 64.5 percent of that in 1948.

Another important finding is the sharp decline of the purchasing power index for all categories of primary products from 1980 to 1984. The major slump was

experienced by foodstuffs, which lost one third of their purchasing power during this period. Metals, minerals and wood lost from one tenth to one sixth of their purchasing power in the four year period.

From 1970 to 1980, the prices of exportable agricultural products rose, some even doubling their initial levels. Despite this fact, prices fell sharply after 1980 and held steady until 1983. Using 1980 as the base year with an index of 100, the index values for all categories of agricultural products behaved as follows:¹⁴

| Index for categories of agricultural products | | | |
|---|------|-------|------|
| | 1970 | 1980 | 1983 |
| Foodstuffs | 32.0 | 100.0 | 74.5 |
| Raw materials | 31.6 | 100.0 | 85.4 |

As this table shows, agricultural prices, especially for foodstuffs, are highly unstable. This deterioration has continued in 1984 and so far in 1985. A study by ECLA¹⁵ explains the situation in the following terms: "The prices of basic products exported by Latin American countries are extremely depressed, in some cases comparable only with those of the crisis of the 1930's. As a result, trade relations in the region were twenty percent lower in 1984 than in 1980. The situation has continued to deteriorate in 1985, already ten percent less than in 1984."

This study shows that the high level of nominal and real interest rates has very little precedent. Demand is stagnant for traditional exports as a result of the slow pace of economic recovery in the developed countries and increased protectionism in some cases. Farm prices are also affected by the floating of national currencies.

For the immediate future, the prices of traditional agricultural exports do not appear favorable, and the terms of trade are therefore unlikely to vary. For a high proportion of agricultural products, demand is growing slowly by comparison with other goods and services. This is why production costs will come to play such a major role in competitive international markets.

5. FAVORABLE FACTORS

Natural Resources

The study of the history of Latin America, from colonial times to the present, demonstrates that the exploitation of natural resources was always in the hands of a small hegemonic group of people. It also shows how urban centers grew up around the places where precious metals and other products for export to Europe (cacao leather, etc.) were found. In this region the infrastructure used for the exploitation of minerals later helped pave the way for building up agriculture, as railroad networks and main roads were constituted to connect the mines and haciendas with major ports.

Because of the heterogeneous nature of the Latin American and Caribbean countries, the quantity and quality of their basic agricultural resources, especially usable land and water resources, are very uneven. This highly generalized document will not specify such differences, but the need for studies and analysis in each country must not be overlooked.

Land

Of the total surface area of Latin America (with the exception of areas covered with water), nine percent is arable, 26 percent is cultivated and natural grasslands, 49 percent is forest land, and 16 percent falls into other categories, such as idle land, urban areas, highways, etc. ¹⁶

The figure for arable land surface per capita in Latin America is similar to the 0.5 ha average for the rest of the world. This does not include land dedicated to pastures, which is more abundant in Latin America than in other developing regions. This figure varies sharply from country to country, with the most favorable rates found in Argentina, which had a 1985 ratio of 0.82 ha per capital. The temperate zone countries of South America have the highest ratios in the region. In the Caribbean, the ratio is 0.20 ha per inhabitant.

The lowest ratios can be found in El Salvador (0.10 ha per inhabitant) and Haiti (0.09 ha per inhabitant).*

Approximately two thirds of the total arable land in the region, over 114 million hectares, were under cultivation as of 1977.¹⁷ Much of this land frequently experiences periods of inadequate moisture.

Increased demand for land in the region has resulted in the incorporation of new areas into production. In some instances the expansion of the agricultural frontier leads to the use of land which is of inferior quality and less competitive because of problems with access to consumer markets and other disadvantages. Similarly, intensive exploitation of forests has led to the near extinction of several kinds of hardwoods, and heavy fishing has greatly diminished certain marine species.

Additionally, any effort to incorporate new lands into production requires major capital investment, complex planning and extensive organization and implementation to insure the efficient utilization of technical and economic resources.

In some countries, the presence of unopened agricultural frontiers creates problems among settlers on issues of land use and ownership, which in extreme cases can lead to violence.

Additionally, the exploitation of some resources is restricted by the need for major investments, by conditions surrounding property ownership and administration, and by problems stemming from political and economic instability in some countries.

For these reasons, careful thought must be given to economic development models. It may not be advisable for growth to be based on the exploitation of

* The estimated ratio of arable land per inhabitant in the United States of America is approximately 0.79 ha, with close to 93 ha per person employed in agriculture. Latin America has only 3.3 ha of arable land per agricultural worker.

certain natural resources that display clear comparative advantages for production, but which are subject, to a greater or lesser degree, to shifting demand and to the resulting price and income instability that can affect exporting countries. Other problems include technological changes which continue to provide synthetic goods as replacements for certain primary products.

Certain options are available for improving the conservation and use of land resources presently under production. They include,

- i) The need for an improved system of land use and conservation; this should include a better understanding of soils; the reclamation of lands through use of irrigation and drainage; the improvement and maintenance of existing irrigation systems; erosion and salinization control; and the use of general conservation practices.
- ii) The increase of productivity per unit of land surface area; this can be done through improved technology, introduction of non-conventional inputs (fertilizers), and intensified use of traditional inputs through denser planting, multicropping, etc. It is also possible to increase the economic value of production by replacing traditional crops or herds with other products that are more profitable, and by introducing technological packages based on complementary inputs that can produce exponential effects on the yield.

The alternatives proposed above to improve land usage and conservation and intensify production have already been tested and proven in various countries of the region. It is important to keep in mind, however, that the success of one or several options requires the presence of favorable climatic, biological, physical and economic conditions, and of incentives and support services to facilitate their acceptance and adoption.

Water Resources

In spite of ample water resources in the region, problems continue to exist. The geographic distribution of precipitation is very uneven, with averages varying from 1 millimeter annually in Arica, Chile, to 8 000 millimeters annually in Quibdo, Colombia. Rainfall frequency is also irregular in specific countries and subregions, creating the need for water reserves to supplement the dry season. Lastly, a high percentage of the population inhabits areas in which precipitation levels are inappropriate for agricultural production. The population is concentrated in areas where precipitation is low and the supply of river water is also limited and highly variable.

By 1979, over 13.6 million ha had been irrigated and incorporated into agricultural production in Latin America. This figure (which is the same for the United States) represents approximately ten percent of the cultivated land. Eighty percent of this irrigated land is concentrated in Argentina, Brazil, Chile, Mexico and Peru.

One of the most important issues confronting land resources is the possibility of increasing the amount of land for crops and pastures, a strategy which can introduce high costs. The cultivation and irrigation potential of land in Latin America is a subject surrounded by controversy because of the lack of basic information. Figures for 1975 indicate that available land reserves with different level of precipitation (high, low, desert, etc.) are three times greater than the amount of land currently under cultivation.¹⁸

Presently the number of hectares in reserve is in the millions and could potentially satisfy present and future needs. However, the incorporation of this land into production would require solving complex problems and making considerable monetary investments. Not all soils meet the requirements of fertility, location, moisture and drainage. The land reserves which could be used for cultivation and irrigation are usually far removed from urban markets. However, even if these lands possessed certain physical qualities similar to land presently under cultivation, only ten percent could be considered problem-free. Of the rest, approximately thirty percent are subject to drought, over

fifty percent have mineral deficiencies, toxicity and inadequate soil depth, and twenty percent have poor drainage and low temperature.

The possibility to putting such land into use through irrigation depends on economic conditions and on the types of technology available.

Forest Resources

Forest resources in the region offer a potential second only to that of mineral resources, making their present underuse all the more frustrating.

Forest reserves are undeniably a very important resource for several countries in the region. Exports of forest products, totalling US\$ 221 million in 1970, rose to US\$ 1.5 billion in 1980. In spite of the vast forest resources available, however, imports continued to outstrip exports. In 1970, Latin American imports of forest products (mostly pulp and paper) totalled US\$559.3 million, which increased to US\$ 1.7 billion by 1980.

Forest use and management have come under recent criticism as the natural destruction to forests caused by fires, pests, disease and high winds is compounded by intense, irrational commercial exploitation. Presently, vast areas are being cleared for livestock production. The collection of fuelwood destroys other areas, and selective cutting of commercially valuable hardwoods is a further threat. FAO estimates that an average of four million ha in the region are deforested every year, while only 300 000 ha are replanted. This imbalance is partially offset by the higher yield typical of plantations, they grow up to 15 m³/ha yearly, as opposed to the growth of a natural densely wooded forest, which is minimal.

Forest plantations for industrial purposes and other uses are particularly important for Brazil, Chile and Argentina. By the end of 1983 some 4.6 million ha had been planted, of which 3.8 million hectare, or nearly 83 percent was in Brazil alone. Although few of the countries in the region have active programs for renewing or expanding forest resources, estimates indicate that most of the future industrial production will come from commercial forest plantations.

Biomass is another product of increasing importance. It provides a means of using forest plant matter as fuel for domestic consumption or to generate energy for direct combustion or charcoal.

Fuelwood and charcoal account for four fifths of the biomass used in the total region.¹⁹ The figure for Haiti is nearly three fourths, and the combined figure for El Salvador, Honduras and Guatemala is over two thirds.

Recent estimates indicate that natural forests in the region are being cleared at an annual rate of 0.62 percent.²⁰ This statistic holds serious implications for the future, since some woods are becoming scarce in certain regions and runoff and hillside soil loss can no longer be controlled. Similarly, sedimentation is limiting the useful life of dams built for irrigation or production of electrical energy. The cutting of forests and resulting damage to watersheds are partly attributable to the opening of the agricultural frontier. This expansion is the result of managed or spontaneous settlements and the growing importance of livestock production, which requires extensive grass lands to feed cattle. The livestock population in some countries, such as those of Central America, has exploded in the last 20 to 25 years.

The outlook for forest development includes a growing market potential for the region's products, especially for high-cost manufactured goods such as boards, wood pulp and paper. Forest plantations are expected to provide most of the wood for industrial use in forthcoming years, given the favorable technical conditions they offer.

There is no clear possibility of or interest in improving existing legislation to encourage better use of forest resources at this time. Concerns have also centered on the level of investment needed for watershed management, expansion of plantations, and development of the forest industry. Furthermore, it is important to help farmers and other sectors of the population develop an awareness of the need to conserve forest resources, avoiding indiscriminate felling and preventing intentional or accidental burning of forest areas.

Fisheries and Aquaculture

Fishery production in the region from 1980 to 1982 yielded ten million tons, and totalled one sixth of the world's catch.

Traditionally, the region has been a net exporter of marine products. Latin America has an estimated four million square kilometers of territorial waters with conditions and currents favorable to an abundant marine life. Additionally, it has 10.5 million hectares of fresh water with a potential for fishery development.

The outlook for exploiting these resources in Latin America is very positive. The region has potential wealth in its variety of fish, crustaceans and mollusks on the coast lines and can reap profits from inland water resources such as lakes, rivers, etc.²⁰ Rural or semi-intensive aquaculture is currently being developed at a rapid pace, and this potential is expanding to meet the internal demand posed by institutional markets (such as school meal programs) and export growth. Studies indicate that aquaculture will play an increasingly important role in the region's fish production.

Productivity and Technological Potential

All this provides a general framework for discussion of certain factors which inspire optimism concerning the future of agriculture in Latin America. Research centers in Latin America and the world in general are presently capable of increasing the countries' productivity by providing appropriate technological packets and by developing needed scientific research capabilities. The focus is on adapting species and crop systems to the specific conditions of each type of agriculture and each country, and putting them in the hands of farmers through intensive, effective technology transfer.

In contrast to other economic sectors, the productivity of the EAP in agriculture grew at a relatively fast pace during the past fifty years. The following table indicates the yearly sectoral growth rate of the gross domestic product, the economically active population, and productivity for the periods 1925-55 and 1950-80.²¹

GROWTH RATES

| | 1925-1955 | | | 1950-1980 | | |
|------------------|-----------|-----|--------------|-----------|-----|--------------|
| | GDP | EAP | PRODUCTIVITY | GDP | EAP | PRODUCTIVITY |
| Total economy(%) | 3.7 | 2.0 | 1.6 | 5.5 | 2.5 | 3.0 |
| Agriculture (%) | 2.7 | 1.4 | 1.3 | 3.5 | 1.0 | 2.5 |
| Urban (%) * | 4.0 | 3.0 | 1.0 | 6.0 | 3.8 | 2.1 |

* Calculated as non agricultural and non mining EAP

The faster pace of development of the urban economy in the two periods reflects high growth in the industrial sector. As can be seen, the growth rate of the urban EAP climbed, while that of the agricultural EAP slipped. Productivity improvements (sectoral product/sectoral EAP) were considerable, practically doubling from 1925-1955 to 1950-1980.

The GDP growth rate in the past thirty years was also considerable by comparison with the earlier period. From 1950 to 1980, the product per worker in the primary sector (including agricultural and mining EAP), in constant 1970 dollars, increased 2.2 times, from US\$ 480 to US\$ 1,060, compared with an increase of 2.4 times for the overall economy (US\$1,150 to US\$2,750). During these thirty years, the growth rate of productivity in the private sector ranged from 3.1 percent to 3.4 percent per year in Argentina, Brazil and Mexico.

Livestock and certain types of crops experienced substantial annual productivity growth rates from 1969-1971 to 1978-1980, especially for oil seed products such as soybeans, and for poultry in the livestock subsector.²²

Much remains to be done to expand productivity. Average yields for major crops continue to display vast differences between Latin America and the United States of America, as can be seen in the following comparative data for selected crops in terms of kilograms/hectare for the year 1982:²³

| | Latin America and the Caribbean (Kg/Ha) | United States of America (Kg/Ha) |
|--------|---|--|
| Cotton | 833 | 1 734 |
| Rice | 2 092 | 5 315 |
| Corn | 1 892 | 7 205 |
| Wheat | 1 841 | 2 396 |

There is considerable potential for surpassing the higher United States yields for crops such as cotton and wheat. Many countries and some crops that are still far below the regional averages are capable of raising their levels.

Technological improvements hold out certain comparative advantages, especially in terms of the cost-benefit ratio. However, policies must be developed to provide producers with incentives for accepting and adapting the findings of modern technology.

New research developments in technology for agricultural production are making profound changes in the traditional patterns of comparative advantage between countries and regions. Evidence of these changes is already visible, including progress made in genetic engineering, rational use of natural resources, optimization of input use such as fertilizers and pesticides, methods for post harvest storage, and the use of little known tropical products for food and energy production.

Technological breakthroughs could transform the agriculture of tomorrow. If Latin America and the Caribbean are not to fall behind, agricultural science and technology agencies must receive support. These agencies were established in the region around 1960/70, and in some cases they have begun to stagnate, decline or lose their human resources. This support should be coupled with a major educational effort to improve research teams and personnel working in technology generation and transfer and in other areas for the agri-

cultural sector, to achieve better coordination of the research and transfer process.

When technology generation and transfer are combined with credit, productivity rises. The addition of structural changes also facilitates more equitable income distribution.

Agricultural production possibilities are more an art than a science for millions of farmers. This is why traditions and practices for risk minimization are more important than agronomic discoveries and principles of farm management in deciding what to plant, what to raise, and how and when to produce. The influence of agricultural sciences, even among producers who use higher levels of technology, is relatively weak in this context.

Within certain limits, the "frontier of production possibilities" in agriculture facilitates the substitution of crops and of livestock production styles even more than in other productive sectors, and provides a greater variety of options. Soils appropriate for dry rice production may also be used for cotton, sorghum, soybeans and others. At the same time, there is a possibility for annual crops to be replaced with perennial crops or for this land to be used for livestock production.

Naturally, existing configurations of soil and climate conditions, latitude, altitude and topography are optimal for certain specific types of crops or for small combinations of crops. The different livestock options also demand certain minimum conditions, although generally there is more flexibility than with crops.

When conditions which are not technically ideal, products are of lesser quality and cost more. Natural resources may be degraded, and this is the ultimate constraint on production possibilities.

Therefore, thought should be given to the need for agroecological zoning for countries and for the hemisphere, in order to make the best possible use

of the inherent flexibility of agricultural and livestock production. A side effect of this zoning would be to foster a certain degree of specialization in some areas and production diversification in others.

We can also expect increased trade and self-sufficiency in agricultural products in Latin America and the Caribbean, better integration of the different regions and countries through complementary agricultural production, and consequently, a lesser dependency on imports of certain agricultural products from outside the region.

6. CONDITIONS FOR DEVELOPMENT OF THE AGRICULTURAL SECTOR

Institutional and Managerial Structures

Many conditions must be present before agricultural development can be supported and encouraged. No one condition is sufficient by itself. However, taking into account the limited time, resources, and operating capacity, as well as constraints and problems associated with agricultural production structures in many countries of the region, this report will discuss only the most timely conditions for dealing with the present crisis, and those which will have a substantial and immediate impact on agricultural development.

The growth of the sector depends not only on international economic support, but also on the success of internal efforts to make full use of this support. In order to fully understand the issue, the agricultural sector must be divided into its two basic components: the private sector, which is extremely heterogeneous, and the public agricultural sector, which is responsible for providing support and guidance.

Strengthening the Public Agricultural Sector

Although the public agricultural sector grew strongly during the sixties and seventies, in many of the countries of the region it is very weak and unable to exert influence over the comprehensive policy decisions that affect its development.

Weak or non-existent political support for programs and projects, and the relatively small amount of allocated funds reflect the public agricultural sector's lack of political clout.

For example, in 1980 the central governments of sixteen countries in the region spent between 1.0 percent and 11.0 percent of their budgets on agriculture, with a simple average close to 4.4 percent of total government expenditures. On the other hand, the same sixteen countries spent an average 10.0 percent of their total budgets on defense.²⁴

Furthermore the structure of the public sector in several countries is not very functional, but instead inefficient and costly to maintain. New agencies crop up in response to perceived needs at that moment. However, the agencies tend to grow and perpetuate themselves after they are no longer needed. New agencies then attempt tasks that the older ones are no longer able to carry out.

In many instances no mechanism exists to coordinate the different agencies, resulting in the overlap of functions among the ministries and other autonomous entities of the public subsector, and even between entities of the same ministry.

There seems to be a general consensus on the need to strengthen and modernize the public agricultural sector and improve the efficiency of its services. The different policies and mechanisms to be adopted should vary with the needs and priorities of each country. Any effort to strengthen the sector should include, to a greater or lesser degree, objectives that will attract strong political support for agriculture from influential groups and organizations, and work to strengthen the public agricultural sector's role as intermediary between producers and decision makers. Support should also be given in the form of monetary, fiscal and wage policies of interest to farmers.

Additionally, the economic, fiscal, exchange and agricultural policies of the countries should be oriented towards developing the agricultural sector in a way that will prevent price and market distortions. Such policies should do away with the practice of imposing costs on certain sectors of a society in order to maintain a system of subsidies.

Private Initiative and Organization for Production

In most countries of the region, economic planning is obligatory for the public sector and highly recommended for the private sector. Through sectoral policies, the public sector guides, supports and regulates production and marketing of crops and livestock. Independent producers, or those who belong to different associations that control resources, make their own production decisions, and work toward their own goals.

All producers need to rely on agricultural policies that stimulate investment and the rational use of resources. Different pressure groups in agriculture, representing different types of producers, seek special advantages in the form of increased resources, land, financing, support services for production and marketing and the stabilization of agricultural prices and revenues.

Producers must have these needs met through lobby groups, if they are to feel motivated to continue working in agriculture. The role of a public agricultural sector that is institutionally strong and technically efficient is to respond justly to these diverse interests, making sure that no one group is favored at the expense of another. Whenever possible, the sector should anticipate needs and create a working environment favorable both to producers and to representatives of public agricultural sector agencies and the government in general.

Because different interest groups are involved in general economic development, and specifically in agricultural development, the different types of producers who participate in this process apply varied resources and diverse viewpoints. Consequently it is important to recognize the need for differentiated, specific policies and programs oriented towards the various types of producers, in accordance with their importance and the role they may play in a particular economy. Although producer types vary within each country, they can be divided into the following four categories when considered regionally: large, medium and small individual producers, and organized producers.

The socioeconomic structures in the countries of the region provide a clear framework for the development of private enterprise and especially for modern commercial producers. These, unlike the colonial owners of latifundia, respond to the profit motive and to higher prices and greater demand. These producers attach major importance to the role of market mechanisms, competition and freedom to allocate production. Interest is being expressed in encouraging the private sector at all levels, with special emphasis placed on the role of small and medium-scale individual producers and economic organizations for production.

Every day more information becomes available on the important contribution made by the small-scale producers who account primarily for so-called campesino agriculture; consequently many development efforts are directed to support this group.

The absence of important technological developments applicable to agricultural production led to the assumption that small producers needed only two basic resources--land and labor--in order to produce, and that capital, in any form, played only a minor role.

Subsequent studies have shown that, in fact, capital is very important to this subsector. At the same time, it has been found that increased production and productivity result from the adoption of new and increasingly more productive factors. However, modern production factors are tied to consideration of availability and cost, and their acceptance is based on their profitability and on the possibility of acquiring investment resources.

This view of investments in agriculture attaches importance to the producers' capacity to adopt technologies that result in increased productivity and lower costs through the strengthening of their technical and managerial skills. A policy which supports the generation and distribution of these production factors and which provides producers with the training needed to make adequate use of inputs is essential to this kind of investment.

Cooperatives, community enterprises and other associative enterprises have grown considerably in the last twenty years. The following facts pertain to cooperatives, which have grown the most:

A survey of thirteen Latin American countries for which statistics were available²⁵ showed an increase in the number of cooperatives from 15,300 (4,973,038 members) in 1963 to 22,456 cooperatives (16,614,893 members) in 1983.

The percentage of the population belonging to cooperatives is proof of their growing importance in the region; thus 45 percent of the population of

Dominica are members, as are 33 percent in Argentina, twelve percent in Panama and nine percent in Costa Rica. Fourteen percent of Costa Rica's exports came from cooperatives, and the production of this sector accounted for ten percent of the GDP.²⁶

The sector composed of cooperatives, community enterprises and other associative forms will clearly continue growing and will become a sector of the economy of social interest, or "third sector," which will unquestionably play a major role in many countries in the near future.

Conservation of Natural Resources and the Environment

The past twenty years have witnessed technological modernization and the incorporation of new land into agricultural production. This process has gone hand in hand with the degradation of renewable natural resources, a trend which must be slowed so that natural wealth can be restored. Protective measures should include suitable legislation to encourage rational use, non pollution, environmental protection, better use of soil and water resources for production, incentives for reforestation, agroecological zoning, and the use of environmentally sound production systems.

These issues merit high priority attention. They must not be overlooked if future generations are to have the renewable natural resources they need for their own development.

Population growth and the inequitable distribution of land are two of the main reasons why many areas with severe agricultural limitations are being incorporated into production every year. Unfortunately, this process usually results in the immediate degradation of the soil in these areas. Estimates indicate that over thirty percent of the agricultural population in the majority of the region's countries cultivates crops on hillsides unsuited to this purpose.

The fragile equilibrium of the soil in the humid tropical forests of Latin America is also being disturbed by migratory agriculture, in which farmers

slash and burn the natural forest vegetation to plant crops for a period of one to three years, only to abandon them once the water level drops and the fertility of the soil is exhausted. In many cases, these lands, which are suitable essentially for forests, are then turned over to extensive livestock production and sooner or later witness only failure.

Available data indicate that the amount of forest land turned into pasture has doubled in some countries during the last 25 years. These new pastures are eventually abandoned after a brief period of three or more years because of fertility loss, erosion, soil compacting and weeds. The deterioration of these pastures increases the pressure to deforest new areas.

Natural and manmade fires destroy vast areas of forest, damaging vegetation and reducing the organic matter, nutrients and microorganisms in the soil. Forests destroyed in this manner become economically unproductive and play a sharply reduced role in protecting watersheds and the infrastructure projects they support.

The felling of trees and forest vegetation to meet increasing demands for fuel for home use also heightens the process of deforestation, especially in the high Andean plateaus and the arid and semi-arid zones of the Pacific and Caribbean coastlines. This practice, especially when accompanied by an additional industrial demand for fuelwood and charcoal, produces adverse effects, including the desertification of rural areas that are densely populated or bordering on urban centers. For these reasons, it is important to increase programs to establish forest plantations for fuelwood and charcoal production, as has already begun in some countries.

Another worrisome trend is the rapid expansion of urban zones covering fertile valleys and lands and spreading across highly productive soils. Furthermore, the city and the countryside are beginning to compete for access to water resources.

In summary, the problem is difficult to solve because of its complexity. It entails population growth, problems of land tenure and access to the land for

millions of producers, the need for and interest in increasing foreign exchange reserves and fiscal revenues through exports of wood, beef and other products, and the absence of conservation policies to protect natural resources, or of mechanisms to control the exploitation of resources.

Consequently there is an urgent need to establish conditions that will reduce the damage and permit rational present and future use of natural resources for the private and public benefit of a vast majority of the population of Latin America.

7. TOWARDS A LATIN AMERICAN SOLUTION

This chapter will suggest basic guidelines useful for achieving shared solutions. The difficulty of this task is evidenced by past experience in this region and others, but it must be accomplished in order to overcome the limitations inherent in fragmented national approaches. What is proposed here is the institutionalization of a regional perspective that would dovetail with proposals made at the national level, and consequently strengthen the agricultural sector through concerted actions that would be part of a unified effort of the Latin American and Caribbean countries.

The following are some of the most important points on which efforts for integration and agricultural development should focus:

- Orchestration of policies for regionalizing production in order to develop complementary products, reduce unnecessary competition and eliminate oversupply, to take full advantage of the different countries' comparative advantages, for the production of specific agricultural and livestock products.
- Strengthening intraregional commerce in support of regional self-sufficiency in foods and agroindustrial inputs, and working to make agricultural prices compatible.
- Adoption of uniform policies to supplant protectionist measures, negotiate the external debt, and search for new sources of financing and lower terms of trade.
- The exchange of information and the coordination of actions for joint promotion of exports and for obtaining quotas and markets at attractive prices.
- Reciprocal technical cooperation and the creation of a cooperative system of research, technology transfer and human resource training. Exchange of experiences with agricultural policies and similar matters affecting the sector.

- Mobilization and allocation of resources for projects of a regional and subregional scope, such as the opening of international highways and railroads into new agricultural zones, and the implementation of major integrated development projects in border zones and watersheds.
- Development of joint regional or hemispheric projects dealing with such topics as animal health, plant protection, planning, policy analysis, training, etc.

There are enough items of shared interest to consolidate a regional policy and develop consistent actions. Many of these actions can be carried out through the various existing systems for regional and subregional integration and cooperation, which must be strengthened. Latin America and the Caribbean constitute a region of sharp contrasts and great heterogeneity. Some of the more developed countries in the region could take advantage of intraregional commerce and provide human resources, training and technical know-how to the less developed countries in the region. This feeling of solidarity could also be expressed by the opening of markets, special tariffs, medium term supply contracts, etc.

In order for the region to work together as a unit, there must be a united Latin American understanding based on regional consensus and an attitude of solidarity in support of the lesser developed countries. This condition would make it possible to develop concerted policies vis a vis the international community, and the resulting cooperation would benefit the entire region. Should the opposite occur, countries would continue leading an isolated existence, many would grow increasingly dependent, and the hopes of consolidating an integrated, unified Latin America would be frustrated.

The continuation of a north-south dialogue, and the exchange between Latin America and other countries in the Third World are conditions that would help the region achieve a better position in the setting of the international economy.

The search for increased hemispheric cooperation, especially with the United States and Canada, as was attempted through the Alliance for Progress during

the sixties, would provide greater development opportunities for Latin America. These efforts could be spurred by organizations such as IICA, IDB, OAS, PAHO and others that could serve as catalysts to further development.

IICA's experience has shown that, with political support from the countries in the region, major sources of external funding can be channeled towards projects for implementation by different regional, subregional and hemispheric institutions.

In summary, solidarity, integration, endogenous development, consensus, cooperation, common cause, exchange and regional and external commerce are all key concepts for the future of Latin America. The well-being and the integrated development of the countries in Latin America and the Caribbean will come about to the degree that the abovementioned concepts are analyzed, their meaning is understood, and their implications become an everyday matter in the dialogue among nations.

IICA will be there to help them through the journey.

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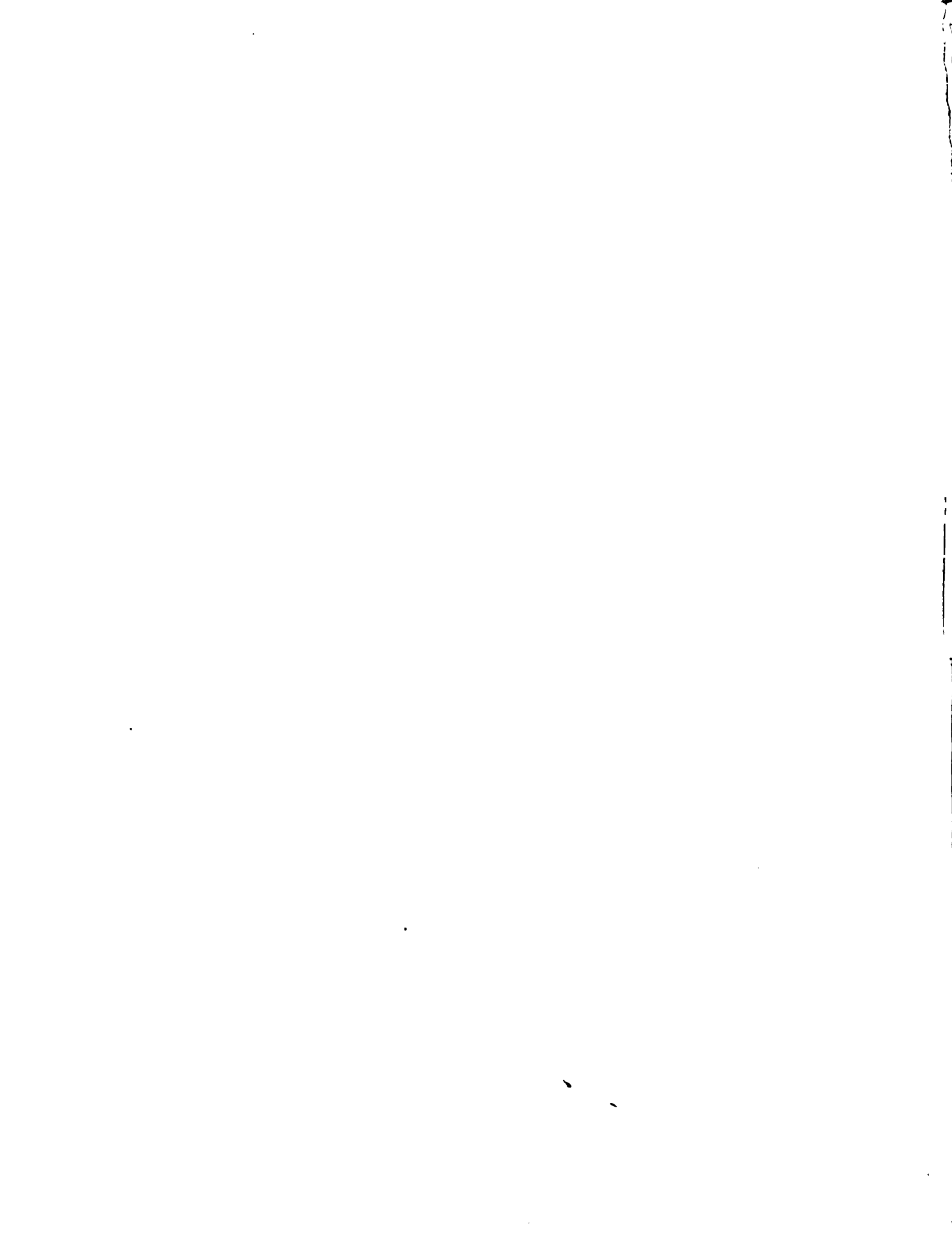
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EDI-IICA SYMPOSIUM

**"The Agricultural Sector in Latin America and
The Caribbean and the International Financial Crisis"**

Montevideo, Uruguay, October 22, 1985