

PLAN OF JOINT ACTION FOR AGRICULTURAL
CULTURAL REACTIVATION IN LATIN
AMERICA AND THE CARIBBEAN

6

PLAN OF JOINT ACTION FOR
AGRICULTURAL REACTIVATION IN THE
COUNTRIES OF THE SOUTHERN AREA

August, 1989

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INTER-AMERICAN INSTITUTE FOR COOPERATION ON AGRICULTURE

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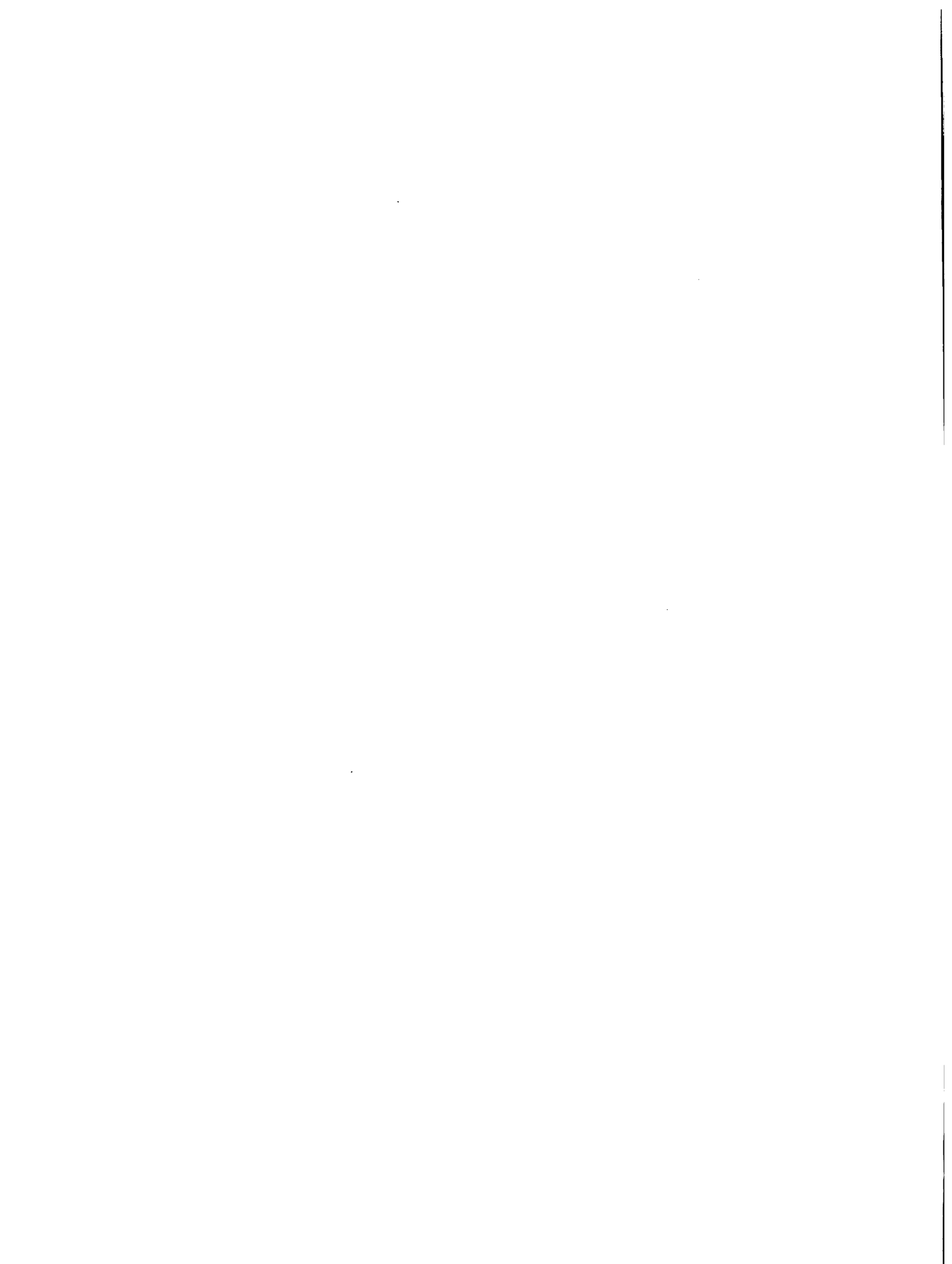
Many institutions and individuals have contributed in one way or another to this work, whether through the broad process of consultation, or by making specific contributions to the different PLANLAC documents.

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EXECUTIVE SUMMARY

INTRODUCTION

In contrast with other subregions of Latin America, the five countries that make up the Southern Area (Argentina, Brazil, Chile, Paraguay and Uruguay) do not belong to a specific integration scheme. Thus it is necessary to identify more precisely what they have in common (as well as their most outstanding differences) so as to justify considering them as a whole in the design of a joint strategy of agricultural development.

This concept of a "joint strategy" refers to the identification of common problems, the solution to which lies in joint actions. However, it in no way proposes to cover all aspects of national agricultural development programs. This must be kept in mind if the joint effort is to be consistent and meaningful: what is sought is the identification of areas of common interest, in which joint action can contribute to the success of national strategies, and not that national strategies be brought together perfectly in a subregional strategy.

A study of the structural characteristics of the economies of the countries of the Southern Area, especially of the features common to the development of the agricultural sectors and to their role in the world economy, as well as a superficial examination of several objective indicators of integration through agricultural activities, and a brief analysis of existing subregional integration schemes, will clearly show that there are broad areas in which the joint action of the countries of the area can promote the development of agriculture.

THE CONTRIBUTION OF THE AGRICULTURAL SECTOR TO THE ECONOMIC DEVELOPMENT OF THE COUNTRIES OF THE SOUTHERN AREA: SOME IDEAS FOR DISCUSSION

Agriculture in the Southern Area at the beginning of 1980: a synthesis

In the late 1870s, in the countries of the Southern Area, the agricultural sectors continued to play the roles traditionally assigned to them;

- to provide the bulk of the food required in the countries,
- to generate most of the foreign exchange produced by exports, and
- to serve as reservoirs of manpower and unskilled labor for urban industry, and to reabsorb those unemployed by industry during periods of recession.

Nonetheless, several dynamic processes were causing changes in many structural characteristics which, if allowed to continue, could bring about irreversible variations in the traditional structure. In this regard, the following are worth mention:

- a. In all the countries of the Southern Area, the agricultural sectors underwent substantial transformations, as regards production structures, area under cultivation and productivity, all of which affected the evolution and development of the sectors.
- b. The integration of the agricultural sector with other sectors of national production activity was another fundamental feature of the development of the countries of the Southern Area.
- c. The importance of foreign markets to agricultural production in the Southern Area continued, and in some cases increased (e.g. Chile and Paraguay). As a matter of fact, between 45 and 50 per cent of the agricultural production in the area is destined for world markets, and it should be noted that the profile of agricultural exports has changed considerably in terms of its composition and destination, in response to changes in the international market. In the Southern Area, as a group, agricultural exports represent more than 60 per cent of the value of total exports.
- d. The degree of subregional integration in the trade of agricultural products did not increase appreciably during the years under consideration.
- e. All the countries of the Southern Area (with the possible exception of Uruguay) increased expenditures for research and agricultural extension services, and the results were significant in terms of rates of adoption of technologies and of increases in yield and agricultural productivity.

The main effects of the crisis on the agricultural sectors of the countries of the Southern Area

Before beginning an analysis of the effects of the current crisis on the performance of the agricultural sectors of the Southern Area countries, it is necessary to stop and describe the phenomena which make up the "crisis" from a Latin American point of view.

In the late 1960s, the world economy found itself at the end of a path of almost continuous growth which had started at the close of the 1940s, and it began to face a series of crisis involving adjustment and reaccommodation of most of the industrialized economies of the world, with inevitable consequences for peripheral economies.

While it is true that the countries of Latin America, especially those of the Southern Area, were not exempt from the effects of these cycles (e.g. the vulnerability of Brazil in the face of increases in oil prices in 1973-1974 and 1978-1979), the feature which stands out most is the fact that these crises did not interrupt the development model in effect, nor the nature of the role played by these economies in the world economy.

The crisis which began in 1981, however, has hit the economies of Latin America and the Caribbean especially hard. Most of these economies have initiated adjustment processes and have suffered deep recessions which have meant declines in growth rates, and even negative growth rates. What is most important, however, is the fact that the current crisis has raised questions as to the viability of the development models of almost all the countries of Latin America, especially those of the Southern Area.

The reconsideration of the role of the agriculture sectors in the countries of the Southern Area should be made within this framework. The way in which, and the degree to which, the crisis has affected economic activity in general, and agriculture in particular, depends to a large extent on the structural characteristics that were built into the economies in question and into their respective agriculture sectors over the almost two decades preceding the onset of the crisis.

Six years after this onset, a review of available evidence leads us to conclude that:

- a. The Southern Area is still the agroexporting region par excellence in all of Latin America and the Caribbean, and is one the most important in the world in terms of specialized agroexports.
- b. The competitiveness of agricultural products from the Southern area is the factor which explains the major role played by the agroexports of the subregion.

Both the abundance of natural resources (not yet totally exploited) and the stepped-up adoption of technologies have led to large increases in production and productivity which have allowed the Area to remain competitive in high distorted world markets.

- c. The make-up of agricultural exports and the structure of the markets on which they are sold have changed considerably in almost all the countries in the area, over the two decades under study. This fact makes it possible to affirm that versatility and the ability to adapt to changes in the markets and to the introduction of new products are a structural characteristic of the agrarian economies of the Southern Area.

Noteworthy, however, is the fact that the degree of subregional integration as concerns the trade of agricultural products did not increase significantly during the same period.

While imports from the area maintained their relative importance in terms of total agricultural imports, the importance of the area as a market showed a relative decline.

- d. The multiplier effect of economic activity as a result of increases in agricultural production has steadily grown over time because of the growing incorporation of extrasectoral inputs and capital goods. This process has been delayed somewhat by the effects of the crisis.
- e. The agrarian and social structures of the rural areas have undergone important changes in several countries of the Southern Area.

The appearance of new production agents (from outside the sector, or with modern management capabilities) has accelerated the "rural industrialization" process, brought about processes of concentration and/or centralization of farms, and served as the social basis of the technological change referred to earlier. This process, in turn, has accelerated the proletarianization of groups of traditional small-scale farmers. Thus, great dichotomies continue to exist in the social and production structure of several of the agrarian economies of the countries of the area (for example, Brazil and Paraguay). Also, profitable "family farms" are becoming rarer in the face of such changes.

- f. In the Southern Area countries, the agricultural sector does not seem to play the anticyclical role or have the greater "resistance to recession" that is generally expected of agriculture.

Apparently, only in the food subsector of some countries where small-scale farmers specialize in the production of these crops, has it been possible to observe this characteristic in the sector in this times of crisis and recession.

- g. The preceding should not lead to the conclusion that the performance of the sector depends entirely on the overall performance of the economy. The evidence studied shows that:

- sectoral policies which are well designed and implemented in a timely fashion permit the reactivation of agriculture even in the midst of a macroeconomic recession.
- the versatility of supply based on the export agriculture sector is very broad and offers unforeseeable degrees of freedom for the increase of this activity and other economic activities linked to the sector (for example, the case of Chile in forestry and fruit crop development).

Thus, to make predictions of agricultural sector growth based on the evolution of domestic demand is, at best, a restrictive and highly conservative approach; the basically agroexporting nature of the agrarian economies of the Southern Area demands that new products and external markets be considered a constant and autonomous factor of vitality.

h. The gradual weakening of the public agricultural sector

In several countries of the Southern Area, this weakening constitutes a major hindrance to the implementation of innovative actions which are compatible with the potential for agricultural reactivation, and also with a strategy of joint actions having the same aim. While this situation has worsened during the crisis, it must be recognized that there are also structural causes behind it.

The solution to this problems lies in policies at the national level, but joint actions at the multinational level may also contribute to this objective.

TOWARD A FRAMEWORK OF JOINT ACTION FOR REACTIVATION AND AGRICULTURAL DEVELOPMENT

A. General strategic guidelines

In order to identify and formulate a strategy of joint action for the agricultural reactivation and development of the Southern Area, it is important first to work out certain conceptual matters. As a matter of fact, from the point of view of orthodox economic theory, economic integration is a process, the main advantage of which is that it allows a better assignment of resources arising from specialization based on the comparative advantages of the different member countries.

Integration arrangements among developing countries can hardly be based on the same rationale as that inherent in the normative precepts of orthodox economic integration theory. In fact, beyond any theoretical considerations and questions, most of the conditions that might make integration advantageous do not actually exist in the developing countries. In particular, the following are worth mentioning:

- there is no specialization of products or of trade within the group of countries; on the contrary, the supply of products (mostly commodities) is relatively uniform, as is the demand for imported goods (durable consumer goods and/or industrial inputs and capital goods).
- Intragroup international trade is not significant prior to integration; hence, facilitating such trade only adds marginal elements to a situation in which there is very little economic complementarity.

From this standpoint, therefore, there would be no great advantage in supporting integration among developing countries.

On the other hand, the main argument for integration among developing countries has to do with creating the base on which to develop a new profile of production and foreign trade. In other words, the idea is to

expand a protected market in order to lay the foundation for the application of the classic infant-industry approach, now at the supranational level.

One aspect usually not considered in arguments in favor of economic integration among developing countries is the fact that such arrangements increase the joint capacity of the new economic bloc vis-à-vis the rest of the world economy.

The above considerations are particularly appropriate and show the working of a key strategic principle in the case of the agricultural export sectors of the Southern Area countries.

The objective would be to expand (or at least maintain) the area's share in world exports of agricultural products.

This would be achieved, at the production level, through policies designed to increase productivity through joint research, the dissemination and increased adoption of technologies, increased plant protection and animal health measures, and the production, at increasingly lower costs, of the inputs required for the technologies adopted.

Such measures would have the indirect effect (beyond the actual objective pursued) of enhancing the linkages in the matrix of intra-regional production of goods, which from the outset has accounted for a major share of the exports of the countries concerned.

In light of the above considerations, and based on a review of the main characteristics of the agricultural sectors of the Southern Area countries, a long-term strategy may be proposed which would include the following objectives:

a. To strengthen the common agroexporting base of the Southern Area

The main structural feature of the agrarian economies of the Southern Area is their basic orientation towards world markets. Each of these countries has developed agrarian activities that are competitive internationally. This feature should be strengthened through joint actions aimed at improving the exportable supply of the subregion.

The following strategic guidelines should be followed in order to improve and expand the exportable supply:

1. Forceful policies and joint programs should be implemented in the area of plant protection and animal health, in order, on the one hand, to improve quality and limit losses in production throughout the subregion and, on the other hand, to enhance the efforts of individual countries, with a view to preventing the spread of diseases across borders and overcoming sanitary barriers in the countries of the area;

2. Joint activities in the area of agricultural research and transfer of technology should be strengthened, with a view to closing gaps and reducing the wide diversity of production at the subregional level;
 3. Clearer and more permanent policies should be established for the management of natural resources common to two or more countries (large river basins, similar agroecological regions, etc.);
 4. Policies and actions should be planned to strengthen the production of capital goods and inputs for agriculture and to make them more accessible at the subregional level;
 5. Agroindustrial complexes of subregional scope should be established in order, on the one hand, to improve the advantages of scale at the world level for the production of processed goods of agricultural origin and, on the other hand, to minimize the risk of shortages in the supply of agricultural raw materials;
 6. Shortcomings in infrastructure and in support services should be identified and dealt with by organizing transport, energy, storage facilities, etc., in such a way as to maximize their positive impact on agricultural production;
 7. The implementation of national policies aimed at combatting rural poverty could be facilitated by modernizing export agriculture. Indeed, the potential for solving these serious social problems could be enhanced both by incorporating small-scale farmers into production for export and by generating jobs in agroindustry.
- b. **To increase and ensure the introduction of agricultural products from the Southern Area into world markets**

In this regard, the following strategic guidelines for joint action should be followed in order to promote and develop external demand, as well as to open up new markets:

1. The policy of forming alliances to deal with third countries in international technical and political fora should be continued and expanded.

The experience of the Cairns Group in GATT could be extended to other types of permanent alliance for the protection of the subregion's commercial interest. This could significantly increase the bargaining power of the Southern Area countries not only in multilateral fora but also in regard to bilateral pressures.

The prospects for increasing the value of exports of the main commodities produced in the Southern Area will depend, to a

large extent, on gradual changes being made in the protectionist policies applied by the industrialized countries with regard to agricultural and agroindustrial products. Top priority should be given to any joint effort that is directed towards this end.

2. Policies and joint actions aimed at promoting nontraditional agricultural exports should be consolidated and coordinated.

There is a growing trend towards trade in high-value agro-based products which is steadily displacing trade in commodities.

The Southern Area countries have a great potential for entering more forcefully into these flows of trade; hence, joint sectoral policies should include specific measures to support such exports.

It is evident from the way world markets have evolved, even during the years of crisis, that they are able to absorb increasing quantities of new or "out-of-season" products. The countries of the subregion are now, and will continue to be for at least another ten years, "small-scale suppliers" to these market niches. Agricultural exports could be further expanded by taking advantage of opportunities in this area.

Reciprocal arrangements for assistance and exchange of information among the countries of the Southern Area would further increase the benefits to be obtained.

3. Joint actions aimed at increasing national control over the external marketing of agriculture-based products should be viewed as an important strategy tool.

Given the trend toward the establishment of large transnational corporations for the marketing of agricultural products, the countries of the area should take joint action to establish multinational marketing enterprises (public-private or mixed), in order to stand on firmer ground in their efforts to consolidate their position on the world market, and to play a role and pursue objectives that are more consistent with the interests of national economic agents.

Similar trends may be observed in the trade of processed foods and other products made from agricultural raw materials.

The establishment of multinational agroindustrial conglomerates would enable the countries of the Southern Area to participate in these growing markets and to take maximum advantage of the benefits they offer.

c. **To gradually meet the domestic demand for agricultural products through production at the subregional level**

Global policies aimed at "paying off the domestic social debt" in the Southern Area countries which are gradually progressing towards democracy even within the constraints of external adjustment, will undoubtedly have an impact on the domestic demand for foodstuffs and other agriculture-based products.

In this regard, several guidelines may be followed that are compatible both with redistribution strategies and with the price stabilization objectives and anti-inflationary policies of several countries and, of course, with the strategy for the reactivation and development of agriculture in the subregion. These are:

1. Priority should be given to the coordination of policies pertaining to the production and supply of food in the subregion.

Beyond the opportunities which are opening up from the standpoint of external markets, there is still a great potential for expanding the domestic market for agricultural products. Brazil, for example, is a market whose future demands will be enormous.

Commodities, especially food crops, are still faced with substantial barriers to intrasubregional trade. An analysis of the overall advantages to be gained from the increased liberalization of intraregional trade in foodstuffs would show that it is in the interest of all parties to initiate such a process, gradually and in accord with one another.

2. Under this joint strategy, the "image-objective" would not depend on "exporting enclaves," but rather on improvement in the quality of traditional and new products, which would be produced for a "global market" in which the national-versus-foreign-market dichotomy would gradually disappear.

Thus, the upgrading of agricultural products that would have to take place in order for them to obtain a better share of world markets would undoubtedly lead to the creation of new domestic market segments in several of the Southern Area countries.

3. It will be important, in considering these guidelines, not to forget the LAC markets outside the Southern Area; indeed, studies being carried out in other LAC subregions show that there are great shortages of food and other agriculture-based products which are supplied from outside the region.

A comprehensive analysis of the LAC region would make it possible to establish more accurately to what extent imports of such products could be substituted at the regional level.

B. Objectives of the Plan of Joint Action

The objectives of the Plan of Joint Action follow, on the one hand, from the realization that independent national policies are not enough to attain maximum agricultural development and overall economic development, in view of the crisis, and, on the other hand, from the conclusions drawn from the strategic guidelines for the agricultural reactivation and development of the subregion.

Thus, the Plan of Joint Action for the Southern Area pursues the following objectives:

- a. To enhance the role of the agricultural sector in the reactivation and economic development of the Southern Area countries, in light of the current crisis.
- b. To strengthen the countries' common production capability, through joint actions and policies aimed at enhancing national efforts and through joint actions aimed at increasing the subregion's capacity and role in world markets.
- c. To work to increase the efficiency of agrarian and agroindustrial production by introducing effects of scale through integration-oriented measures and alliances vis-à-vis third countries.
- d. To increase the bargaining power and the relative strength of the Southern Area countries in world markets, through permanent alliances built around the concept of agricultural development.
- e. To contribute towards the solution of structural problems in the national agrarian economies, through a gradual standardization of policies on incentives, technological development, marketing of agricultural products and strengthening of institutions.

C. Instruments of the Plan of Joint Action

The formulation and subsequent implementation of a Plan of Joint Action will undoubtedly call for a highly varied and versatile battery of instruments. Indeed, it will be important both to improve existing policy tools and to create new ones.

In general, it may be said that the arsenal of instruments to be used should include at least the following:

- a. Amendment and/or creation of legal rules and instruments and/or institutional mechanisms at the national and/or international levels.
- b. Reforms in and/or strengthening of national institutions concerned with the sector, as well as of some international institutions.

- c. Drawing up of technical cooperation and training programs, as well as other actions designed to improve the human and technological resources of the subregion.
- d. Identification of funding needs and design of a joint program for seeking the financial resources required either for the implementation of investment programs and projects or for other purposes, such as possible compensation to social groups affected by structural and policy changes arising from implementation of the Plan.

From the methodological standpoint, the "battery of policy instruments" would be fully cross-referenced with the list of areas for joint action. Thus, each area of joint action could involve the total or partial implementation of tasks directed toward the formulation of different types of instruments.

At this stage, it would be premature and counterproductive to attempt to list all the instruments applicable to each area of joint action. To be precise, the following stages should be followed in drawing up the Plan of Joint Action:

- a. Reaching political and technical consensus on the areas of joint action identified on the basis of the subregional strategy guidelines and the objectives of the Plan;
- b. Qualifying this consensus by setting priorities -in conceptual and chronological terms- for the different areas of joint action;
- c. Scheduling tasks to be carried out in identifying policy instruments for each area of joint action;
- d. Formulating the Plan of Joint Action by preparing -entirely or in part- the instruments selected (e.g., legal reforms, institutional reforms, investment programs and projects, technical cooperation programs, etc.), and
- e. Organizing the institutional framework for the execution, follow-up and periodic revision of the Plan of Joint Action.

D. Preliminary identification of areas of joint action

Once the basic concepts for formulation of the Plan of Joint Action have been clarified, it will be necessary to identify areas of joint action to be carried out in the Southern Area countries. The following section presents a summary of the structural features of the agrarian economies of the five countries and the strategic guidelines and national policies currently in force, with a view to identifying those areas of joint action considered a priori to be highly feasible.

Thus, from the following sources:

- the common characteristics of the Southern Area (Section I),

- the structural features of the agrarian economies of the countries of the area (Section II),
- the general strategy guidelines,
- an analysis of the compatibility of national policies,

It is possible to propose a tentative list of areas of joint action; these should be further developed during the subsequent stages of formulation of the Plan, i.e., when the instruments needed to attain the objectives of the Plan in each specific area of action are prepared in greater detail.

At this stage, the following order for possible areas of joint action is proposed:

- a. **Joint actions pertaining to the production base of the agricultural sectors of the Southern Area:**
 - 1. Integrated management of shared natural resources (large river basins, savannahs, inter-Andean valleys, etc.),
 - 2. Transfer of technology and/or joint research on natural resource management and conservation issues which are of common concern.
- b. **With regard to production:**
 - 1. Strengthening and expansion of joint research and agrarian technology transfer programs,
 - 2. Consolidation of comprehensive technological packages together with the well-coordinated production, throughout the subregion, of agriculture-based goods or of goods produced by other sectors (e.g., capital goods, agrochemicals, seeds), with a view to substituting imports and improving the international competitiveness of the subregion as a whole.
 - 3. Strengthening of joint plant protection programs,
 - 4. Strengthening of joint animal health programs, and
 - 5. Programming of agroindustrial production at the subregional level, so as to standardize requirements on the amount and quality of raw inputs.
- c. **With regard to marketing:**
 - 1. Strengthening of alliances (e.g., the Cairns Group) for purposes of joint negotiation in world fora,
 - 2. Standardizing, at the subregional level, food codes and other consumer-protection regulations pertaining to fresh and/or processed foods in order to meet the requirements of the major world markets,

3. Promoting the establishment of subregionally integrated agroindustrial complexes, in order to improve international competitiveness and to raise the quality of processed foods to be sold on the domestic market,
4. Promoting the signing of agreements on the establishment of joint marketing enterprises to cover new niches in world markets, and
5. Formulating anticyclical policies at the subregional level, based on the coordination of seasonal supply of and demand for products that are subject to fluctuation (e.g., vegetables, fruits, dairy products, meat, etc.).

d. With regard to institutions:

1. Strengthening of ministries of agriculture in areas pertaining to integration and/or joint action at the subregional level,
2. Establishment of permanent subregional working groups up on and monitor the agrarian policies of Southern Area countries and the progress of their joint actions,
3. Strengthening of other institutions of the public agricultural sector, in view of the new duties required of them under a process of joint action for agricultural reactivation.
4. Joint training of human resources at different levels of training.

The above summary of possible areas of joint action is neither restrictive nor exhaustive. As the Plan of Joint Action is developed, the areas of joint action will be expanded while at the same time choices will be made as to which areas of joint action are viable and can actually be implemented by the countries in the different areas of Latin America and the Caribbean.

Finally, it should be noted that, although it will be difficult to finance some of the instruments to be applied under the Plan of Joint Action, given the current situation in the hemisphere, such financing would be greatly facilitated if several countries were to present joint proposals to the international funding and technical cooperation agencies. This practice, which has been applied successfully in other sectors of activity (e.g., binational energy programs), should be adopted by the agricultural sectors of the region.

E. Proposals for Joint Action

Proposals for joint action have been divided into three groups: technical cooperation projects, funding mechanisms, and institutional mechanisms for implementing the Plan of Action.

1. Technical Cooperation Projects

The following technical cooperation projects grew out of the process to identify and obtain technical and political consensus, and are to be incorporated into the Plan of Joint Action.

a. Profiles

Cooperative Agricultural Research Program for the Southern Cone (PROCISUR)

Proposals for technological action for the Plan of Joint Action in the Southern Area concentrate on consolidating and expanding cooperative mechanisms that exist in the subregion.

PROCISUR as it is today originated in technological exchange activities among Argentina, Brazil, Chile, Paraguay and Uruguay, which were promoted by IICA since the end of the 1960s, and focused on wheat, corn, livestock, pastures, programming and economic analysis. The Program was first consolidated through the IICA-Southern Cone/IDB Project which received funding from the IDB from 1980 to 1983. In 1984, activities were expanded and the implementation stage is to be completed by 1990. The institutionalization of this cooperative mechanism has been proposed as the basis for joint actions within the Plan of Reactivation.

The present framework favors regional integration and opens enormous possibilities for solving many of the problems affecting the countries, through joint actions that make it possible to take advantage of the technical capabilities of each country, existing economies of scale, and the greater bargaining capacity that results from the joint implementation of activities.

The objectives of PROCISUR are:

1. To support joint actions among the national agricultural research institutions of participating countries, in order to increase the exchange of agricultural technology.
2. To promote reciprocal assistance among participating countries in order to facilitate the spread and use of technologies developed in each country, through the horizontal exchange of know-how, experiences and genetic material generated by agricultural research in participating countries.
3. To identify new possibilities for strengthening integrated efforts, as well as cooperative and/or joint actions among

participating countries in order to make better use of available resources and seek solutions to common problems.

4. To cooperate in coordinating the actions of national agricultural research organizations and international agricultural research centers.
5. To support the identification and transfer of know-how useful for agricultural development from other countries of the world to participating countries.
6. To keep up-to-date information on the structure and operations of agricultural research organizations in the countries of the Southern Cone.
7. To identify, prepare and implement integrated cooperation projects, including studies that contribute to the technological integration process.

The projects will include integrated activities including reciprocal technical cooperation, training, consultation, studies and analyses, and joint research.

The annual cost of the Program in effective resources, as contemplated in the Agreement, is estimated at around the equivalent of US\$950,000.

Strengthening International Animal Health and Plant Protection Emergency Systems in the Southern Area

The agricultural sector of the countries of the Southern Area is important not only as the main supplier of foodstuffs and agricultural products consumed in the region, but also as a provider of exportable surpluses, the volume of which exceeds agricultural imports by a ratio of 5 to 1. It thus contributes effectively to generating foreign exchange and to the overall economies of the countries.

Objectives

The following are the objectives of this project:

1. General objective

To prevent the entrance and/or spread of pests and diseases subject to quarantine, and to prevent international agricultural trade from being affected by quarantine measures.

2. Specific objectives

- a. To establish emergency animal health and plant protection systems, for use by national animal health and plant protection services of the Southern Cone countries.

- b. To improve the training of professional, technical and non-technical personnel of national agricultural health services in diagnosing diseases and pests subject to quarantine, and applying emergency plant and animal health measures.
- c. To train and/or upgrade professional, technical and non-technical personnel in charge of international agricultural quarantine services in surveillance and inspection techniques of agricultural products at international ports of entry.
- d. To support the implementation and equipping of national agricultural health services to allow for and/or improve emergency and international agricultural quarantine services.

This project has two components:

- 1. The strengthening of the countries international agricultural quarantine systems; and
- 2. The establishment and/or strengthening of animal and plant health emergency systems.

The executors of the Project will be: the Inter-American Commission on Animal Health (COINSA) --Southern Area--, and the Plant Protection Committee for the Southern Area (COSAVE).

Total project cost for the four-year period is approximately US\$2,496,400.

Evaluation of Animal Diseases and Pests in the Countries of the Southern Area (Previously titled: Strengthening the Southern Network of Diagnostic Veterinary Laboratories)

This project aims to strengthen the animal health services of the Southern Area countries by implementing national units in charge of gathering, processing and analyzing data concerning the presence of animal diseases and pests, and making an economic evaluation of related damages; as well as of upgrading the technical capabilities of animal health laboratories, establishing a technological exchange mechanism among the laboratories.

The project seeks to introduce proven methods into the veterinary services of the countries of the Southern Area in order to find out, with a high degree of reliability, what the economic impact of animal diseases and pests is on livestock production, productivity and marketing.

The objectives of the project are:

1. To implement and strengthen national animal health laboratories in the Southern Area countries in order to ensure the reliability of diagnoses of diseases and pests, establishing a horizontal subregional technical exchange mechanism in this field.
2. To establish national units that will gather, process and make economic analyses of data on the prevalence, incidence and distribution of diseases and pests.
3. To establish a subregional mechanism to disseminate this information in the countries.

This project is divided into two components: The first concerns the implementation of a mechanism for the economic evaluation of animal diseases and pests; the second, the establishment of a technological exchange mechanism among animal health laboratories of the countries of the Southern Area (REDSUR).

The activities to be undertaken for implementing this project are: the establishment of institutional and inter-institutional mechanisms; training of animal health laboratory personnel; equipping of laboratories; instituting economic evaluation systems on pests and diseases; and conducting diagnostic and applied research programs.

Economic Research Program: Potential and Limitations for Agricultural Development in the Countries of the Southern Area

The conceptual issues arising from the definition of the Plan of Joint Action for Latin America and the Caribbean, and particularly for the Southern Area, point to the need for economic research on agricultural problems in these countries. The new guidelines for agricultural development in Latin America, set forth in the proposals of the Plan, clearly indicate that the target of this research will be the agricultural/agroindustrial processes, considering their role in the overall economy and in the international and regional contexts that shape them. The consideration of the region or subregion as a possible framework for joint development will not lose sight of national profiles and will seek to pinpoint what the restrictions and potentials are for achieving the closest economic relationship possible.

The objective of the economic research program is to determine the potential and limitations present in the economies of the Southern Area related to the agricultural/agroindustrial development process.

Fulfillment of this objective will help the countries of the area establish their long-term integration strategies and base their policies on firm ground.

Another objective of the program is to encourage joint economic research by scholars from various countries.

This academic endeavor will establish close ties with the public sector, particularly the ministries of agriculture, and with pertinent private sectors.

In general terms, the strategy will concern itself with the following:

- a. A conceptual and theoretical basis for research topics must be defined.
- b. When selecting topics, priorities established in the Plan of Action will be kept in mind.
- c. The program will seek to have its empirical base studies follow strict, related methodologies that produce comparable and compatible results.
- d. Efforts will be made to check the hypotheses, progress and results of the research against the views of agricultural policy makers.
- e. The strategy addresses the need to transfer research findings to different levels and intends to introduce innovative mechanisms to that end.
- f. Exchange among researchers from the different countries will be encouraged.

The four main components of the program are:

- a. Coordination
- b. Research projects
- c. Strengthening joint infrastructure for agricultural economic research in the area
- d. Disseminating research finding at different levels

Program to Strengthen Ministries of Agriculture of the Countries of the Southern Area in Activities Pertaining to Foreign Trade and Integration

The countries of the Southern Area constitute the main export region for agricultural/agroindustrial commodities from Latin America. The weight of these sectors in the external strategy of these economies has been of historical importance.

Objectives

The program has two objectives:

1. To increase the participation of the ministries of agriculture of the countries of the Southern Area in formulating foreign agricultural trade policies within the framework of the overall external strategies of each economy.

2. To create channels of communication among the units and experts that deal with foreign trade and integration in the ministries of agriculture of the five countries.

The program is seen as a step forward on the road to modernizing and strengthening the public agricultural sectors of these countries.

The program consists of three components, which will be concerned with:

1. The establishment of working groups and the design of its three-year program of activities.
2. The training of the members of these groups and of ministry personnel in matters related to foreign trade.
3. The setting up of an information exchange system among the units participating in the program.

The program includes the following activities: identification of the institutional space in the ministry of agriculture where it would be best to place these working groups; selection of technical personnel from the ministries of agriculture and external relations to make up these working groups; selection of public or private organizations to be incorporated into the groups; and initiation of work by the groups.

b. Ideas to be developed

Support for the establishment of an integrated fruit fly management system in the Southern Area

Markets for fruit and vegetables from the Southern Area are found in the northern hemisphere where seasons are reversed. As a result, out-of-season fruits can be offered there with certain advantages in regard to preference and price. In order to gain access to these markets, fruits and vegetables must meet the quality standards and plant health controls of those markets.

Objective

To upgrade the organization and technical structure of plant protection institutions so as to establish integrated fruit fly management programs in the Southern Area.

The project includes the following activities: diagnostic study of the fruit fly situation; application of integrated management methods, and training of technical personnel and farmers.

The general strategy aims to combine and coordinate the efforts of the countries of the Area in order to establish integrated fruit fly management systems that use legal, educational, mechanical, chemical, biological and fruit fly sterilization control methods efficiently and effectively.

Budget

IICA	Local governments	External Resources
US\$482,010	Infrastructure and	
Operating capacity	plant protection	
in the Southern	personnel	
Area		

2. Financial Mechanisms**Promotion of Investment in Agricultural Projects in the Southern Area**

This project was designed within the context of the Plan of Joint Action in Support of Agricultural Reactivation and Development in Latin America and the Caribbean. IICA was charged by the Inter-American Board of Agriculture with the preparation of this Plan, in collaboration with the governments, other organizations of the inter-American system and other specialized organizations.

In September 1988, in Asuncion, Paraguay, the vice-ministers of agriculture of the Southern Area (Argentina, Brazil, Chile, Paraguay and Uruguay) studied a document submitted by IICA, entitled "Strategy of Joint Action for Agricultural Reactivation in the Countries of the Southern Area: Ideas for Discussion," at which time the objectives of the Plan for the Area were established to reflect the strategy established for joint actions among the countries. These objectives included agroindustrial development and integration, with important participation by the private sector. To this end, IICA was asked to prepare an agroindustrial development program and a proposal to set up a preinvestment fund. This fund would emphasize agroindustry, but would also be used in designing other agricultural investment projects of critical importance for making investment in agroindustry feasible.

Objectives

The purpose of the project is to identify investment projects and investors. Investors standing to benefit from the Program would be national or multinational public or private enterprises, cooperatives or small-farmer organizations. Risk-capital investors from outside the Area could also be included.

The program will be experimental in nature and will have a duration of four years. It will be evaluated after the third year and the governments will then decide whether to continue or not, and whether the establishment of a preinvestment fund is called for.

The program will be financed by a non-reimbursable IDB technical cooperation project. Governments engaged in cooperative actions in the countries of the Area, as well as international organizations such as the European Economic Community (EEC), FONPLATA, etc., will be invited to share in funding the program.

The program will identify investment projects that foster integration in agroindustry and "strategic" investment projects in infrastructure, in the production base, marketing and in institutions that will help open new avenues for investment in agroindustrial production. The nature of the program and its main object of promoting private investment will make it a particularly useful instrument for identifying the need for strategic investments and how they can benefit the private sector.

3. Institutional Mechanisms for Implementing the Plan of Joint Action and for Coordinating Actions in the Southern Area

The proposal described herein reflects the guidelines handed down in the advisory meeting held in Santiago, Chile, March 16 and 17, 1989.

It is presented in the form of an agreement, which is the simplest form that can be used for this purpose. Later, it must be complemented with pertinent regulations.

The following three alternatives are proposed:

A	B	C
<p>Three levels of operation: a) at the Advisory Council level at ministerial level, b) Executive Committee of vice ministers and c) Coordination Secretariat</p>	<p>Advisory Council at the vice-ministerial level and Coordination Secretariat</p>	<p>Advisory Council of Ministers and Coordination Secretariat</p>

CONSIDERING

That the third advisory meeting, held in Santiago, Chile on March 7 and 8, 1989, requested IICA to prepare a document to create a consultation mechanism, based on the guidelines established by the vice ministers participating in said Meeting,

AGREE

First : Purpose

To establish the Advisory Council for Agricultural Cooperation in the countries of the Southern Area (CONASUR). CONASUR is the institutional mechanism for consultation and coordination of the ministries of agriculture.

Second: The Advisory Council

The Advisory Council is the political body responsible for coordination and integration, and is made up of the ministers of agriculture of the countries of the Area. It shall meet at least once a year.

Third: The Executive Committee

The Executive Committee is the technical-executive support body of CONASUR, and is made up of the vice ministers of agriculture of the countries.

Fourth: The Coordination Secretariat

The Coordination Secretariat is the executive body of CONASUR. Its work covers coordination and consultation activities to implement the agreements and resolutions of the Advisory Council.

Fifth: Participation of the Countries

The ministers of agriculture of the countries of the Southern Area agree to: participate on the Advisory Council, through their respective ministers, and to draw up the by-laws for governing the operations of CONASUR.

Sixth: IICA Support

IICA will provide support to CONASUR, through the appointment to a member of its international professional personnel. The IICA Offices in the member countries of CONASUR will also provide support.

Seventh: Financial Resources

CONASUR will operate with resources from member country quotas, IICA contributions and special funds.

The Agreement will last for four years, starting on the date it is signed, and can be extended by mutual agreement, which must be presented in writing at least sixty days prior to expiration.

I. INTRODUCTION

The Ninth Inter-American Conference of Ministers of Agriculture - a specialized conference of the Inter-American System, convened by the OAS, and held in Ottawa, Canada in August of 1987 - in its Recommendation No. 10, charged IICA with "developing, in collaboration with member countries and the other specialized agencies, a strategic plan of joint action in support of agricultural revitalization and economic development in Latin America and the Caribbean." This resolution also received the support of the Seventeenth General Assembly of the OAS, in October of 1987; the Plan will also be presented to the Inter-American Board of Agriculture during its regular meeting, to be held in 1989. 1/

In compliance with this mandate, IICA has proposed and reached agreement on a broad mechanism of consultations and participation for the purpose of involving interested member countries, regional institutions, and technical cooperation and financial organizations in the development of the Plan.

Included in the preparation of the Plan 2/ is the development of "joint strategies for agricultural reactivation" in each of the four subregions covered by the Plan (Central, Caribbean, Andean and Southern). These "strategies" are oriented toward providing a framework for consensus in key areas which are to be the focus of joint actions taken by the countries on behalf of agricultural development, and must be drawn up prior to the elaboration of detailed proposals for action (programs, projects, etc.), which will constitute the final task in the development of the Plan.

These organizational guidelines for the development of the Plan of Action were approved by the Executive Committee of IICA at its Eighth Regular Meeting held in San Jose, Costa Rica, from August 1st to 4th, 1988, as well as by the ministers and vice ministers of agriculture at the meetings of their subregional fora (Regional Council for Agricultural Cooperation in Central America, Mexico, Panama and the Dominican Republic - CORECA; Board of the Cartagena Agreement - JUNTA; Caribbean Common Market - CARICOM).

In the case of the countries of the Southern Area (Argentina, Brazil, Chile, Paraguay and Uruguay), since no specific forum exists, the ministers of agriculture of the five countries agreed, at the request of IICA, to set up a consultation mechanism at the level of vice ministers which is to operate during the development of the Plan of Action. To date, the vice ministers have met three times: the first time, in Buenos Aires on May 2 and 3, 1988, and the second, in Asuncion on September 19 and 20, 1988; and the third in Santiago on March 7 and 8, 1989. In the first meeting, the "strategy for joint action," included in Chapter II of this document, was approved; some proposals for action were discussed and it was agreed to set up national working groups in the five countries, which would serve as counterparts in the preparation and in-depth analysis of the proposals for action.

1/ The working documents and the declaration and recommendations of the Ninth ICMA may be found in: "Agricultural Reactivation: A Strategy for Development." IICA, San Jose, 1987.

2/ See: "Plan of Joint Action for Agricultural Reactivation in Latin America and the Caribbean: Guidelines for its Preparation," No. 1. IICA, June 1988

During the Santiago meeting, the proposals for action already developed were analyzed. Agreement was reached on the majority of these proposals which are included in section III of this document. Other proposals for action, that are still under study, are included in Appendix 1.

This document is a revised version of "Estrategia conjunta para la reactivación agropecuaria en los países de Area Sur," and incorporates the suggestions and comments on the preliminary version made by the representatives of the five countries on the occasion of the consultation meeting held recently in Asuncion.

This new version is to be used for reference and for establishing priorities in the preparation of proposals for action (programs, projects, etc.) which are to be presented to the countries for consultation in successive stages. The purpose of its publication is also to facilitate greater dissemination and discussion of the progress made, in order to improve on the experience gained, and to increase overall awareness as to the potential of agriculture in subregional development strategies.

II. THE STRATEGY OF AGRICULTURAL REACTIVATION

A. SOME IMPORTANT CONSIDERATIONS FOR JOINT ACTION

Introduction

1. In contrast with other subregions of Latin America, the five countries that make up the Southern Area (Argentina, Brazil, Chile, Paraguay and Uruguay) do not belong to a specific integration scheme. Also, it is the largest subregion in Latin America, and the one that boasts the greatest ecological variety.

In the case of Central America, the Caribbean or the Andean Pact, the existence of subregional integration schemes makes it possible to envisage carrying out joint actions within a broad range of objectives that are explicitly shared by all the countries.

2. The preceding notwithstanding, the countries of the Southern Area belong to different integration or joint action schemes which link them to other countries in the region and the world, and to one another.

Thus, these five countries are members of the Latin American Integration Association (ALADI), four of them (Argentina, Brazil, Paraguay and Uruguay) belong to the River Plate Basin arrangements, three of them (Argentina, Brazil and Uruguay) have initiated an intense process of integration aimed at establishing a Free Trade Zone, and four of them (Argentina, Brazil, Chile and Uruguay) are members of the Cairns Group, which negotiates on behalf of all its members in the GATT multilateral negotiations in the trade of agricultural products.

This active participation in supranational schemes demonstrates that, at least there are no national policies which forbid involvement in integration schemes or associations with other countries for the development of common policies. This means that there are solid bases on which to build new actions of this type.

3. Nonetheless, because there is no single integration scheme which includes all of them, it is important to define more clearly what they have in common (as well as their most outstanding differences) so as to justify considering them as a whole in designing a common strategy for agricultural development.

This concept of a "joint strategy" refers to the identification of common problems, the solution to which lies in joint actions. However, it in no way proposes to cover every aspect of the national agricultural development strategies. This must be kept in mind if the joint effort is to be consistent and meaningful: what is sought is the identification of areas that coincide, in which joint action can contribute to the success of national strategies, and not that the national strategies be brought together perfectly in a subregional strategy.

In the following paragraphs, objective facts are identified and analyzed, as elements which make it possible to treat the Southern Area as a

subregion suitable for the implementation of joint actions which fall within the strategy for the reactivation and development of agriculture.

Brief description of the economic and production structure of the countries of the Southern Area

4. The economic and production structure of the countries of the Southern Area in the mid-1980s displayed the following major characteristics (see Tables 1 and 2):

- a. In four of the five countries of the area, the relative importance of the primary production sectors, in terms of GDP, was less than 20 percent, while in three of the countries, manufacturing accounted for more than 20 percent of GDP, and services also played a significant role. This production structure indicates that, in general, the level of economic diversification and development was significant.
- b. The integration of the agricultural sector into the matrix of intersectoral relations was significant; in other words, the "backward" and "forward" linkages of agriculture have an intensity and permanence which are structural in nature.

In fact, recent estimates seem to indicate that in three countries more than 40 percent of the gross value of agricultural production corresponds to extrasectoral inputs, and the percentage of agricultural production which goes through industrial processing is considerable. These figures speak of agrarian economies which have achieved a high degree of modernization, as a result not only of the introduction of technologies, but also of the significant changes that have occurred in the traditional rural structure and the type of production agent acting in the rural areas.

- c. The services sector accounted for more than 45 percent of GDP in all the countries of the area. It should be pointed out, however, that the share of the government sector was different in each of the countries under consideration.

TABLE 1- SOUTHERN AREA
STRUCTURE OF GDP (%)
1985

COUNTRY	GDP	AGRICULTURE	INDUSTRY	SERVICES
ARGENTINA	100	12	38	50
BRAZIL	100	13	35	52
CHILE	100	6	39	55
PARAGUAY	100	26	26	48
URUGUAY	100	14	29	57
SOUTHERN AREA	100	12	36	52

SOURCE: WORLD BANK

5. The study of the employment structure in the five countries of the Southern Area points up the fact that there are important differences between this structure and the one related to the generation of the GDP. Generally, these discrepancies are explained by the differences in the productivity of the labor factor. For example, in Brazil, Paraguay and Chile, productivity per person employed is relatively low in the agriculture sectors, while in Uruguay and Argentina, this low relative productivity is found in the industry sector. Given the make-up of the services sector and its role as employer, it can be stated that mean productivity in this sector is relatively low in all the countries of the area.

TABLE 2 - SOUTHERN AREA
PERCENTAGE DISTRIBUTION OF THE WORK FORCE BY SECTOR

COUNTRY	AGRICULTURE	INDUSTRY	SERVICES
ARGENTINA			
1960	20.6	34.1	45.3
1980	13.0	33.9	53.2
BRAZIL			
1960	52.1	18.4	29.5
1980	31.1	26.6	42.3
CHILE			
1960	30.0	30.0	40.0
1980	16.4	25.2	58.4
PARAGUAY			
1960	56.4	19	24.6
1980	48.5	20.6	30.9
URUGUAY			
1960	21.3	28.9	49.8
1980	15.7	29.2	55.1

SOURCE: ILO

6. When the Southern Area is considered as a whole, the relative weight of the individual countries is obviously different. Brazil is the "giant" of the area, and its share in almost all the variables analyzed for the whole region is never less than 60 percent; Argentina is also important, and together with Brazil, the two account for 90 percent of all the variables analyzed for the whole Southern Area. The remaining countries are also heterogeneous, as Chile is five times larger than Paraguay and/or Uruguay, which are the two most similar countries of the region in terms of total land area.

TABLE 3 - SOUTHERN AREA
 SECTORAL VALUE ADDED: STRUCTURE BY COUNTRY
 (1984 in millions of US\$ and in %)

COUNTRY	GDP	%			
		GDP \$/area	AGRIC. \$/area	IND. \$/area	SERVIC. \$/area
ARGENTINA	76 210	26	25	28.4	25
BRAZIL	187 130	64	67	62	65
CHILE	19 760	7	3.4	7.3	7.3
PARAGUAY	3 870	1.3	2.8	1	1.2
URUGUAY	4 580	1.7	1.8	1.3	1.5
TOTAL SOUTHERN AREA	291 550	100	100	100	100
% GDP	100		12.4	36.1	51.5

SOURCE: WORLD BANK

7. The degree to which the Southern Area as a whole has opened up is not significant. As a matter of fact, as may be seen in Table 4, exports represent only 14 percent of the GDP, on average, while imports barely reach 8 percent, on average. Consequently, the Southern Area could be considered a "relatively closed economy", if the usual criteria are applied.

However, this conclusion is not equally applicable to all the countries. It is the size of Brazil, the most closed economy of all, which makes the preceding true.

TABLE 4 - SOUTHERN AREA
 IMPORT COEFFICIENTS
 (% OF GDP)

COUNTRY	1980	1981	1982	1983	1984	1985
ARGENTINA	15.7	14.7	8.9	7.9	8.2	7.3
BRAZIL	11.2	10.3	9.2	7.7	6.9	6.3
CHILE	27.2	30.0	21.3	18.4	19.5	17.1
PARAGUAY	20.3	21.1	22.6	16.4	26.3	27.2
URUGUAY	30.6	27.8	23.5	19.8	18.7	17.2

EXPORT COEFFICIENTS
 (% OF GDP)

COUNTRY	1980	1981	1982	1983	1984	1985
ARGENTINA	11.9	14.7	17.3	17.8	15.9	19.5
BRAZIL	8.8	11.2	10.2	12.1	13.7	12.8
CHILE	23.1	19.9	25.5	26.7	25.5	28.5
PARAGUAY	13.7	11.3	13.6	11.2	16.3	26.1
URUGUAY	21.8	22.9	25.5	30.0	28.5	29.8

SOURCE: ECLAC

The small countries have export coefficients above 25 percent, especially Uruguay with almost 30 percent, while the import coefficients for this group of countries are higher than 17 percent. Argentina has a relatively closed economy, but also has growing export coefficients.

8. One characteristic worth mentioning is the enormous importance of agricultural or agriculture-based exports in terms of total exports from the area. With the exception of Chile, where agricultural exports account for only 15 percent of the total, in the rest of the countries they account for more than 50 percent.

This structural characteristic is an indicator of the development model followed, with a great degree of similarity, by the five countries of the Southern Area. Indeed, the process of industrialization has been aimed at meeting the demands of the domestic markets, and exports have originated in the traditional primary sectors (mainly agriculture). In Brazil, the process of industrialization has been so effective that it has permitted the successful exportation of manufactured goods since the mid-1970s (and in the the mid-1980s, agricultueal exports accounted for only 37 percent of the total). Notwithstanding the above, attention must also be paid to the role that agriculture-based manufactures play in overall exports from Brazil, i.e., between 25 and 33 percent of total exports, depending on the year.

TABLE 5 - SOUTHERN AREA
SHARE OF AGRICULTURE IN TOTAL EXPORTS

COUNTRY	1960	1970	1980	1985
ARGENTINA	94.7	94.3	69.3	67.9
BRAZIL	88.4	72	46.8	36.4
CHILE	NA*	3.3	8	14.2
PARAGUAY	NA	77.4	75	95.9
URUGUAY	NA	83.8	56.4	54.3

SOURCE: ECLAC

* NA - No data available

9. An analysis of the external sector of the economies of the Southern Area reveals the high degree of external indebtedness being experienced by these countries. Indeed, as shown in Table 6, all the countries in the Area have foreign debts whose total is always greater than 45 percent of the GDP (with this percentage rising to 65 percent for the Southern Area as a whole) and never less than five times of the total annual value of exports.

In addition, annual interest on the foreign debt is equal to half the value of exports in all the countries of the area. These figures clearly show the enormous limitations placed on the importing capacity of the Southern Area countries, on their management of fiscal balances and, hence, on their implementation of policies aimed at stabilization with growth.

TABLE 6 - SOUTHERN AREA
TOTAL FOREIGN DEBT PAID
(in millions of US\$)

COUNTRY	1978	1980	1986
ARGENTINA	12 496	27 162	50 300
BRAZIL	52 285	70 025	110 282
CHILE	6 664	11 207	20 670
PARAGUAY	669	861	1 842
URUGUAY	1 240	2 138	5 193
SOUTHERN AREA	73 354	111 393	188 287

SOURCE: ECLAC

The agriculture sector in the countries of the Southern Area

10. The heterogeneity already referred to in terms of land area, economic structure, employment, the external sector, and the weight and performance of the public sector, becomes relative when one considers the facts about the agriculture sector in the five countries.

Actually, above and beyond the differences which may exist between countries in terms of total production or specialization of production arising from agroecological conditions, there are significant similarities with respect to the following indicators:

- a. Position on world markets: With the exception of Chile, the countries of the Southern Area joined the world economy around the middle of the nineteenth century by exporting their agricultural products. This introduction into the world markets not only gave them a definite export profile, but also led to the establishment of entire socioeconomic structures in the different regions of the area. Despite the changes which occurred in the mid-1980s in the structure of exports and/or in the major production and marketing agents, the primary link between the countries of the area and the world economy continues to be their agricultural exports.
- b. Profile of agricultural exports from the Southern Area: The quantitative importance of the agricultural exports of the Southern Area (45 percent of total exports of the area) also brings to light another significant fact: agricultural exports represent a very important source of demand for agricultural production in the subregion. Table 7 shows that around 50 percent of the agricultural production of the Southern Area is bound for world markets. If this figure is compared with the figure for LAC as a whole, the agroexporting role of these countries becomes clear.

Furthermore, the Southern Area constitutes the major source of production and exports of LAC in terms of agricultural products from temperate climates. The importance of Brazil in the export of

tropical products makes the Southern Area the agroexporting region par excellence of the entire hemisphere. Strictly speaking, agricultural exports from the area make up 65 percent of total agricultural exports from LAC.

TABLE 7 - SOUTHERN AREA
IMPORTANCE OF EXPORTS IN AGRICULTURAL PRODUCTION

COUNTRY	AGRIC. EXPORTS	1985 AGRIC. GDP	% AGRI.EXPORTS IN AGRIC. GDP
ARGENTINA	6 059	9 145	67
BRAZIL	10 449	24 327	43
CHILE	431	1 186	37
PARAGUAY	327	1 006	32
URUGUAY	519	641	81
SOUTHERN AREA	17 785	36 305	49

SOURCE: ECLAC - WORLD BANK

NOTES: TOTAL AGRICULTURAL EXPORTS LAC = 27 290
 % S. AREA EXPORTS IN LAC EXPORTS = 65
 % S. AREA AGRIC/GDP IN LAC AGRIC. GDP = 51

- c. The degree of food self-sufficiency: The five countries of the Southern Area enjoy a degree of food self-sufficiency which is higher than the mean for the region. Table 8 shows that the intake of calories and proteins is higher than the minimum recommended by FAO. To a certain extent, these indicators are related to those mentioned in the preceding paragraph and point out the advantages of these economies in agricultural production.

The above notwithstanding, it must be stated that access to an adequate diet is still severely limited for many social groups in the countries of the area because of their extremely low incomes.

TABLE 8 - SOUTHERN AREA
PERCENTAGE OF THE MINIMUM DAILY
REQUIREMENT OF CALORIES

COUNTRY	1965	1970	1975	1982
ARGENTINA	118.8	122.1	125.4	120.6
BRAZIL	100	102.5	104.5	107.3
CHILE	108	109.2	106.6	109.1
PARAGUAY	112.5	116.5	118.0	122.0
URUGUAY	105.6	109.5	110.3	101.4

SOURCE: ECLAC

- d. Common agroecological regions: The huge geographical area of the subregion includes highly heterogeneous agroecological systems. Also, the size of these agroecological systems is so vast that several of them reach across borders and are shared by several countries of the area. Thus, for example, the Gran Chaco is shared by Argentina and Paraguay (and by Bolivia), the cerrado of Brazil and certain parts of the Amazon region are shared by Paraguay (and, in the case of the latter, by many of the Andean countries), the dry sub-Andean valleys are in both Chile and Argentina, and many of the problems affecting the pampas in Argentina also affect the Uruguayan pampas. If one also considers the problems linked to the management of the large watersheds in the River Plate system, the number of problems common to the countries of the Southern Area becomes significant in terms of shared management of natural resources involved in agricultural production.
- e. The degree of development of agroindustrial complexes: The Southern Area also has a fairly homogenous degree of development of agroindustrial and agrofood complexes or chains. With the exception of Paraguay, the level of integration of these subsystems into the production economy is comparatively much higher among the countries under consideration than in the rest of LAC.

Indeed, intermediate production of agriculture (i.e., that production which constitutes an input for agroindustrial activities) represents 49 percent of the gross value of agricultural production in Argentina, 69 percent in Brazil, 56 percent in Chile and 53 percent in Uruguay, compared with 17 percent in Bolivia, 30 percent in Peru, 17 percent in Guatemala and 24 percent in Haiti, etc. 1/

11. There are common problems in several structural matters, as well as in the dynamics of many processes linked to the agriculture sector of the countries of the Southern Area. These characteristics provide the basis for considering the subregion as a whole in the implementation of joint actions aimed at contributing to the reactivation and development of agriculture.

However, conclusions of this sort also call for the analysis of additional elements having to do with the degree of subregional integration at the level of the agriculture sector and/or other sectors linked to it.

1/ Mandler, Pablo. IICA (1987)

Indicators of subregional agricultural integration

12. Prior to considering and analyzing quantitative indicators, it is necessary to look at some aspects directly related to joint actions which already exist in the agriculture sector of the Southern Area. The countries of the area take part in several international technical cooperation programs which link different agriculture-related activities: the FAO technical cooperation networks link all these countries to one another and to others in LAC; IICA's PROCISUR program, which has been active for almost 8 years, links a series of agricultural research institutions and technology transfer programs in the countries of the area plus Bolivia; and finally, other IICA sponsored activities which are underway, such as the agreements on plant protection (COSAVE) and animal health (COINSA) signed by the countries of the area and others in LAC, as well as several bilateral and/or multilateral initiatives of an academic nature (FAO's PROCAPLAN; agreements between schools of agronomy in the River Plate area, etc.). All these do not, however, eliminate the need to analyze quantitative indicators of subregional integration in regard to agriculture.

The most significant objective indicator for this purpose may be obtained from an analysis of the subregional trade in agricultural products. This analysis might be supplemented with a study of trade in agroindustrial products and those which are inputs for agricultural production, in order to add further significant information. It is recommended that this study be made separately.

The magnitude of these indicators serves, both in absolute terms and in relative terms with respect to other groupings in the region, as a measure of the degree of integration already achieved or of possible internal goals in this regard.

13. The analysis of the subregional trade in agricultural products should be carried out within the framework of the analysis of overall trade between these economies, so that proper comparisons may be made.

If this indicator is used for measurement, it will become apparent, as shown in Table 9, that the subregion as a whole has undergone neither a process of disintegration nor a strong process of integration.

In overall terms, around 1970, 12.5 percent of the Southern Area's total imports came from within the Area itself; around 1985, the figure had dropped slightly, to 11.9 percent. As regards individual countries, the situation is different; while Brazil reduced imports from within the Southern Area from 6.9 percent to 6.5 percent, Chile kept the same level as in 1970 (13.3 percent), and Argentina, Uruguay and Paraguay experienced significant increases (16.2 to 18.7 percent, 32 to 37 percent, and 37 to 55 percent, respectively).

The Southern Area, seen as a market for the exports of each individual country, declined in relative importance for the larger economies of the subregion: Brazil sent 9.2 percent of its exports to the other countries of the Southern Area in 1970, but only 5 percent in 1985; Argentina's share dropped from 15 to 9 percent; Chile, from 9.5 to 8 percent; and

Paraguay, from 31 to 27 percent. In contrast, Uruguay showed substantial increase, from 9 to 25 percent, in the period under consideration.

TABLE 9 - SOUTHERN AREA
INTRASUBREGIONAL TRADE OF TOTAL GOODS
1970

COUNTRY	ARGENTINA	BRAZIL	CHILE	PARAGUAY	URUGUAY	SOUTH. AREA	WORLD	LAC
ARGENTINA	--	138.6	91.5	15.1	29.2	273.4	1773.1	372
BRAZIL	186.0	--	24.0	11.0	31.0	252.0	2739.0	317
CHILE	78.5	24.4	--	0.2	16.3	119.4	1245.9	152
PARAGUAY	17.6	1.1	1.5	--	2.6	22.8	74.1	24
URUGUAY	6.4	12.4	2.0	1.6	--	22.4	232.7	29
STH. AREA	288.5	176.5	119.0	27.9	78.1	690.0	6064.8	894
WORLD	1773.0	2566.0	856.0	75.0	241.0	5511.0	--	--

1985

COUNTRY	ARGENTINA	BRAZIL	CHILE	PARAGUAY	URUGUAY	SOUTH. AREA	WORLD	LAC
ARGENTINA	--	496.3	111.1	72.2	99.0	778.6	8396.1	1478
BRAZIL	548.0	--	239.0	299.0	140.0	1226.0	25606.0	3059
CHILE	84.5	211.3	--	5.8	12.3	313.9	3872.5	547
PARAGUAY	16.9	60.1	--	--	6.4	83.4	303.9	127
URUGUAY	62.8	143.4	4.0	6.1	--	216.3	850.5	245
STH. AREA	712.2	911.1	354.1	383.1	257.7	2618.2	39029.0	5456
WORLD	3824.0	13917.0	2655.0	696.0	746.0	21838.0		

SOURCE: ECLAC

Thus, the Southern Area gradually lost importance as a market for its own exports, which were 11 percent of total exports in 1970, but only 6.7 percent in 1985.

14. In the period under consideration, the following changes took place in LAC as a whole:

- imports from within the region, in respect to total imports, went from 13 percent in 1970 to 14 percent in 1985.
- exports to the region, as a percentage of total exports, went from 12.8 percent in 1970 to 11 percent in 1985.

In other words, the Southern Area performed differently than LAC as a whole, especially with regard to the final destination of its exports.

This is confirmed by observing that, in 1970, exports from the Southern Area to LAC were 14.7 percent of total exports, while in 1985 they barely reached 13 percent.

One might reach the preliminary conclusion that, given the fact that the relative importance of intrasubregional imports has not varied while exports to third countries have grown much more than exports to the subregion, the Southern Area as a whole developed a process of import substitution at the subregional level in order to strengthen its base for exporting to third markets. However, such an affirmation could only be confirmed by making a breakdown of the pertinent trade flows, a task which goes beyond the scope of this document.

15. The analysis of the intrasubregional trade of agricultural products was done individually (see C. Barbato-IICA-1987) for trade between Argentina, Brazil and Uruguay. Chile and Paraguay are included through estimates based on secondary information.

Table 10 summarizes the intrasubregional trade flows of the major agricultural commodities.

TABLE 10 - SOUTHERN AREA
INTRASUBREGIONAL TRADE FLOWS OF AGRICULTURAL PRODUCTS
(in millions of \$US-averages 1980-1982)

COUNTRY	ARGENTINA	BRAZIL	CHILE	PARAGUAY	URUGUAY	SOUTH. AREA	WORLD
ARGENTINA	--	219.0	33.4	11.6	7.9	271.9	5604.0
BRAZIL	50.5	--	10.0	..	3.8	64.3	9102.0
CHILE	0.8	4.4	--	..	0.5	5.7	371.8
PARAGUAY	19.7	110.7	..	--	3.8	134.2	302.8
URUGUAY	2.8	79.9	7.4	..	--	90.1	702.8
STH. AREA	73.8	414.0	50.8	11.6	16.0	566.2	16083.4

SOURCE: ECLAC-ALADI

From the analysis of the data presented, it can be concluded that the Southern Area is not a very important market for the countries that belong to it. Indeed, only 3.5 percent of their agricultural exports -in terms of value- was destined for the subregion. At the level of the individual countries, the situation is different: the Southern Area was the market for 45 percent of Paraguay's agricultural exports; 13 percent of Uruguay's; 4.8 percent of Argentina's; and only 1 percent of Brazil's and Chile's.

The main products, by source country, are wheat, corn, soya beans and vegetables, from Argentina; coffee and soya beans, from Brazil; vegetables, from Chile; soya beans, from Paraguay; and rice, dairy products and beef, from Uruguay.

16. More than three-fourths of the intrasubregional trade of agricultural products is carried out between Argentina, Brazil and Uruguay. For these three countries, available data is based on a breakdown of sections I to IV of the NAB, which deal with agricultural products. The conclusions of this analysis could be extrapolated to include the entire Southern Area, although it is recommended that similar analyses be conducted for the other two countries, and that items to cover agroindustrial products and agricultural inputs and capital goods also be included.

Table 11 presents 1985 data on the trade flow of agricultural products between the three countries mentioned.

The conclusions mentioned above are confirmed in this analysis, in that less than 1 percent of Brazil's total agricultural exports were destined for the other two countries, and in the case of Argentina, the figure is a mere 4.6 percent. During the same year, however, the Brazilian market represented almost 30 percent of its total agricultural exports, which reflects a significant change with respect to the above figures.

With data available on total imports of agricultural products, it is possible to analyze the influence of subregional supply on total external purchases: a significant indicator for the three countries appears here, as Brazil receives 26 percent of its imports from the area; Argentina, 42 percent; and Uruguay, 59 percent. Evidently, the make-up of the imports (which in no case accounts for more than 10 percent of total imports) reflects the necessary complementarity between the supply of tropical products from Brazil and the demand in Argentina and Uruguay, as well as Brazil's deficits in grains and meat and the capacity of the southern economies to fill them.

For Argentina, agricultural products represent more than half (53 percent) its total exports to Brazil. Likewise, because of the demand in Brazil, 72 percent of Uruguay's exports consist of agricultural products.

On the other hand, Brazil's agricultural exports to Argentina and Uruguay account for only 14 percent of its total foreign sales to those two countries.

As regards Argentina and Uruguay, the share of agricultural exports is quite similar, as they account for approximately 12 percent of total sales between the two countries.

TABLE 11
 TRADE FLOWS OF AGRICULTURAL PRODUCTS - 1985
 ARGENTINA - BRAZIL - URUGUAY
 (in millions of \$US)

COUNTRY	ARGENTINA	BRAZIL	URUGUAY	TOTAL	WORLD
ARGENTINA	--	245.0	12.2	257.2	5579.0
BRAZIL	79.1	--	20.3	99.4	9568.0
URUGUAY	9.7	102.1	--	111.8	370.0
TOTAL	88.9	347.1	32.5	468.4	15517.0
WORLD-imports	213.9	1317.4	54.1	1585.4	

SOURCE: Report by C. Barbato. Based on Sections I to IV of the NADE.

17. The preliminary conclusions from this limited analysis of intrasubregional trade of agricultural products may be summarized as follows:

- a. Trade in agricultural products has not developed to the same degree as other types of trade. However, a more detailed analysis of the goods which make up the so-called agroindustrial complex could show this conclusion to be relative.
- b. Brazil displays significant food deficits for large portions of its population. It is, without doubt, the largest potential market of the subregion in terms of food. In addition, as will be noted in greater detail later on, it is the country whose agricultural policies reflect the highest degree of protectionism, in relative terms.

Changes in the distribution of income and/or in social priorities, as well as changes in agrarian and trade policies in Brazil, could bring about significant changes in the trade flows of agricultural products of the subregion.

Other indicators of subregional integration

18. Other objective indicators of the degree of subregional integration may be obtained by reviewing the status of connections between the geographic areas involved, in other words, by briefly evaluating:

- a. the existing infrastructure for land (highway and rail), maritime, river and air transportation,
- b. the infrastructure for telecommunications,
- c. the infrastructure for energy supply.

While it is true that, in absolute terms, there are serious deficits in these aspects, the Southern Area has achieved an outstanding degree of integration in comparison with other subregions of LAC. With regard to land transportation, the five countries are linked by networks of highways, and the existence of bridges that span large rivers on the

borders and of passes through the mountains make the transportation of passengers and cargo possible; also, four of the countries (to varying degrees) are linked by rail.

Air transportation service covers the needs of the five countries fairly well.

Telecommunications infrastructure among the five countries exists, but is deficient. However, the shortcomings are within individual countries, and do not impede communication with the other countries of the area.

In the case of the provision of energy, the countries of the Southern Area are relatively integrated, in comparison with other regions. Several large binational hydroelectric projects are already operational or under construction, and several others are in various stages of development; in addition, there are projects almost ready for implementation which would link Argentina's networks of natural gas and other hydrocarbons with Uruguay and Brazil.

19. One objective indicator of agriculture-sector integration is that of the seasonal movement of migrant laborers between the countries of the Southern Area. For example, the need for manpower to harvest certain crops in Argentina (which is structurally deficient in rural labor) leads to a seasonal influx of laborers from Chile and Paraguay at different times during the year. These migrations are subject to sways in production cycles in both the country receiving and those providing the work force, and even though progress has been made on regulating such movements, much remains to be done to ensure the rights of these workers while at the same time bringing them in line with the interests of Argentine workers and entrepreneurs.
20. To the objective indicators of subregional integration must be added the positive signs arising from the political willingness of the countries to participate in subregional or regional integration actions.

The purpose of this listing is to highlight the existence of a spirit of integration in the design of national policies, above and beyond the relative success already achieved by such policies.

In this regard, and strictly at the subregional level, mention must be made of the recent moves towards integration between Argentina, Brazil and Uruguay. The explicit objective of this effort is the establishment of a Free Trade Zone in the 1990s; the process has the following characteristics:

- It is a process aimed at strengthening existing mechanisms that promote a gradual liberalization of trade (i.e. ALADI), but that also include instruments which are more flexible and precise (the protocols).

- It is a process which, in addition to dealing with trade issues, takes into account other structural elements common to all integration processes, i.e., joint action in the area of technology (biotechnology center, high technology center, etc.), the transportation of people and goods, infrastructure, etc.
- It is a process explicitly aimed at the joint design, or at least the standardization, of macroeconomic policies, leaving open the possibility of eventually dealing with sectoral policies.
- It is a process in which consultation mechanisms are the basis of the entire integration exercise; this should, at least in principle, make the effort more feasible.

In addition, four of the Southern Area countries (plus Bolivia) work together in the River Plate Basin (Chile being excluded because of its geographical location). This is an initiative whose major objective is the harmonious management of the countries' shared natural resources. This specific characteristic can lend support to other actions more concerned with the productive exploitation of these resources, especially agricultural activities.

The most outstanding example of an alliance of Southern Area countries for the purpose of strengthening their bargaining power in world fora is the decision of the Governments of Argentina, Brazil, Chile and Uruguay to join a group of agricultural exporting countries which do not subsidize agricultural exports. These fair traders include 14 countries from different parts of the world and with different levels of development, to wit: Argentina, Australia, Brazil, Canada, Chile, Colombia, Fiji, Hungary, Indonesia, Malaysia, New Zealand, Philippines, Thailand and Uruguay. At a meeting held in Cairns, Australia, this group formed an alliance for the specific purpose of conducting GATT negotiations.

Finally, the five countries of the Southern Area still belong to ALADI, and have been members since it was created as LAFTA. The manifest integrationist objectives of this association are additional evidence of the recognition of the need for integration on the part of the countries of the area. It must be stated, however, that it is in the area of agricultural products that the least progress has been made under this scheme.

Conclusions

21. A review of the structural characteristics of the economies of the Southern Area countries and, in particular, the identification of common features in the development of their agriculture sectors and their participation in world markets, as well as a brief examination of several objective indicators of integration in agriculture, and a brief analysis of existing subregional integration schemes lead to the conclusion that there are openings where joint action among the countries of the area can promote the development of agricultural activities.

22. The above mentioned facts provide grounds enough to conclude that, despite the vast size and the diversity of the Southern Area, there are common elements that make it feasible to consider it as a subregion suited to the design of a strategy of joint action to promote agricultural reactivation and development.

It is important to note that these considerations neither ignore nor replace decisions or actions at the regional level. Rather, they are meant to provide clear definitions and show their relationship with those of a more general scope.

B. THE CONTRIBUTION OF THE AGRICULTURE SECTOR TO ECONOMIC DEVELOPMENT IN THE COUNTRIES OF THE SOUTHERN AREA: SOME TOPICS FOR DISCUSSION

Introduction

23. The purpose of this section is to analyze, in as much detail as possible, the role played by the agriculture sectors in the economic development of the countries of the Southern Area. This involves more than a mere discussion of concepts: it has become a political priority, in light of the fact that LAC in general, and the Southern Area in particular, are facing their worst economic and social crisis since the Second World War.

The apparent "lack of projects" or "absence of models" designed to promote equitable economic growth in these societies makes it more important than ever to redefine the roles played by the different economic sectors, in order to lay the foundation for embarking on a new path to development.

24. Before beginning the analysis of the effect of the current crisis on the performance of the economies and the agriculture sectors of the Southern Area countries, it is necessary to stop and define the "crisis" from a Latin American point of view.

In the late 1960s, the world economy found itself at the end of a path of almost continuous growth begun at the close of the 1940s, and began to face a series of crises involving the readjustment and reaccommodation of most of the industrialized economies of the world, with inevitable consequences for peripheral economies.

While it is true that the countries of Latin America, especially those of the Southern Area, were not exempt from the effects of these cycles (e.g. the vulnerability of Brazil in the face of increases in oil prices in 1973-1974 and 1978-1979), the feature that stands out most is the fact that these crises did not interrupt the development model in effect, nor the nature of the role played by these economies in the world economy.

Between 1974 and 1975, several situations, one of the most important of which was the sudden jump in oil prices, threw the global economy into a period of recession that particularly affected the industrialized countries, which showed low, and even negative, growth rates. However, this crisis caused little or no recession in LAC. On the contrary, the region in general, and the Southern Area in particular, continued to grow at an acceptable rate. As will be seen in more detail later, only Brazil, because of its dependence on oil imports, had to face difficulties in its external sector.

25. The crisis which began in 1981, however, has hit the economies of Latin America and the Caribbean especially hard. Most of these economies have initiated adjustment processes and have suffered deep recessions which have meant declines in growth rates, and even negative growth rates. What is most important, however, is the fact that the current crisis has raised questions as to the viability of the development models of almost all the countries of Latin America, especially those of the Southern Area.

The reconsideration of the role of the agriculture sectors in the countries of the Southern Area should be made within this framework. The way in which, and the degree to which, the crisis has affected economic activity in general, and agriculture in particular, depends to a large extent on the structural characteristics that were built into the economies in question and their respective agriculture sectors over the almost two decades preceding the onset of the crisis. The following section provides facts which will make it possible to understand these structural characteristics and their capacity for dealing with the crisis and initiating processes of recovery.

The development and economic structure of the Southern Area countries up to the early 1980s

26. The period under analysis began in the early 1960s, when all of the economies of the Southern Area undertook the task of transforming their development patterns, after the adjustments of the post-World War II period.

It may be said that it was from that moment on that the industrialization and internationalization of the economies of these countries took shape.

Of course, it is understood that within this general characterization there are distinctions to be made at the level of individual countries. Nevertheless, the general characterization will serve as the framework or background for describing the overall development process of these economies over more than two decades, culminating in the current crisis.

This model included, as an essential ingredient, the increased use of external funding, arising from the relative inability of these economies to raise traditional exports at a rate compatible with the growing need for imports for industrial development.

27. The Southern Area changed its production structure drastically between 1965 and 1980. As may be observed in Table 12, the agriculture sector's share of the GDP declined in all the countries, while the industry and services sectors increased their shares significantly.

TABLE 12 - SOUTHERN AREA
STRUCTURE OF GDP (1965-1984)

COUNTRY	1965			1984		
	AGRIC.	IND.	SERV	AGRIC.	IND.	SERV.
ARGENTINA	17	42	41	12	38	50
BRAZIL	20	32	48	13	35	52
CHILE	9	40	51	6	39	55
PARAGUAY	37	19	44	26	26	48
URUGUAY	15	32	53	14	29	57

SOURCE: WORLD BANK

With respect to the employment structure, the changes in the Southern Area are even more significant. Table 13 shows these important variations, which, specifically, meant a significant reduction in rural employment. The reduced relative importance of the campesino economies in the Southern Area, compared with other areas of LAC (e.g., the Andean Area) added to the relative ease with which "labor-saving" technologies (e.g., agricultural mechanization) were adopted. In addition, the attraction of the cities, which, at least in the beginning, offered growing opportunities for employment in industry, helped this process along. The negative side to this process was the constant increase in the number of people living in different degrees of poverty in the cities.

TABLE 13 - SOUTHERN AREA
DISTRIBUTION OF THE LABOR FORCE BY SECTORS
(in percentages)

COUNTRY	AGRICULTURE	INDUSTRY	SERVICES
ARGENTINA			
1960	20.6	34.1	45.3
1980	13.0	33.8	53.2
BRAZIL			
1960	52.1	18.4	29.5
1980	31.1	26.6	42.3
CHILE			
1960	30.0	30.0	40.0
1980	16.4	25.2	58.4
PARAGUAY			
1960	56.4	19.0	24.6
1980	48.5	20.6	30.9
URUGUAY			
1960	21.3	28.9	49.8
1980	15.7	29.2	55.1

SOURCE: ILO

28. Changes of such magnitude in production and employment structures reflect a highly dynamic process in these economies. Table 14 shows significant growth rates in the GDP of the economies of the Southern Area in the 1970s. Such a performance has not been common in the world economy since the post-war period.

The performance of Brazil, primarily, but also that of Paraguay, explains the vitality of the area taken as a whole, inasmuch as Argentina, Chile and Uruguay grew at slower rates.

TABLE 14 - SOUTHERN AREA
GROWTH OF THE GDP AT CONSTANT MARKET PRICES

COUNTRY	70/75	75/80	1980	1981	1982	1983	1984	1985	1986
ARGENTINA	2.8	2.3	2.2	-7.1	-5.3	2.4	2.3	-4.7	6.0
BRAZIL	10.3	7.1	9.2	-3.4	0.9	-2.4	5.7	8.3	8.2
CHILE	-1.9	7.1	7.3	5.2	-13.1	-0.5	6.0	2.4	5.4
PARAGUAY	7.2	10.2	11.3	8.8	-0.8	-3.0	3.2	4.0	-0.3
URUGUAY	1.6	4.5	5.8	1.4	-10.1	-6.1	-1.2	-0.2	6.6

SOURCE: ECLAC

Obviously, Brazil, because of its economic importance and the vitality of its development, is mainly responsible for the performance of the Southern Area. 1/

29. When the crisis hit, Brazil was growing steadily. Its external structure was vulnerable because of its heavy oil imports and debt service, but there were also large investments which included agroenergy substitution programs that were already underway, and, above all, an industrial structure capable of exporting efficiently to world markets.

These differences between the development of Brazil and that of the other countries in the Southern Area explain why each performed differently during the crisis.

30. The changes in the economic and employment structures of the countries of the Southern Area did not take place in an orderly or coordinated fashion.

A basic cause of the pattern of uneven growth of these economies can be found in the role played by the different production sectors with respect to their introduction into the world economy. Thus, the more dynamic sectors (manufacturing industries, which grew at a rate of 9.8 percent on average) required more foreign exchange than any other sector and created increasingly negative trade balances.

1/ As a matter of fact, it may be stated that the process of industrializing and internationalizing the economy of Brazil has been the most "successful" of all such attempts in the Southern Area, and perhaps in all of LAC.

The 1960s marked two important steps in laying the groundwork for the economic development of Brazil. Between 1964 and 1967, there were several substantial changes in the major factors which made up the economic scene of the country.

During those years, the government sector was strengthened, legislation was passed which encouraged foreign investment, and the financing system was reformed in such a way as to enable a broad segment of the market to gain access to durable consumer goods.

Continued....

In the meantime, the generation of foreign exchange became the responsibility of traditional exports, most of which were primary and agricultural in nature. While their performance was remarkable, it was not enough to meet the requirements of the industrialization process.

The amount of agricultural exports grew between 3.8 and 8.2 percent on average for the countries of the area (see Table 15), but the value of these exports did not grow at the same pace during the period under analysis. Consequently, recurring constraints in the external sector characterized the progress of these economies during the period under consideration. It should be pointed out that Paraguay did not follow this general pattern in that, on the one hand, its industrialization process was not as dynamic as those of its neighbors, and, on the other, its import requirements were more related to needs for consumer goods and the consolidation of basic infrastructure.

31. Thus, the permanent gap between foreign exchange needed and foreign exchange available led to a constant increase in foreign indebtedness as the only means of providing industry with the capability to import. And this industry, which was supposedly to play an import-substitution role, did not find a way to effectively rejoin the world economy during this period.

TABLE 15 - SOUTHERN AREA
GROWTH OF EXPORTS IN VOLUME

COUNTRY	1960/70	1970/80	1980	1981	1982	1983	1984	1985	1986
ARGENTINA	5.3	2.0	-11.5	14.9	10.9	5.6	- 8.7	17.2	-14.4
BRAZIL	8.2	8.3	20.8	22.3	-8.1	16.6	19.0	1.3	-17.2
CHILE	3.8	8.9	7.2	- 9.5	11.7	3.9	1.5	14.2	5.5
PARAGUAY	5.7	7.3	8.6	-10.2	19.3	-20.1	50.9	66.5	- 4.7
URUGUAY	3.1	5.9	4.3	6.9	0.1	10.3	- 6.2	4.5	11.9

SOURCE: ECLAC

32. Table 16 shows data relevant to the external indebtedness of the Southern Area countries in significant years of the period under consideration.

Continued 1/

Beginning in 1968, the forces that characterize the model began to take hold, and what became known as the "Brazilian Miracle" lasted for the next five years. Growth rates during this five-year period (10.5 percent annually on average) were higher than those recorded by any Latin American country in modern times. It must also be mentioned, of course, that this process entailed a regressive redistribution of income and a significant increase in the number of people living in poverty.

This model was based on characteristics similar to those of all the countries of the Southern Area, but with significant structural differences.

TABLE 16 - SOUTHERN AREA
TOTAL EXTERNAL DEBT PAID
(in millions of \$US)
(*)

COUNTRY	1970	1978	1980	1986
ARGENTINA	5 169	2 496	27 162	50 300
BRAZIL	4 940	52 285	70 025	110 282
CHILE	2 568	6 664	11 207	20 670
PARAGUAY	...	669	861	1 842
URUGUAY	298	1 240	2 138	5 193
SOUTH. AREA	12 975	63 354	111 393	188 287

SOURCE: ECLAC
(*) WORLD BANK

33. It must also be noted that economic policy considerations, social conflicts and pressures for change in the distribution of income all existed and help explain the worsening of these cycles and their repetition over time.

In general, the economic policies carried out were not compatible with the objectives of strengthening traditional export sectors, on the one hand, and, on the other, of quickly finding outlets for exports from newly industrialized sectors.

Continued 1/

The accelerated industrialization was centered primarily on the durable consumer goods production sector, in which foreign and/or transnational corporations played a predominant role. Nevertheless, the rate of expansion and the length of the growth cycle of these sectors were greater than in other LAC countries. Two factors appear to explain this performance:

- First, the size of the domestic market, and the degree of confidence in the fact that the policies would last, gave rise to a steady flow of direct foreign investment over a long period of time.
- Second, the flexibility of export agriculture made it possible to offset increased expenditures for imports, imports of industrial inputs (promoting vertical integration of industry), with the State heading this process in response to the needs of private national and foreign capital.

This process came to an abrupt halt in 1974. The increase in the price of oil that year caused the value of imports to quadruple with respect to the preceding year. This crisis in the external sector forced Brazil to face not only the possibility of having to interrupt its rate of growth, but also of having to undertake serious adjustments.

In some countries (e.g. Argentina and Uruguay), the major export products were (and still are) also the principal wage goods. Thus, a policy of high prices achieved through a high exchange rate was a direct threat to real wages and a double threat to the interests of the new industries aimed at the domestic market: this captive market became smaller and imports became more expensive.

As a result, there were long periods of "anti-agrarian bias" 1/, the name given to policies that draw from the surpluses of the sectors doing best in the world economy to finance other activities of the economy.

As a result of policies entailing an "exchange rate lag" and/or taxes on imports, the prices received by producers were systematically lower than international prices. To this must be added the protection of industries supplying inputs for agricultural production at prices above international market prices.

In other countries (e.g. Chile and Brazil), food and energy deficits led to policies aimed at substituting imports of both, financed with surpluses from the primary export sectors.

34. Finally, the fiscal situation of the Southern Area countries progressively worsened during the period under consideration because of the ever-increasing demands the governments had to face. On the one hand, it had to gradually increase its capital outlays to attend to the growing requirements for energy infrastructure and transportation, as well as for the social demands caused by the accelerated process of urbanization and industrialization. On the other hand, faced with growing urban unemployment, the governments began to carry out policies of concealed unemployment by increasing unproductive public employment.

There were not enough resources to back up this increase in public expenditure inasmuch as tax evasion had become a structural characteristic of these economies. As a matter of fact, the appearance of new special interest groups linked to the industrialization and internationalization

Continued 1/

As was the case in Argentina a few years later, only a substantial increase in foreign indebtedness could prevent an abrupt adjustment of the Brazilian economy. External funding was available, and the Government chose to avail itself of same at an ever-increasing pace and for use in development plans in which the State played a leading role in accelerating capital accumulation. As a result of these policies, the Brazilian economy was able to hold out until 1981 with growth rates of 9.6 percent.

From 1974 on, the Brazilian model was based on the execution of large infrastructure projects and the substitution of imports of industrial inputs (promoting vertical integration of industry), with the State heading thus process in response to the needs of private national and foreign capital.

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of the economy weakened the relative autonomy of tax policies, which began to include a broad gamut of exemptions and other tax loopholes. Furthermore, fiscal resources obtained from the taxation of traditional exports were increasingly limited because little was being done to encourage these activities.

35. As a result, growing and persistent public deficits came to characterize the evolution of the Southern Area economies, giving rise to serious restrictions on the management of monetary policy as well as permanent inflationary pressures.

Tables 17 and 18 present data on the growth of public deficits among the countries of the area.

36. These changes in the economic structure encouraged and were in turn encouraged by significant changes in the social structure, the segmenting of markets, patterns of consumption, and the demands of different socioeconomic strata.

TABLE 17 - SOUTHERN AREA
PUBLIC REVENUES AND EXPENDITURES
as % of GDP

COUNTRY	1970			1980		
	REVENUES	EXPENDITURES	BALANCE	REVENUES	EXPENDITURES	BALANCE
ARGENTINA	7.8	9.2	-1.4	12.7	15.4	-2.7
BRAZIL	9.8	10.2	-0.4	21.8	24.6	-3.2
CHILE	27.6	40.8	-13.2	32.9	40.8	-7.9
PARAGUAY	11.7	11.8	-0.1	9.2	9.5	-0.3
URUGUAY	13.8	15.1	-1.3	16.2	16.1	-0.1

SOURCE: ECLAC

The urbanization process, the existence of large segments of the population with average incomes and urban demands, the breakdown of rural-campesino structures, and the revolution in expectations and patterns of consumption caused by the increasing power of the mass media during the period under consideration, are all structural elements which radically changed the development profiles of the economies of the Southern Area.

37. It is important to avoid taking a simplistic approach to the evaluation of the policies which accompanied (consistently or contradictorily) this development process.

Value judgements as to the degree of compatibility of the policies adopted during the period under analysis can only be made from limited sectoral or ideological points of view. These approaches cannot be considered either enriching or pertinent from an analytical point of view.

Continued 1/

The process of transnationalization was more extensive in the Brazilian economy than in any other economy of LAC. This process included broad participation by direct foreign investment in almost every sector, including agriculture and agroindustry.

There is no question, however, that this period led to one of the most important economic growth processes ever recorded for a specific area (with Brazil as the driving force behind this regional process). It is also important to acknowledge the fact that the goals of equity were constantly put in jeopardy by economic growth based on the industrialization and internationalization of the economies of the area. Finally, it is obvious that the contradictions and vulnerabilities of the development model chosen were exposed with the crisis of 1981.

38. The different countries of the Southern Area undertook structural changes which, while having much in common, were unique, in some respects, to each country. Nevertheless, each one did so at a different pace and with different degrees of success and different results up to the beginning of the 1980s.
39. Without a doubt, these individual characteristics were influential in dealing with the crisis, both in terms of policy decisions and of the ability of the economic and social structures to withstand the crisis. These differences and peculiarities must be taken into account in any evaluation of the future development of each economy under analysis.

TABLE 18 - SOUTHERN AREA
FARMED AREA AND IRRIGATED AREA
(in thousands of hectares)
1965

COUNTRY	Annual crop area	Perennial crop area	Pastures area	Irrigated area	Total area
ARGENTINA	19 598	8 500	146 500	1 046	175 644
BRAZIL	22 400	7 854	131 880	546	162 680
CHILE	4 007	199	9 850	1 084	15 140
PARAGUAY	737	115	13 800	30	14 682
URUGUAY	1 726	53	13 769	32	15 580
SOUTHERN AREA	48 468	16 721	315 799	2 738	383 726

1984

COUNTRY	Annual crop area	Perennial crop area	Pastures area	Irrigated area	Total area
ARGENTINA	19 598	8 500	146 500	1 046	175 644
ARGENTINA	25 850	9 750	142 800	1 660	180 060
BRAZIL	63 500	11 750	165 000	2 200	242 450
CHILE	5 330	198	11 900	1 257	18 685
PARAGUAY	1 640	300	15 550	62	17 552
URUGUAY	1 400	46	13 632	92	15 170
SOUTHERN AREA	97 720	22 044	348 882	5 271	473 917

SOURCE ECLAC

Moreover, any proposal for a viable strategy of joint action aimed at promoting the adoption of new development models must be based on a proper assessment of the common characteristics of these countries, as well as their differences.

Agricultural development in the countries of the Southern Area

40. Because of its agroecological and socioeconomic diversity, it is difficult to analyze the characteristics of the agricultural development of a region as vast as the Southern Area.

However, by looking at the general characteristics of the development model followed by the countries of the area, it is possible to determine what role the agriculture sector plays, and to find common features, both with regard to limitations and obstacles, and to the potential for expanding these activities.

The period under analysis extends from the mid-1960s to the beginning of the 1980s, when the crisis broke out.

Natural resources

41. An examination of Table 18 will reveal the huge differences which exist between the countries in terms of natural resources available for use in agricultural production.

Around 1980, Brazil has 65 percent of the land planted with annual crops, 52 percent of the land planted with perennial crops, 50 percent of the perennial grasslands and pastures, and 45 percent of the irrigated lands of the entire Southern Area.

Worth mention, however, is the importance of the irrigated lands in Chile. They equal almost 25 percent of the total for the Southern Area, and account for 20 percent of all farmlands in Chile, the highest percentage for any country in the area.

Naturally, a comparative analysis of this type includes broad simplifications stemming from the vastness of the region under consideration: for example, the category of lands with perennial crops includes both the cacao plantations of the Brazilian tropics and the pit fruit orchards on the Argentine Patagonia.

TABLE 19 - SOUTHERN AREA
CULTIVATED LANDS
(in thousands of hectares and in %)

COUNTRY	1965	1985	% annual growth
ARGENTINA	19 598	26 300	1.5
BRAZIL	22 400	64 000	5.4
CHILE	4 007	5 330	1.4
PARAGUAY	737	1 700	5.3
URUGUAY	1 726	1 400	-1.0
SOUTHERN AREA	48 468	98 730	3.6

SOURCE: ECLAC

Expansion of the agricultural frontier

42. Table 19 shows data on the expansion of the areas under cultivation in the five countries of the Southern Area. Of note is the expansion of the agricultural frontier in Brazil, which grew at an average rate of 5.4 percent during the period under consideration, followed by Paraguay, with a rate of 5.3 percent. The other countries also increased their cultivated lands (except for Uruguay), but at more modest rates.

The growing importance of the cultivation of soya beans in three of the five countries may be seen in Table 21, in comparison with the total area planted with cereals, whose growth rates are presented in Table 20. Both types of crops account for nearly three-fourths of the area planted with food crops. Crops linked to agroindustrial complexes or to energy programs (e.g. cotton, sugar cane) explain, especially because of the weight of Brazil, the overall expansion of cultivated areas.

TABLE 20 - SOUTHERN AREA
GROWTH RATES OF FARMED AREA: TOTAL CEREALS

COUNTRY	1960/1965	1965/1970	1970/1975
ARGENTINA	1.4	2.6	1.0
BRAZIL	5.5	3.4	2.8
CHILE	-2.7	0.2	0.0
PARAGUAY	6.4	5.8	3.1
URUGUAY	-0.1	-3.8	2.0
SOUTHERN AREA	3.3	2.8	2.0

SOURCE: ECLAC-FAO

TABLE 21 - SOUTHERN AREA
 AREA PLANTED WITH MAJOR CROPS: TOTAL CEREAL AND SOYA BEANS
 (thousands of hectares)

COUNTRY	1960	1965	1970	1975	1980	1985
ARGENTINA	9 191	9 866	11 222	11 780	9 924	12 315
soya bean	1	16	26	356	2 030	3 269
BRAZIL	10 878	14 248	16 822	19 310	21 081	19 689
soya bean	171	432	1 319	5 824	8 774	10 153
CHILE	1 098	958	968	970	852	800
PARAGUAY	132	180	239	279	469	653
soya bean	1	11	28	150	475	550
URUGUAY	929	923	759	839	552	571
SOUTHERN AREA	22 228	26 175	30 010	33 178	32 878	34 028
SOUTHERN AREA (incl. soybean)	22 401	26 634	31 383	39 508	44 157	48 000

SOURCE: FAO-ECLAC

43. Table 22 shows the changes in the relative importance of the countries of the Southern Area in terms of farmed area and the production of cereals. Note the increased importance of Brazil with respect to farmed area and the increase in Argentina's share of total production, in spite of a significant reduction in the size of area farmed compared with total area.

In the case of Brazil, attention must be called to the importance of the cultivation of sugar cane. In 1960, there were approximately 1.3 million hectares under production, while in 1985, the figure had risen to almost 4 million: energy substitution programs were the cause for the significant expansion of the area planted. Another crop, the cultivation of which more than doubled, was cotton, which also covered almost 3.5 million hectares. The typical Brazilian tropical export crops (coffee and cacao) performed differently. In the case of coffee, the area under cultivation decreased during the period under consideration. In the case of cacao, there were moderate increases in the area under cultivation, while production increased substantially as a result of significant increases in productivity per unit of land.

TABLE 22 - SOUTHERN AREA
 STRUCTURE OF FARMED AREA AND PRODUCTION : TOTAL CEREALS
 (in %)

COUNTRY	1960		1985	
	Area	Production	Area	Production
ARGENTINA	41.3	41.5	36.2	43.9
BRAZIL	48.9	50.3	57.9	49.9
CHILE	4.9	5.3	2.4	3.3
PARAGUAY	0.6	0.6	1.9	1.5
URUGUAY	4.2	2.3	1.7	1.4
SOUTHERN AREA	100.0	100.0	100.0	100.0

SOURCE: FAO-ECLAC

Agricultural productivity

44. Table 23 shows the growth of cereal yields in the countries of the Southern Area. These crops have been chosen as being the most representative of technological innovation in agriculture. It is important to observe that the growth rate of grain yields in Argentina, Chile and Uruguay has been high and explains most of the increase in the volume produced, given the minimal expansion of cultivated areas in these countries.

TABLE 23 - SOUTHERN AREA
GROWTH OF AGRICULTURAL YIELDS - TOTAL CEREALS
(in kg/ha. and in %)

COUNTRY	1960	1970	1980	1985	GROWTH RATE 1960/85
ARGENTINA	1278	1775	2258	2423	2.6
BRAZIL	1310	1409	1576	1828	1.3
CHILE	1362	1902	2059	2949	3.1
PARAGUAY	1315	1266	1513	1676	1.0
URUGUAY	706	1157	1618	1804	3.8

SOURCE: FAO-ECLAC

A comparison of these figures with those corresponding to cultivated areas will show that the increases in grain production in Argentina, Chile and Uruguay are due primarily to increases in yields, while in Brazil and Paraguay, they are mainly due to the expansion of the area under cultivation.

Growth of agricultural production

45. Table 24 shows the growth of the agricultural value added.

The most active agrarian economies of the area were Paraguay and Brazil, in that order, in that they grew at rates above 6 percent annually during the 1970s (the table also includes data related to the 1980s).

TABLE 24 - SOUTHERN AREA
GROWTH OF AGRICULTURE SECTOR (V.A.)

COUNTRY	1970-75	1975-80	1980	1981	1982	1983	1984	1985	1986
ARGENTINA	2.8	1.4	-5.5	1.9	6.9	1.9	3.6	-1.7	-0.9
BRAZIL	4.4	5.1	9.6	6.1	-1.9	1.7	3.2	8.8	-7.3
CHILE	1.5	2.9	3.8	3.8	-1.2	-2.5	7.5	5.6	8.8
PARAGUAY	7.4	6.1	8.5	10.1	0.4	-2.4	5.9	4.6	-6.1
URUGUAY	-1.3	2.6	16.2	5.5	-7.3	2.1	-6.8	4.5	3.2

SOURCE: ECLAC

46. Table 25 contains data relevant to bovine, swine and poultry production in the countries of the Southern Area. The data correspond to the estimated volume slaughtered, in accordance with FAO conventions. The relative importance of stockraising in the value added of the agriculture sector has declined in all the countries of the Southern Area (except, probably, Uruguay).

In Brazil, there was strong growth in production. Beef and poultry production grew at a faster rate than the mean rate achieved in the entire area. Likewise, Paraguay's pork production was above the regional mean, while the traditional livestock-producing countries (Argentina and Uruguay) had more modest performances. Argentina and Chile registered important increases in poultry production during the period under consideration.

A proper analysis of increases in livestock productivity would require more data and the standardization of the methods employed in the different countries. Nevertheless, it can be assumed that in Argentina, Uruguay and Brazil there were significant increases in livestock productivity as a result, above all, of the adoption of better management techniques, sanitary controls, artificial insemination, etc. These innovations, most certainly, have produced positive changes in the livestock herds of the area.

Technological innovation in agriculture

47. Tables 26 and 27 present indicators of technological modernization in the five countries of the Southern Area.

TABLE 25 - SOUTHERN AREA
GROWTH IN LIVESTOCK PRODUCTS
(in thousands of tons)

COUNTRY	1960	1970	1980	1985 1960-85	% GROWTH
ARGENTINA					
beef	1893	2624	2839	2740	1.5
pork	188	210	263	240	1.0
poultry	44	187	429	482	10.0
BRAZIL					
beef	1359	1845	2084	2223	2.0
pork	474	767	980	900	2.6
poultry	130	375	1385	1549	10.5
CHILE					
beef	139	176	162	175	1.0
pork	23	44	50	66	4.3
poultry	18	56	110	73	5.8

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PARAGUAY					
beef	108	128	110	105	0.0
pork	23	42	81	93	5.7
poultry	5	7	12	17	5.0
URUGUAY					
beef	249	379	336	328	1.1
pork	19	22	17	13	-1.5
poultry	7	13	18	22	4.7

SOURCE: FAO-ECLAC

TABLE 26 - SOUTHERN AREA
CONSUMPTION OF FERTILIZERS PER TILLABLE HECTARE

COUNTRY	1961-65	1970	1980	1981	1982	1983	1984	1985
ARGENTINA	9	26	33	27	27	35	37	43
BRAZIL	91	186	591	376	376	307	304	425
CHILE	226	313	239	204	204	249	249	391
PARAGUAY	13	98	36	48	48	46	46	52
URUGUAY	197	485	558	439	439	292	223	378

TABLE 27 - SOUTHERN AREA
INDICATORS OF MECHANIZATION
AREA TILLABLE BY TRACTOR
(in thousands of hectares)

COUNTRY	1961-65	1970	1980	1981	1982	1983	1984	1985
ARGENTINA	202	197	211	167	176	177	175	177
BRAZIL	326	205	130	122	114	106	98	98
CHILE	200	241	161	161	161	161	161	161
PARAGUAY	568	430	600	262	571	228	216	229
URUGUAY	75	69	44	43	43	43	43	43

SOURCE: ECLAC

These data show that mechanization grew considerably in Brazil and Paraguay, at rates of 6.2 and 4.6 percent, respectively. Given the substantial increase in the areas under cultivation in these countries, this indicator implies an impressive increase in the number of tractors used during the period under consideration. For Uruguay, Chile and Argentina, the growth rates were more modest (2.8 percent, 1.0 percent, 0.6 percent, respectively).

The consumption of fertilizers grew at an average annual rate of around 8 percent in Argentina, Brazil and Paraguay, while Chile and Uruguay achieved rates of only about 3 percent. Significant differences between the countries become apparent when the average consumption of these inputs is observed. The major reasons are to be found in factors related to natural fertility, relative prices of inputs and products, and the types of crops that are predominant in the different countries.

Table 29 adds facts to help in considering technological progress in agriculture of the countries of the Southern Area: government expenditures on research and technology transfer grew at rates of between 4.3 and 12.7 percent during the period under consideration; these figures are consistent with the growth rates of other associated variables. It should be mentioned that the institutional development of the public agricultural sectors during these two decades included the organization and putting into operation of public research and extension institutes in all the countries of the area.

TABLE 28 - SOUTHERN AREA
GOVERNMENT EXPENDITURES ON AGRICULTURE
Argentina-Brazil-Chile
(in millions of 1960 US\$)

COUNTRY	TOTAL EXPENDITURES		% GROWTH	EXPENDITURES ON R&E*		%GROWTH on R&E
	1960	1980		1960	1980	
ARGENTINA	106.5	353.5		10.7	30.5	4.3
BRAZIL	264.7	1504.0		8.8	174.3	12.7
CHILE	0.6	4.2	8.1

SOURCE: IFPRI - Research Report No. 50
*Research and Extension

Agriculture and the external sector

48. An examination of the data contained in Table 29 reveals that, during a good part of the period under consideration, the agricultural trade balance of the Southern Area countries was favorable. In the case of Chile, traditionally considered a net importer of agricultural products, the reversal of this trend was caused by dramatic increases in the export of fruits and forestry products.

TABLE 29 - SOUTHERN AREA
AGRICULTURAL TRADE BALANCE
(in millions of US\$)

COUNTRY	1965			1983		
	EXPORT	IMPORT	BALANCE	EXPORT	IMPORT	BALANCE.
ARGENTINA	1388	64	1324	6114	165	5949
BRAZIL	1325	188	1137	9639	1235	8404
CHILE	49	106	-57	656	510	146
PARAGUAY	56	8	48	300	72	229
URUGUAY	186	9	177	751	52	699
SOUTHERN AREA	3004	375	2629	17161	2034	15426

SOURCE: ECLAC and WORLD BANK

49. The most outstanding characteristic of the agriculture sectors of the Southern Area countries appears to be their considerable ability to compete on world markets.

As a matter of fact, each country of the area has the lowest costs in the world for certain products: Argentina, for wheat, maize, sorghum and oilseeds; Brazil, for coffee, cacao, soya beans, and oranges; Chile, for pit fruits, grapes and sea products; Uruguay, for beef, and Paraguay for soy bean. ^{1/}

The principal reason for this competitiveness appears to be the especially advantageous agroecological conditions which exist in a good portion of the countries of the area. Additional proof of the comparative advantages of the Southern Area in agricultural production may be found in the fact that they almost completely satisfy domestic and external demands. As already noted in Table 8, the mean consumption of food in each country provides more calories than the minimum daily requirements. Table 6 shows that the countries of the Southern Area export between 45 and 50 percent of their agricultural production, which makes it the area with the largest agroexporting base in the Americas, and one of the most important in the world.

Technological innovations applied in other regions of the world have been selectively adopted by farmers of the Southern Area, taking into account relative costs and the different degrees of availability of natural resources. The advantages of the "green revolution" have been put to good use, in the form of technologies adapted by the agrarian economies of the area. Notwithstanding the preceding, the new technological frontiers which biotechnology will introduce in the future could represent a serious threat to the comparative advantages of the Southern Area, which lie in the abundance of natural resources. It will be possible to maintain and expand upon existing advantages only if great efforts are made in research on biotechnologies suited to the farming conditions of the area.

50. Also, an analysis of the profile of agricultural exports from the Southern Area countries shows that, during the period under consideration, there were important variations in the make-up and final destination of these exports.

The principal destinations of agricultural exports varied considerably during this period. For example, in the case of Argentina, the preponderance of sales to Europe up to and through the 1960s shifted to increased exports to LAC, and, in the 1970s, to the USSR. Brazil also diversified its markets by adding sales to countries in the Middle East and Africa, and establishing itself in the U.S. market. Chile gained foreign markets in Europe and the U.S. for its "out of season" fruit products.

^{1/} Flichman, G. (1987); AACREA (1980); Cirio, F. and Regunaga, M. (1986)

The export profiles of Argentina and Brazil were altered in that tropical products and livestock-meat exports were replaced by exports of oilseed-related products, while in the case of Uruguay it was rice and fruit products which entered the export profile. Oilseeds also changed the export profile of Paraguay, while in Chile the increase in the share of fruit, vegetable and forestry products in total exports was significant. Furthermore, in some of the countries of the area, the unit value of agricultural exports increased considerably, in a manner not unlike the major developed countries.

51. As a matter of fact, the pattern of diversification in agricultural exports over the last fifteen years has shown continued growth in international sales of so-called "high-value agro-based products." These products, classified as those having an international price of more than US\$200 per ton (USDA, 1985), have come to occupy a more important place in the make-up of the agricultural exports of the developed countries. This pattern may be observed in Table 30.

This worldwide trend in agricultural exports may also be seen for certain years in every country of the Southern Area. The strengthening of this trend over the next decade should be a strategic objective of the countries of the Southern Area.

52. It is worthwhile to stop and consider some food products that were being produced at prices consistently higher than international prices.

Table 31 presents the case of Brazil, where domestic prices of some of the major products for domestic consumption were systematically higher than the international price.

TABLE 30 - SOUTHERN AREA
TRADE OF HIGH-VALUE AGRO-BASED PRODUCTS
SELECTED COUNTRIES
(in % of total agricultural and agroindustrial exports)

	EEC	USA	ARGENTINA
High-value products	91	40	39
Low-value products	9	60	61
Total	100	100	100

SOURCE USDA; Sec. Science/Technology, Argentina.

These differences reflect the existence of direct or indirect mechanisms for the protection of national production which, without a doubt, constitute barriers to greater intrasubregional trade, and hurt domestic consumers. It should be borne in mind, in this case, that food deficits are very high for large groups of the lower-income population (see Table 32).

For various years of the period under consideration, this was also the situation with regard to the production of sugar and wheat in Argentina, and the production of wheat in Chile.

TABLE 31 - SOUTHERN AREA
RELATION BETWEEN DOMESTIC AND INTERNATIONAL PRICES
OF AGRICULTURAL PRODUCTS IN BRAZIL
(in %)

YEAR	RICE	MAIZE
1980	12.1	--
1983	70.2	64.8
1986	95.5	73.6

SOURCE: Cited in Homem de Melo, F. Um diagnostico sobre producao e abastecimento alimentar no Brasil-1988.

The preceding data may be better understood by studying the rates of nominal and actual protection of several Brazilian agricultural products, shown in Table 32.

TABLE 32 - SOUTHERN AREA
MEAN RATES OF NOMINAL AND ACTUAL PROTECTION
BRAZIL-AGRICULTURAL PRODUCTS (1971-1983)
(in %)

CROP	NOMINAL PROTECTION	ACTUAL PROTECTION
RICE	25.8	46.1
BEANS	10.3	25.2
SWEET POTATOES	29.3	55.3
MAIZE	-12.7	- 3.5

SOURCE: Leite da Silva, C.R. Thesis IPE-USP, quoted by Homem de Melo, F.

A look at the estimates included in Table 33 gives an idea of the "consumption frontiers" Brazil could open by applying sound growth hypotheses or a determined policy of income redistribution. As a matter of fact, the national production growth rates required for some products are considerably higher than those achieved historically, which could give rise to greater intrasubregional trade.

TABLE 33 - SOUTHERN AREA
BRAZIL - FOOD NEEDS FOR SOME PRODUCTS
PROJECTION TO THE YEAR 2000
(in thousands of tons)

PRODUCT	SOUND HYPOTHESIS	REDISTRIBUTION HYPOTHESIS
RICE	12006 (1.51)	12006 (1.51)
BEANS	3349 (1.23)	3072 (0.57)
MAIZE	42657 (3.27)	52164 (5.03)
WHEAT	8376 (2.62)	9098 (3.48)
BEEF	4469 (3.59)	5663 (5.61)
MILK	25674 (3.77)	33190 (5.92)

SOURCE: Homem de Melo, F. *op. cit.*

Note: Data in parentheses represent projected annual growth rates for 1995-2000.

Poverty in rural areas

53. Agricultural development over the last few decades has not necessarily meant an improvement in the living conditions of the rural population of the Southern Area countries, made up of subsistence farmers, rural laborers and "landless farmers." On the contrary, the trends referred to above have, in some cases, aggravated rural poverty.

While it is possible, in every country, to point to some social groups in the rural areas whose socioeconomic situation has improved, the persistence of production lags, difficult access to land and employment, and conditions of extreme poverty in many rural areas, make it clear that the goal of "growth with equity" has not been fully achieved in the countries of the area. In Brazil and Paraguay in particular, there were numerous efforts at helping these sectors through a variety of policies, especially the integrated rural development programs and projects whose scope and effectiveness are currently being questioned.

The number of people living in abject poverty in the rural areas of the countries of the Southern Area can be estimated at nearly 40 million.

The bulk of this population lives in northeastern and west-central Brazil, but similar groups can also be found in Paraguay, parts of northern Argentina and southern Chile.

These phenomena are relatively less prevalent in the Southern Area than in other regions of LAC. The deterioration of the living conditions of the small-farm population began much earlier in these countries than in other areas of the Americas. Also, the capacity of the cities to absorb employment was greater and, finally, the role of small-scale farmers has been qualitatively different. While in other regions of LAC, their primary role is to produce food, in the countries of the Southern Area (except perhaps in certain parts of Brazil), their existence is much more linked to the formation of agroindustrial complexes.

The reshaping of these groups and the strengthening of their social organization, the provision of more infrastructure and better social services, and agricultural technology transfer policies among others, are strategies that should be encouraged in the search for solutions to these problems.

The search for equity is not the only motive underlying the formulation and execution of policies aimed at these social groups. The adoption of more productive technologies, the improvement of animal health and plant protection programs, the effect on overall demand resulting from significant increases in the real income of small-scale producers, etc., all contribute toward the objective of efficiency in the economies under consideration. Actually, the existence of these problems would seriously limit national efforts to implement joint policies aimed at maximizing agricultural production in the Southern Area.

Finally, it must be noted that it will be difficult to deal with these problems from the point of view of joint actions by the countries.

Sectoral policies

54. Government policies aimed at the agriculture sector, and overall economic policies having an impact on it, cover a wide range of situations among the countries throughout the period under consideration.

In the cases of Argentina and Uruguay, during the period under consideration, the general rule seemed to be the coexistence of policies having contradictory objectives and effects (for example, policies entailing an "exchange-rate lag" and heavy taxes on agricultural exports, side by side with increasing allocations of resources for research and extension services, and long periods of subsidized agricultural credit. In the case of Brazil, on the other hand, agricultural development policy, as of 1967, was quite consistent and was carried out with due regard for priorities.

As a matter of fact, around 1967, the National Rural Credit System, which was part of the general economic reforms of the period, was set up.

In 1973, EMBRAPA was set up as a nation-wide corporation devoted to agricultural research and technology transfer; up to that time, these

tasks had been the responsibility of several federal agencies of regional scope, state agencies, and universities.

Government policy began to be applied comprehensively to the development of agriculture, and this trend became stronger during the 1970s.

In fact, three interdependent policy instruments began to be used on a mass scale to promote the activities and transformation of Brazilian agriculture. These had to do with:

- rural credit,
- technology, and
- expanding the agricultural frontier.

Toward the end of the 1970s, major structural changes had taken place in Brazilian agriculture. In oversimplified terms, it may be said that the three major features of this new agricultural structure were:

- the formation of the integrated agroindustrial complex as the driving force behind sectoral development,
- the concentration of farms, and
- the modernization of technology and production.

A specific feature of Brazilian agriculture and, above all, of its agroindustrial enterprises, is the high degree of transnationalization of the representative firms. This characteristic, which is unique to Brazil, is consistent with the nature of the entire economic development model of the two decades leading up to the crisis, and, without doubt, provides specific material for an analysis of the future performance and evolution of the sector.

In the case of Chile, during the two decades analyzed, there were profound changes in governmental policies aimed at the sector. Agrarian reform and the individual or collective allocation of lands, had a profound impact on the agricultural structure in the mid-1960s and the early and mid-1970s. These shifts, caused to some degree by overall political changes, led to a rather poor performance by agriculture up to nearly the end of the period under consideration.

Finally, in the case of Paraguay, government policies were aimed primarily at facilitating the expansion of the agricultural frontier and providing enterprises interested in the settlement of land with access to credit, and low-cost inputs and capital goods. Here also, the role of foreign firms in the development of agriculture and the agroindustrial complex was very important. Toward the end of the 1960s, a process of providing support for the settlement of lands, and services and credit for small-scale farmers was begun.

The institutional base

55. The period under consideration was also, at least during the 1960s, a time of growth and strengthening for many of the institutions that make up the public agricultural sector of the Southern Area countries.

In almost all the countries, this was a period of decentralization and growth for the governmental bodies that deal with agriculture, such as the regulatory agencies for domestic and foreign trade, agricultural research and extension agencies, animal health and plant protection institutions or services. In addition, a whole array of institutions dedicated to teaching agronomy and animal husbandry, at different levels were created or strengthened in the countries of the Southern Area.

In terms of each country, the strengthening of the institutional base was not uniform in the 1970s. Thus, for example, there was a solid process of institutional growth in Brazil, while in other countries, the process either slowed down or regressed.

Agriculture in the Southern Area in the early 1980s: a synthesis

56. The information provided thus far makes it possible to analyze the major characteristics of agricultural development in the countries of the Southern Area up to the beginning of the 1980s.

In the late 1970s, in the countries of the Southern Area, the agricultural sectors continued to play the structural roles traditionally assigned to them:

- to provide the bulk of the food required in the countries,
- to generate most of the foreign exchange produced by exports, and
- to serve as reservoirs of manpower and unskilled labor for urban industry, and to reabsorb those unemployed by industry during periods of recession.

Nonetheless, several dynamic processes were causing changes in many structural characteristics which, if allowed to continue, could bring about irreversible variations in the traditional structure. In this regard, the following are worth mention:

- a. In all the countries of the Southern Area, the agricultural sectors underwent substantial transformations, as regards production structures, area under cultivation and productivity, all of which affected the evolution and development of the sectors.

In the case of Argentina, the introduction of soya beans, and the rapid process of agriculturalization and increase in productivity of grains during the 1970s characterize these transformations.

In the case of Brazil, the expansion of the agricultural frontier, especially during the 1970s, was the predominant feature of agricultural development, along with the increased agriculturalization of the southern part of the country, based on the soya bean-wheat complex.

In the case of Chile, the patterns of land tenancy underwent substantial structural changes, and the foundations were laid for the development of the fruitgrowing and forestry subsectors, during the decades under consideration.

In the case of Paraguay, the expansion of the agricultural frontier, the rapid growth in importance of soya beans, and self-sufficiency in wheat were the basis for one of the most rapid growth rates in the hemisphere.

Finally, in the case of Uruguay, important increases in the productivity of the wool sector, as well as the expansion of rice crops and the restructuring of fruit and vegetable production, helped the sector to grow, in spite of the crisis in the market for beef, a traditional export.

- b. The integration of the agriculture sectors with other sectors of national production was another fundamental feature of the development of the countries of the Southern Area.

As a matter of fact, between 1960 and 1980, in all the countries of the area, there was increased "backward" integration, which meant using more capital goods and more industrial inputs (including inputs produced "off-the-farm," but within the agricultural sector: e.g, seeds, seedlings, semen, etc.) along with more productive technologies. Likewise, during the same period assistance was provided in establishing important agroindustrial complexes which use increasing amounts of agricultural raw materials.

- c. The importance of foreign markets to agricultural production in the Southern Area continued, and in some cases increased (e.g. Chile and Paraguay).

As a matter of fact, between 45 and 50 percent of the agricultural production in the area is destined for world markets, and it should be noted that the profile of agricultural exports has changed considerably in terms of its composition and destinations, in response to changes in the international market.

In the Southern Area, as a group, agricultural exports represent more than 60 percent of the value of total exports.

- d. The degree of subregional integration in the trade of agricultural products did not increase appreciably during the years under consideration.

While imports from the area maintained their relative importance within total agricultural imports, the importance of the area as a market declined because of heavy expansion of agricultural exports to third markets.

- e. All the countries of the Southern Area (with the possible exception of Uruguay) increased expenditures for research and agricultural extension services, and the results were significant in terms of

rates of adoption of technologies and of increases in yield and productivity. The preceding notwithstanding, there are substantial deficits in the productivity of several crops and herds; in particular, the yields of several basic food crops in Brazil are still way below their potential.

The dichotomy which exists between the small-scale farmers and large-scale agricultural enterprises explains, to a large extent, the differences in levels of technology which characterize agriculture in some of the countries of the Southern Area. Also, land tenure structures sometimes constitute barriers to technological innovation.

- f. Naturally, this growth process was caused by and resulted in substantial changes in the agrarian structure and the major characteristics of the main agents of production. Within the changes which took place in agriculture in the Southern Area, the following can be pointed out as trends:
- a growing process of technification, in accordance with the size of the land holding,
 - a growing process of integration between the marketing-exporting and agroindustrial manufacturing apparatus (with the solid presence of multinational firms) and the roles of suppliers of inputs (seeds, agrochemicals, etc.) and seasonal credit agents, and
 - a growing process of dissemination of business, management and production techniques on medium- and large-scale farms, while small-scale farmers found it increasingly difficult to technify and attain economic and social development.

The current crisis: implication for economic development. New opportunities for the agriculture sector

The crisis

57. Beginning in 1981, there was a crisis in the world economy, which was especially felt in the countries of Latin America. The date of September 1982, when Mexico declared it was unable to make payments on its debt, stands as a "symbol" of all the changes and adjustments being made around the world. As will be seen later, in the case of LAC, this crisis created serious obstacles for the development models in effect at the time.

The major characteristics of the crisis may be summarized as follows:

- a. Onset and duration: The crisis may be said to have begun in mid-1981. From then until now, the structural features of the crisis have not varied much, only furthering a situation which makes it difficult to begin the process of recovery for the economies of the area.
- b. Factors behind the onset: Beyond the consideration of the evolution of the structural competitiveness of the United States economy in

relation to other industrialized economies in recent years, as the ultimate cause of a series of adjustments in the world economy and of economic policies adopted, it may be said that the crisis was triggered by the economic policy decisions of the then United States administration.

As a matter of fact, expansive fiscal policy combined with restrictive monetary policy resulted in a steep jump in interest rates worldwide, and in a growing flow of financial capital attracted by deposits in the U.S.

- c. Immediate effects on the countries of LAC: The extremely high foreign indebtedness of the Latin American economies at the end of the 1970s, the result of the implementation of development models based on the high contribution of foreign savings and the feasibility of obtaining these funds because of the financial surpluses produced in the 1970s by the oil-producing countries, made the external sectors of these countries highly vulnerable to these two factors.

Thus, the increased debt service had a profound effect on the balances of both the current accounts and the fiscal accounts, which caused sudden and serious monetary and exchange rate imbalances. Also, the sudden and almost total disappearance of new flows of external funding, either because the funds were sent to the United States or because of the high risk of making financial investments in delinquent nations, only aggravated the aforementioned disequilibria.

- d. Later effects further aggravating the crisis: The absorption of international financial capital by the United States economy caused a growing contraction of the world economy (which dropped from a growth rate of 4.8 percent between 1976 and 1981 to rates of less than 2 percent between 1982 and 1987) with a disproportionate drop in commodity trade flows. This reduction in worldwide demand had an immediate effect on the prices of the major commodities, which make up the bulk of exports from LAC. To this situation was added the structural crisis in the production and trade of agricultural products, which brought about an uncontrolled drop in prices (40 percent on average between 1982 and 1986) never before seen in the modern world economy.

All these elements, together with the structural problems already mentioned, led not only to a crisis, but also set a structural trap for the development models in existence in Latin America, and especially in the Southern Area.

The effects of the crisis in the Southern Area were, however, different in each country. To identify these differences accurately, what is needed, on the one hand, is a clear understanding of the structural differences between the economies, and of the nature of each development process and just how far along each process was at the moment. On the other hand, there must be an assessment of the policies applied by the different countries during this period, inasmuch as they had a different effect on the performance of the

economy and of agriculture in each case. The observable results are, without doubt, caused by both factors.

Of course, this crisis, just like any other crisis, creates problems but also opens up doors for new opportunities, and these opportunities need to be explored.

The effects of the crisis on the overall economic situation of the countries of the Southern Area

Indicators of the crisis

58. The negative impact of the crisis on the economy, on employment and on the development process in the countries of the Southern Area has been exceptional, and can only be compared with some periods prior to the Second World War.

Indeed, the decline in the growth rate of the world economy, growing protectionism, and the highly unstable performance of key variables such as exchange rates and interest rates in the major financial markets of the world, had an especially harmful effect on those countries whose external debts are large, whose major source of foreign exchange is the export of commodities, and whose structures require foreign savings to finance their growth processes.

Most of the countries of LAC fit this description, especially those in the Southern Area.

59. The GDP, indicator of overall economic activity, suffered a serious reduction during the 1982-1987 period.

Table 14 presents data which make it possible to estimate that for the entire Southern Area, the 1986 level of the GDP represented an increase of only 13.7 percent in relation to 1981, which is equivalent to an average annual growth rate of only 2.5 percent, almost three times lower than the growth rate of the 1970s. Certainly, the crisis caused the most serious interruption in the economic growth of the area to have occurred in more than 20 years. It should be noted, however, that the Brazilian economy, the largest in the area, displayed the best performance in the period under consideration, and hence the preceding statements are biased.

As may be seen in Table 34, the shrinking of economic activity meant declines and reversals in the level of the per capita GDP. The magnitude of this deterioration in income per inhabitant becomes apparent when one observes that the 1986 levels are similar to those for 1975. In terms of economic and social development, the crisis has set the Southern Area countries back by ten years.

TABLE 34 - SOUTHERN AREA
EVOLUTION OF THE PER CAPITA GDP
(in %)

COUNTRY	1975-80	1980	1981	1982	1983	1984	1985	1986
ARGENTINA	0.7	0.5	-8.5	- 6.7	0.9	0.9	-5.9	4.6
BRAZIL	4.6	6.7	-5.6	- 1.4	-4.5	3.4	5.9	5.9
CHILE	5.5	5.7	3.5	-14.5	-2.2	4.3	0.7	3.7
PARAGUAY	6.8	7.8	5.3	- 4.0	-6.0	0.0	0.9	-3.3
URUGUAY	4.0	5.2	0.8	-10.7	-6.7	-1.9	-0.9	5.9

SOURCE: ECLAC

60. If the figures in Table 35 are analyzed, the concern arises as to the future, over the medium term, of the economies under study. The accumulation of capital, measured as the coefficient between gross investment and GDP, has fallen substantially over the last five years.

The levels shown can only be found, in the Southern Area, at the beginning of the 1960s.

TABLE 35 - SOUTHERN AREA
COEFFICIENTS OF GROSS DOMESTIC INVESTMENT
(% of GDP)

COUNTRY	1970	1975	1980	1981	1982	1983	1984	1985	1986
ARGENTINA	20.5	19.6	22.8	18.8	15.9	13.9	12.2	10.4	11.6
BRAZIL	21.2	27.6	22.5	20.0	18.3	14.4	15.6	16.1	16.9
CHILE	20.5	12.1	21.0	24.4	9.8	8.1	13.4	12.2	13.2
PARAGUAY	12.5	19.0	28.8	31.0	25.9	21.9	21.5	20.9	21.7
URUGUAY	10.0	10.3	17.4	15.6	14.2	9.6	9.9	7.7	7.6

SOURCE: ECLAC

61. The magnitude to the deterioration of the external sectors of these countries is shown in Table 36.

While all the countries have made tremendous efforts at exporting (the amount of exports increased at a higher pace than earlier), the fall in the terms of trade has nullified this effort and the ability to import has contracted significantly.

If to this situation are added the obligations arising from the foreign debt, which amount to nearly 38 percent of exports, and which mean that imports have no elasticity in respect of the exchange rate, it is easy to see that the deficit in the current account balance has grown for all the countries and/or that imports have had to be reduced to an alarming point, or even that, in addition to these two factors, it has been necessary to seek further external funding in order to deal with the needs of the financial services.

TABLE 36 - SOUTHERN AREA
CURRENT ACCOUNT BALANCE
(% in respect to exports)

COUNTRY	1970	1980	1981	1982	1983	1984	1985	1986
ARGENTINA	7.6	48.3	43.4	25.6	26.2	26.0	9.5	31.3
BRAZIL	28.1	58.8	46.1	74.3	29.0	-0.1	1.0	16.6
CHILE	7.6	33.8	95.9	51.1	25.1	47.1	30.0	22.6
PARAGUAY	21.5	49.1	67.9	61.4	54.5	42.0	21.2	25.9
URUGUAY	19.1	46.9	27.2	15.9	5.0	10.8	9.5	-4.4

SOURCE: WORLD BANK AND ECLAC

Note: The (-) sign refers to a positive balance.

62. The external debts in all the countries have been assumed by the State. As a result, the debt service has direct repercussions on fiscal budgets, and this forces reductions in other public expenditures and an increase in tax collections in an effort to keep fiscal deficits at manageable levels.

This has not been achieved generally, and as a result of the growing fiscal deficit, the expectations of economic agents and several interlinked indexation mechanisms, the countries of the Southern Area have entered into processes of serious monetary and fiscal imbalance and, as a result, of high inflation.

These processes, in turn, provoke disequilibria in the external sectors and force constant devaluations. This, in turn, provokes inflationary trends, which, in some countries, are out of control.

TABLE 37 - SOUTHERN AREA
ANNUAL CONSUMER PRICE INDEXES
(Base year 100=1980)

COUNTRY	1981	1982	1983	1984	1985	1986
ARGENTINA	204.0	541.4	2402.8	17461.7	134835.7	256314.1
BRAZIL	195.6	370.9	873.7	2379.6	7180.4	16509.9
CHILE	119.7	131.6	167.4	200.7	262.2	313.3
PARAGUAY	114.0	121.7	138.1	166.1	208.0	274.0
URUGUAY	134.0	159.5	238.0	369.6	636.5	1122.7

SOURCE: ECLAC

63. This difficult situation has very negative effects in terms of the distribution of income and the overall socioeconomic situation of the weakest sectors of the population. Steep declines in real wages, increases in open and concealed unemployment, significant reductions in the incomes of small-scale producers and entrepreneurs, and speculation, have tainted the scene in almost all the countries of the Southern Area over the last few years.

64. Some detail must be provided on the preceding general affirmations. While it is true that overall activity in all the countries of the Southern Area entered a period of deep recession, the performance of other variables (especially, inflation and the fiscal situation) has been different in different countries. Thus, in the case of Chile, the crisis came along after a thorough process of adjustment was already under way, which, aided by strong social measures, caused a substantial opening up of the economy, high rates of open unemployment and a notable drop in the pace of growth of general price levels. In the cases of Paraguay and Uruguay, inflationary processes and the fiscal account crisis were less severe than in the two largest economies of the area, which because of their relative weight, bias the aggregate results.

Policies in response to the crisis

65. It goes without saying that a crisis of such magnitude makes it extremely difficult to design economic policies, especially considering situations in the world economy that cause the crisis, and over which none of the countries in the area have any control.

In general, the countries have no choice but to seek "adjustment" by striving for a new type of equilibrium in the external sector; and all the countries had to deal with the consequences of such a process.

Nevertheless, the responses of the economies have been different and the variations are due to both structural differences and to the political determination and the feasibility of applying certain economic policy measures in some countries.

Thus, the longevity of new real exchange rate levels (substantially higher than before the crisis) depends, in each country, on resistance offered by different sectors and by society, and on the ability of the authorities to deal with them. Of course, this key price, as well as other policies aimed at opening up the economy, benefit the sectors linked to the export of goods or services, and harm the production sectors linked to markets which are somewhat protected. Furthermore, in the cases in which wage goods are part of the export base, wage earners are hurt by higher real exchange rates. This also occurs in those economies in which indexation with the dollar affect broad production sectors, due, among other things, to the degree of transnationalization of the leading enterprises.

In addition to adjustment policies directly linked to external sector disequilibria, policies aimed at containing public expenditures, caused by the need to cover more and more of the external debt service with budgetary resources, have had a tremendous effect on the level of real wages paid to public employees, and have caused a serious deterioration of the quality of services provided. An additional effect, with consequences for the medium term, is a decline in public investment programs, with all the recessive and multiplier effects this entails.

Certainly, the effect of a crisis of such magnitude on private investment is great and is cause for concern. Not only do investments motivated by the "accelerator effect" drop off drastically in a recession, but also the rationing of capital caused by the external crisis raises interest rates

to such levels that few investment projects can continue to be profitable. The net effect is a drop in the overall pace of capital accumulation, and serious consequences for the rate of technological innovation and future economic growth.

This time, the external constraints cannot be solved through devaluations and increases in external financing. The former encounter markets with rapidly falling prices, and the latter is virtually rationed and only available from public international sources or involves cumbersome negotiations with private banks, which do not want to take further risks in countries with high levels of foreign debt.

Credit policies linked to the promotion and financing of production activities have been reduced to a minimum during the current crisis. Faced with runaway inflation, restricted public spending and scarcity of external funding, lendable resources have consistently declined and the supply of credit, for investment or working capital, is becoming more scarce and expensive.

Price policies and other incentives have been checked by this process and by the inertia of inflationary expectations of all economic agents. It is difficult to design selective policies, and, what has been done repeatedly is to resort to overall measures (e.g. freezes, exemptions, etc.) which further destabilize the relative price structure and do little to increase overall supply.

66. The preceding gives an idea of the difficulties involved in designing policies which will make it possible not only to minimize the negative effects of the crisis, but also to lay the groundwork for a new phase of economic growth.

However, "crisis" means "change", and some policies are now being designed with this in mind. This concept is the theoretical basis of the so-called "structural adjustment" policies. The idea is to take advantage of the deteriorated relative positions of the different production agents to promote changes which will make future economic development feasible, with a more appropriate role in the world economy.

Along these lines, several international financial organizations (especially the World Bank) began to promote structural adjustment and/or stabilization projects or programs, by offering financing for their implementation.

Problems arise when there is discussion of what should be sought in terms of changes, sectors to be involved, degree of severity of application of economic policy measures, and the different images-objective as to what is the "best" role for the economy and its development.

It is here that ideological concepts are mixed with purely technical solutions, both by the governments and the financial agencies, and it is here that the greatest creativity, on the part of the countries, is needed to encourage important changes which can serve as the basis for a new development model, capable of guaranteeing economic growth with equity.

The main effect of the crisis on the agriculture sectors of the countries of the Southern Area

67. Tables 38 and 39 provide data on the performance of production in the countries of the Southern Area.

At the aggregate level, it may be seen that the agriculture sector suffered the effects of the crisis in much the same way as the aggregate of overall economic activity.

At the level of countries, the performances are different, and a certain counter-cyclical effect may be identified in the cases of Brazil, Chile and Paraguay.

Nonetheless, the evidence available makes it possible to state that agriculture in the Southern Area has definitely played an anti-cyclical role during the years under consideration.

TABLE 38 - SOUTHERN AREA
COMPARISON OF GROWTH RATES OF GDP AND AGRICULTURE SECTOR

COUNTRY	1970 /75	1975 /80	1980	1981	1982	1983	1984	1985	1986
ARGENTINA									
GDP	2.8	2.3	2.2	-7.1	-5.3	2.4	2.3	-4.7	6.0
AGRICULTURE	2.8	1.4	-5.5	1.9	6.9	1.9	3.6	-1.7	-0.9
BRAZIL									
GDP	10.3	7.1	9.2	-3.4	0.9	-2.4	5.7	8.3	8.2
AGRICULTURE	4.4	5.1	9.6	6.1	-1.9	1.7	3.2	8.8	-7.3
CHILE									
GDP	-1.9	7.1	7.3	5.2	13.0	-0.5	6.0	2.4	5.4
AGRICULTURE	1.5	2.9	3.8	3.8	-1.2	-2.5	7.5	5.6	8.8
PARAGUAY									
GDP	7.2	10.2	11.3	8.8	-0.8	-3.0	3.2	4.0	-0.3
AGRICULTURE	7.4	6.1	8.5	10.1	0.4	-2.4	5.9	4.6	-6.1
URUGUAY									
GDP	1.6	4.5	5.8	1.4	-10.0	-6.1	-1.2	-0.2	6.6
AGRICULTURE	-1.3	2.6	16.2	5.5	-7.3	2.1	-6.8	4.5	3.2

TABLE 39 - SOUTHERN AREA
COMPARISON BETWEEN GROWTH IN AGRICULTURE AND FOODS

COUNTRY	1970 /75	1975 /80	1980	1981	1982	1983	1984	1985	1986
ARGENTINA									
FOOD	1.5	1.8	-6.8	6.2	5.7	-3.7	3.8	-3.7	3.8
AGRICULTURE	2.8	1.4	-5.5	1.9	6.9	1.9	3.6	-1.7	-0.9
BRAZIL									
FOOD	4.8	3.3	7.5	7.0	0.9	-0.9	5.6	9.7	-7.3
AGRICULTURE	4.4	5.1	9.6	6.1	-1.9	1.7	3.2	8.8	-7.3
CHILE									
FOOD	0.4	1.9	2.1	8.2	-1.9	-4.8	5.1	3.8	7.4
AGRICULTURE	1.5	2.9	3.8	3.8	-1.2	-2.5	7.5	5.6	8.8
PARAGUAY									
FOOD	1.7	6.4	6.3	3.0	3.8	1.9	0.0	17.3	-7.0
AGRICULTURE	7.4	6.1	8.5	10.1	0.4	-2.4	5.9	4.6	-6.1
URUGUAY									
FOOD	-0.8	0.0	6.7	18.8	-1.8	2.7	-7.8	2.8	-1.8
AGRICULTURE	-1.3	2.6	16.2	5.5	-7.3	2.1	-6.8	4.5	3.2

68. When the analysis is made at the level of each country, the preceding conclusions become relative and, at the same time, questions are raised as to the interaction among the structural characteristics of agriculture and the overall and/or sectoral policies applied in each case.

The following specific aspects may be pointed out:

- a. In the case of Argentina, beginning in 1982, the agriculture sector appears to have played a relatively anticyclical role. In the years of positive GDP growth rates, agriculture grew more than the overall aggregate, and in the years of decline of the GDP, it also declined, but at a slower pace.

It must be pointed out that the enormous importance of foreign markets for agricultural production in Argentina played a decisive role in the performance of the sector, since world prices for major products dropped suddenly during those years. Furthermore, the policy of reducing taxes on exports and the policy of exchange rate devaluations were put into effect slowly inasmuch as they were an integral part of the price stabilization "Plan Austral" implemented between June of 1985 and mid-1987. These delays did nothing to encourage farmers to plant.

- b. In the case of Brazil, the effects of the crisis and of the subsequent adjustment policies are contradictory. On the one hand, the available evidence does not make it possible to assign an anticyclical role to agriculture as a whole.

On the other, the analysis of specific data makes it possible to infer that agriculture geared to satisfying domestic food needs grew much more than the rest of agriculture, and did so even in times of overall recession. Thus, at least in this way, agriculture's role was anticyclical.

For its part, export agriculture suffered recessive effects similar to those mentioned above because of the fall in international prices, and because of an exchange rate policy that did not compensate for these losses.

Two elements of sectoral policy which explain, to a large extent, these performances should be pointed out. First, the application of a policy of well-adjusted and timely minimum guaranteed prices, for major foods with price levels generally higher than international prices, offered small-scale farmers, who are the major suppliers of these products, a considerable degree of certainty. Secondly, the reformulation of credit policy, which in 1983 eliminated the subsidy for investment credit, and which in 1984 reallocated short-term credit according to farm size and at a more affordable cost was an important cause of the growth of food production.

However, in 1986 there were a series of negative effects on agricultural production as a result of the application of the stabilization plan ("Plan Cruzado"). The freezing of food prices, the sharp reduction of available credit, and the slowing down of the pace of devaluations all discouraged planting, and brought about a decline of more than 7 percent in overall agricultural production.

These negative effects were corrected in 1987, and the criteria mentioned earlier were again applied, with a great response by agricultural production, which grew by more than 14 percent that year.

- c. In the case of Chile, certain conclusions can definitely be made as to the anticyclical and reactivating role of agriculture during the years of recession following the onset of the crisis.

The agriculture sector grew at rates which as much as doubled the rate of growth of the GDP during those years. It should be pointed out that a good part of the production increase came from the forestry and fruitgrowing subsectors, the result of investments made in previous years.

In other words, long-term investments made in these subsectors during the preceding decade began to bear fruit precisely in the years following the crisis. What is more, overall economic policy decisions designed to respond to the external adjustment (e.g., opening up of the economy, high real exchange rates), helped to encourage these activities, which have become the most dynamic sector of activity.

In turn, export agriculture has brought about structural modifications in many of the support activities (e.g., land and air transportation, storage, marketing, information, etc.), which has changed the nature of the agroindustrial complexes of Chile.

The growth of food production, however, was considerably slower than the growth of products for export, even though it was positive for the years under consideration.

- d. In the case of Paraguay, the evidence shows a performance pattern similar to that mentioned for Brazil. Agriculture as a whole did not play a definite anticyclical role, but food production was more dynamic than the aggregate of economic activity. Specifically, highly dynamic land settlement policies, supported by comprehensive rural development programs, explain in great part the increase in cultivated areas and the impact on production cited earlier.
- e. Finally, in the case of Uruguay, the performance of the agriculture sector was highly erratic in the years following the crisis.

While it is true that the fluctuations in agricultural activity seem not to have been as broad as in the case of overall economic activity (except for 1984), it is debatable whether or not the performance of the sector has been a force contrary to the economic cycle.

The causes of this process are to be found, as in the case of Argentina, in the enormous importance of foreign markets to agriculture. Faced with the crisis on world beef markets, Uruguay was unable to make up for lost earnings with grain exports or a vital domestic market because the recession had seriously reduced urban incomes. In addition, fluctuations in neighboring economies, especially Brazil, caused erratic surges in demand for other products (e.g., dairy products), which caused unforeseen rises and falls.

Toward the end of the period under consideration, sectoral policy managed to impose some measures, such as the elimination of all taxes on agricultural exports and an exchange rate policy allowing for a relatively high real rate. The results can be clearly seen in a recovery of the pace of growth at rates higher than those of the preceding decade.

Sectoral policies in response to the crisis

- 69. The changes in the design of economic policy caused by the external adjustment mentioned above also have direct implications for the design of policies aimed at the development of the agriculture sector.

Of course, the formulation of sectoral policy was limited and restricted not only by the crisis, but also by macroeconomic policy decisions totally out of the hands of agriculture sector authorities.

It is important to review the difficulties created by the international situation and by macroeconomic adjustments:

- the fall in international prices,
- the rationing of external funding,
- the scarcity of domestic credit and subsequent high interest rates,
- price controls,
- the increased cost of imported inputs, and
- the erratic nature of prices, costs, interest rates, etc.

These are the principal factors that the agents of agricultural production must face in this time of crisis and recession.

In light of this situation, those responsible for formulating sectoral policy have had to resort to a number of unconventional measures in order to get some relief from the restrictions already mentioned.

Modifications in tax policies and the maintenance of high real exchange rates are the two instruments most used (and not easily negotiated domestically) to soften the fall of international prices for exportable products. In the cases (e.g., Brazil) where it is possible to finance purchases, a policy of guaranteed minimum prices is another appropriate measure for minimizing these effects.

Also, the high cost of and limited access to credit go hand-in-hand with reluctance on the part of monetary authorities to assign to specific sectors resources which might be diverted into speculative activities. Recognizing that these fears are well-founded, "credit-in-kind" policies (e.g., conversion plans in Argentina) have proven to be useful in increasing the availability of short-term credit at reasonable interest rates.

The rise in the costs of imported inputs, as a result of devaluations, can be tempered through actions designed to reduce tariff protection, even if only for brief periods.

Finally, the erratic performance of the major economic variables can be reduced only by designing indexing mechanisms based on "product-values", although this usually clashes with the wishes of the monetary authorities.

The preceding paragraphs show that, even in the midst of a crisis and recession like the one currently affecting the economies of the Southern Area, it is possible to formulate sectoral policies that have a positive impact.

Another issue for analysis is whether or not the implementation of these policies and/or the timeliness of their implementation has been optimal, given the difficult institutional obstacles to overcome. Recent experience in the countries of the area includes significant successes and failures.

One element worth mention is the "revelation" of deficiencies in infrastructure or significant diseconomies in some parts of the production apparatus directly or indirectly linked to agriculture. Indeed, the crisis has exposed a series of deficiencies which, at higher levels of activity and remuneration, were going unnoticed.

Programs for the improvement of marketing, infrastructure, land transportation services, and ports, etc., in several countries of the Southern Area are the result of these discoveries.

A significant factor worth mentioning is that of the growing restrictions placed on the formulation and execution of certain sectoral policies as a result of the serious deterioration of the public agricultural sector in several countries of the area. Already mentioned was the fact that one of the consequences of macroeconomic adjustment and stabilization has been the sudden drop in wages of public employees, and the reduction in regular public expenditures. In the case of the centralized and autonomous institutions of the public agricultural sector, these trends have been very apparent.

Because of the scarcity of resources, not only has there been a deterioration in the services concerned with monitoring and applying existing regulations (e.g., health, records, etc.), or the personnel assigned to planning and implementing policies, plans and projects, but also in the State's role in marketing, research and technology transfer. Naturally, the longer this situation lasts, the greater the deterioration will be and the longer recovery will take. Of course, these circumstances may lead to a poorly conceived redefinition of the State's role in respect to agricultural development policies: rather than reform based on criteria of effectiveness and rationality, there would be a progressive destruction of the institutional and technical resources existing prior to the crisis.

Conclusions

70. Before analyzing the compatibility of national policies in the countries of the Southern Area, and proposing some general strategic guidelines aimed at laying the groundwork for joint action, it is necessary to evaluate some of the lessons learned by those in the agriculture sector during the crisis, and re-evaluate some of the structural characteristics of agriculture summarized earlier.

This evaluation, in turn, will make it possible to draw up some strategy guidelines for the design of medium and long-term agricultural development policies in the area.

71. A review of the available evidence makes it possible to conclude that:
- a. The Southern Area is the agroexporting area par excellence in all of LAC, and one of the most important in the world in terms of specialized agroexports.

- b. The competitiveness of agricultural products from the Southern Area is the factor which explains the major role played by the agroexports of the subregion. Both the abundance of natural resources (not yet totally exploited) and the ever-increasing adoption of technologies have led to large increases in production and productivity that have allowed the area to remain competitive on highly distorted world markets.
- c. The make-up of agricultural exports and the structure of markets on which they are sold have changed considerably in almost all the countries of the area over the two decades under study. This fact makes it possible to affirm that versatility and the ability to adapt to changes in the markets and to the introduction of new products are a structural characteristic of the agrarian economies of the Southern Area.

It must be pointed out, however, that the degree of subregional integration in regard to the trade of agricultural products did not increase significantly during the same period.

While imports from the area retained their relative importance in terms of total agricultural imports, the importance of the area as a market showed a relative decline.

- d. The multiplier effect of economic activity as a result of increases in agricultural production has grown steadily over time because of the growing incorporation of extrasectoral inputs and capital goods.
- e. The agrarian and social structures of the rural areas have undergone important changes in several countries of the Southern Area.

The appearance of new production agents (from outside the sector, or with modern management capabilities) has accelerated the "rural industrialization" process, brought about processes of concentration and/or centralization of farms, and served as the social basis of the technological change referred to earlier. This process, in turn, has accelerated the proletarianization of groups of traditional small-scale farmers. Thus, great dichotomies continue to exist in the social and production structure of several of the agrarian economies of the countries of the area (for example, Brazil and Paraguay). Also, profitable "family farms" are becoming rarer in the face of such changes. Of course, these factors can become significant limitations to any process of agricultural reactivation and development. For example, the adoption and dissemination of more productive technologies can be hindered by agrarian structure problems and by the existence of small-scale producers living in extreme poverty. Furthermore, to achieve the goal of growth with equity, there must be policies aimed at solving the problem of poverty in the rural areas.

- f. In the Southern Area countries, the agriculture sector does not seem to play the anticyclical role or show the greater "resistance to recession" that are generally expected of agriculture.

Apparently, only in the food subsector of some countries, and with a structure of small-scale farmers specialized in the production of these crops, has it been possible to observe this characteristic in the sector in these times of crisis and recession.

- g. The preceding should not lead one to conclude that the performance of the sector depends entirely on the overall performance of the economy. The evidence studied shows that:

- sectoral policies which are well-designed and implemented in a timely fashion permit the reactivation of agriculture even in the midst of macroeconomic recession.
- the versatility of supply based on the export agriculture sector is very broad and offers unforeseeable degrees of freedom for the increase of this activity and other economic activities linked to the sector (for example, the case of Chile).

Thus, making predictions of agriculture sector growth based on the evolution of domestic demand is, at best, a restrictive and highly conservative approach; the basically agroexporting nature of the agrarian economies of the Southern Area demands that new products and external markets be considered a constant and autonomous factor of vitality.

- h. The gradual weakening of the public agriculture sector in several countries of the Southern Area constitutes a major hindrance to the implementation of innovative actions which are compatible with the potential for agricultural reactivation, and also with a strategy of joint actions having the same aim. While this situation has worsened during the crisis, it must be recognized that there are also structural causes behind it.

The solution to this restriction lies in policies at the national level, but joint actions at the multinational level could also contribute to this objective.

C. **BASES FOR A PLAN OF JOINT ACTION IN SUPPORT OF AGRICULTURAL REACTIVATION AND DEVELOPMENT**

General strategy guidelines

72. In order to identify and draw up a strategy of joint action for the reactivation and development of agriculture in the Southern Area, it will first be necessary to clarify certain concepts. Indeed, from the standpoint of orthodox economic theory, economic integration is a process which has the main advantage of allowing for a better allocation of resources as the result of specialization based on the comparative advantages of the different member countries.

Integration arrangements among developing countries can hardly be based on the same rationale as that inherent in the normative precepts of orthodox economic integration theory. In fact, beyond any theoretical considerations and questions, most of the conditions that might make integration advantageous do not actually exist in the developing countries. In particular, the following are worth mentioning:

- There is no specialization of products or of trade within the group of countries; on the contrary, the supply of products (mostly commodities) is relatively uniform, as is the demand for imported goods (durable consumer goods and/or industrial inputs and capital goods).
- Intragroup international trade is not significant prior to integration; hence, facilitating such trade only adds marginal elements to a situation in which there is very little economic complementarity.

From this standpoint, therefore, there would be no great advantage in supporting integration among developing countries. In other words, there would no gain if the idea were to have integration based on specialization arising from the existing profiles of production and foreign trade.

This would be the case if the approach taken were a strictly static one (which, in fact, is typical of the orthodox position).

On the other hand, the main argument for integration among developing countries has to do with creating the base on which to develop a new profile of production and foreign trade. In other words, the idea is to expand a protected market in order to lay the foundation for the application of the classic infant-industry approach, now at the supranational level.

Thus, the main constraint on capital accumulation in these countries (i.e., the lack of a market and hence of investment, which in turn means resources are idle for structural reasons) would be removed under the integration scheme.

One aspect usually not considered in arguments in favor of economic integration among developing countries is the fact that such arrangements increase the joint capacity of the new economic bloc vis-a-vis the rest of the world economy.

this objective (or expected effect) may be evident in different phenomena, such as:

- a. The establishment of commercial-political alliances in international fora (a growing trend since the 1960s).
- b. The establishment of multinational trading "cartels" (joint ventures for the sale or purchase of goods on the international market).

- c. The gradual strengthening and improved productivity of the structure of production, which has enhanced efficiency in the production of major export goods. Although so far there are no outstanding examples of this phenomenon, in view of the current situation of the world market, this strategy can play a key role in protecting the acquired interests of developing countries.

The above considerations are particularly appropriate and show the working of a key strategic principle in the case of the agricultural export sectors of the Southern Area countries.

The objective would be to expand (or at least maintain) the area's share in world exports of agricultural products.

This would be achieved, at the production level, through policies designed to increase productivity through joint research, the dissemination and increased adoption of technologies, increased plant protection and animal health measures, and the production, at increasingly lower costs, of the inputs required for the technologies adopted.

Such measures would have the indirect effect (beyond the actual objective pursued) of enhancing the linkages in the matrix of intraregional production of goods, which from the outset have accounted for a major share of the exports of the countries concerned.

In light of the above considerations, and based on a review of the main characteristics of the agricultural sectors of the Southern Area countries, a long-term strategy may be proposed which would include the following objectives:

- a. To strengthen the common agroexporting base of the Southern Area.

The main structural feature of the agrarian economies of the Southern Area is their basic orientation towards world markets. Each of these countries has developed agrarian activities that are competitive internationally. This feature should be strengthened through joint actions aimed at improving the exportable supply of the subregion.

The following strategic guidelines should be followed in order to improve and expand the exportable supply:

- i. Forceful policies and joint programs should be implemented in the area of plant protection and animal health, in order, on the one hand, to improve quality and limit losses in production throughout the subregion and, on the other hand, to enhance the efforts of individual countries, with a view to preventing the spread of diseases across borders and overcoming sanitary barriers in the countries of the area.
- ii. Joint activities in the area of agricultural research and transfer of technology should be strengthened, with a view to closing gaps and reducing the wide diversity of production at the subregional level.

- iii. Clearer and more permanent policies should be established for the management of natural resources common to two or more countries (large river basins, similar agroecological regions, etc.).
 - iv. Policies and actions should be planned to strengthen the production of capital goods and inputs for agriculture and to make them more accessible at the subregional level.
 - v. Agroindustrial complexes of subregional scope should be established in order, on the one hand, to improve the advantages of scale at the world level for the production of processed goods of agricultural origin and, on the other hand, to minimize the risk of shortages in the supply of agricultural raw materials.
 - vi. Shortcoming in infrastructure and in support services should be identified and dealt with by organizing transport, energy, storage facilities, etc., in such a way as to maximize their positive impact on agricultural production.
 - vii. The implementation of national policies aimed at combatting rural poverty could be facilitated by modernizing export agriculture. Indeed, the potential for solving these serious social problems could be enhanced both by incorporating small-scale farmers into production for export and by generating jobs in agroindustry.
- b. To increase and ensure the introduction of agricultural products from the Southern Area into world markets

In this regard, the following strategic guidelines for joint action should be followed in order to promote and develop external demand, as well as to open up new markets:

- i. The policy of forming alliances to deal with third countries in international technical and political fora should be continued and expanded.

The experience of the Cairns Group in GATT could be extended to other types of permanent alliance for the protection of the subregion's commercial interests. This could significantly increase the bargaining power of the Southern Area countries not only in multilateral fora but also in regard to bilateral pressures.

The prospects for increasing the value of exports of the main commodities produced in the Southern Area will depend, to a large extent, on gradual changes being made in the protectionist policies applied by the industrialized countries with regard to agricultural and agroindustrial products. Top priority should be given to any joint effort that is directed toward this end.

- ii. Policies and joint actions aimed at promoting nontraditional agricultural exports should be consolidated and coordinated.

There is a growing trend towards trade in high-value agro-based products which are steadily displacing trade in commodities.

The Southern Area countries have a great potential for entering more forcefully into these flows of trade; hence, joint sectoral policies should include specific measures to support such exports.

It is evident from the way world markets have evolved, even during the years of crisis, that they are able to absorb increasing quantities of new or "out-of-season" products. The countries of the subregion are now, and will continue to be for at least another ten years, "small-scale suppliers" to these market niches. Agricultural exports could be further expanded by taking advantage of opportunities in this area.

Reciprocal arrangements for assistance and exchange of information among the countries of the Southern Area would further increase the benefits to be obtained.

- iii. Joint actions aimed at increasing national control over the external marketing of agriculture-based products should be viewed as an important strategy tool.

Given the trend toward the establishment of large transnational corporations for the marketing of agricultural products, the countries of the area should take joint action to establish multinational marketing enterprises (public-private or mixed), in order to stand on firmer ground in their efforts to consolidate their position on the world market, and to play a role and pursue objectives that are more consistent with the interests of national economic agents.

Similar trends may be observed in the trade of processed foods and other products made from agricultural raw materials.

The establishment of multinational agroindustrial conglomerates would enable the countries of the Southern Area to participate in these growing markets and to take maximum advantage of the benefits they offer.

- c. To gradually meet the domestic demand for agricultural products through production at the subregional level

Global policies aimed at "paying off the domestic social debt" in the Southern Area countries which are gradually progressing towards democracy even within the constraints of external adjustment, will undoubtedly have an impact on the domestic demand for foodstuffs and other agriculture-based products.

In this regard, several guidelines must be followed that are compatible both with redistribution strategies and with the price stabilization objectives and anti-inflationary policies of several countries and, of course, with the strategy for the reactivation and development of agriculture in the subregion. These are:

- i. Priority should be given to the coordination of policies pertaining to the production and supply of food in the subregion.

Beyond the opportunities which are opening up from the standpoint of external markets, there is still a great potential for expanding the domestic market for agricultural products. Brazil, in particular, is a market in which the frontiers of consumption are still enormous.

Commodities, especially food crops, are still faced with substantial barriers to intrasubregional trade. An analysis of the overall advantages to be gained from the increased liberalization of intraregional trade in foodstuffs would show that it is in the interest of all parties to initiate such a process, gradually and in accord with one another.

In particular, the following fields of action might be considered:

- As regards meat, the differences in the stockraising cycles of the different countries (i.e., Argentina, Brazil and Uruguay) would allow for the design of anticyclical policies aimed at increasing the stocks and the productivity of herds throughout these countries. Further consideration should be given to this possibility.
- As regards grains, the protectionist policies of Brazil (and Chile) in respect of wheat, maize and rice, hinder the expansion of exports from Argentina, although integration arrangements are opening up some opportunities. It should be stressed that an expanded market for these commodities would reduce the subregion's dependency on world markets, strengthen its production capacity and free for better uses the natural resources of the countries that are currently protecting their production of these crops.
- As regards dairy products, Uruguay's surpluses could make up for deficits which occur in the region at certain times of the year, and the harmonization of policies affecting the sector would allow for the production of surpluses which could be exported to Brazil or other LAC countries that have shortages of such products (e.g., the Andean Pact).

- As regards perishables (vegetables and fruits), the expansion of "first fruits zones", including certain regions of Brazil and/or Uruguay, would make it possible to minimize seasonal price and supply cycles on the Argentine market, and vice versa in the aforementioned countries.

ii. Under this joint strategy, the "image-objective" would not depend on "exporting enclaves", but rather on improvements in the quality of traditional and new products, which would be produced for a "global market" in which the national-market-versus-foreign-market dichotomy would gradually disappear.

Thus, the upgrading of agricultural products that would have to take place in order for them to obtain a better share of world markets would undoubtedly lead to the creation of new domestic market segments in several of the Southern Area countries.

iii. It will be important, in considering these guidelines, not to forget the other LAC markets outside the Southern Area; indeed, studies being carried out in other LAC subregions show that there are great shortages of food and other agriculture-based products which are supplied from outside the region.

A comprehensive analysis of the LAC region would make it possible to establish more accurately to what extent imports of such products could be substituted at the regional level.

Objectives of the Plan of Joint Action

73. The objectives of the Plan of Joint Action follow, on the one hand, from the realization that independent national policies are not enough to attain maximum agricultural development and overall economic development, in view of the crisis, and, on the other hand, from the conclusions drawn from the strategic guidelines for the agricultural reactivation and development of the subregion.

Thus, the Plan of Joint Action for the Southern Area pursues the following objectives:

- a. To enhance the role of the agricultural sector in the reactivation and economic development of the Southern Area countries, in light of the current crisis.
- b. To contribute towards the solution of structural problems in the national agrarian economies, through a gradual standardization of policies on incentives, technological development, marketing of agricultural products and strengthening of institutions.
- c. To strengthen the countries' common production capability, through joint actions and policies aimed at enhancing national efforts and through joint actions aimed at increasing the subregion's capacity and role in world markets.

- d. To work to increase the efficiency of agrarian and agroindustrial production by introducing effects of scale through integration-oriented measures and through alliances vis-a-vis third countries.
- e. To increase the bargaining power and the relative strength of the Southern Area countries in world markets, through permanent alliances built around the concept of agricultural development.
- f. To promote the participation of the private sector in the design and execution of activities that will contribute to the subregional integration process.

Instruments of the Plan of Joint Action

74. The formulation and subsequent implementation of a Plan of Joint Action will undoubtedly call for a highly varied and versatile battery of instruments. Indeed, it will be important both to improve existing policy tools and to create new ones.

In general, it may be said that the arsenal of instruments to be used should include at least the following:

- a. Amendment and/or creation of legal rules and instruments and/or institutional mechanisms at the national and/or international levels, with special emphasis on the subregion.
- b. Reforms in and/or strengthening of national institutions concerned with the sector, as well as of some international institutions.
- c. Drawing up of investment programs and projects within the framework of the various areas of joint action.
- d. Drawing up of technical cooperation and training programs, as well as other actions designed to improve the human and technological resources of the subregion.
- e. Identification of funding needs and design of a joint program for seeking the financial resources required either for the implementation of investment programs and projects or for other purposes, such as possible compensation to social groups affected by structural and policy changes arising from implementation of the Plan.

The generation, approval and implementation of proposals on these topics will be an on-going activity of the Plan of Joint Action, and part of a dynamic process. The following are recommendations and initial proposals for institutional policies and reforms, and for the identification of areas for programs and projects of joint action. The final sections of the document include a description of initial programs and projects, and institutional and funding mechanisms for the implementation of the Plan.

Policies and institutions: changes required and possibilities for joint actions

75. Elements that describe the body of sectoral and overall policies in effect in each country of the Southern Area have previously been indicated.

The purpose of this section is to analyze the compatibility of these policies and their national objectives, on one hand, with the strategic guidelines set forth and, on the other hand, with the possibility of standardizing these policies at the subregional level.

This analysis will be extremely useful in justifying feasible proposals for joint action from all national approaches; in other words, joint actions will be considered feasible only if they do not create irrevocable contradictions (at least in the short- and medium-term) to strictly national objectives and policies.

76. The review of the objectives of national policies related to the agricultural sector of each country, carried out in collaboration with IICA Offices, leads to the conclusion that the explicit objectives of sectoral policies are very similar in all the countries of the Area.

In particular, objectives for national food supply and the generation of foreign exchange through increased exports are shared by all the countries.

Likewise, objectives to ensure optimum sanitary conditions for foodstuffs destined for both domestic and foreign markets, strictly sectoral objectives to increase productivity by incorporating technologies and objectives to secure satisfactory incomes for small-scale farmers, are all shared by the countries of the Southern Area.

77. This similarity of objectives, although encouraging, disappears when an analysis is made of the instruments chosen to achieve the objectives in the countries.

The greatest contradictions exist between food security policies implemented in Brazil (and to a lesser degree in Chile) and the objectives to increase intrasubregional trade. In turn, these same policies also create incompatibilities between the objective for import substitution at the subregional level and policies for "financed purchases" that are favored by Brazil and Chile when they purchase North American grains.

Some policy instruments implemented in Argentina (dairy products, rice and sugar) also contradict the objectives set forth, when considering surpluses in Uruguay.

78. In summary, the greatest conflicts appear when implementing a policy to increase the subregional trade of agricultural commodities.

This statement should be tempered: the greatest contradictions exist in grains and red meats; this is not true for the whole range of products (i.e., processed foods). Moreover, even in the case of grains, the operation and expansion of the Argentina-Brazil integration agreements could change this situation.

79. The other element related to strictly national decisions, and which could be considered a serious constraint when implementing an agricultural reactivation and development strategy based on joint actions, is the current state of public agricultural institutions.

The main deficiencies and the process of deterioration heightened by the crisis have already been pointed out. Attempts to reverse these trends must coincide with the implementation of a sectoral reactivation strategy, which would lend legitimacy to the demands for additional resources, and, in turn, would make it possible to implement the policies, programs and projects of the development strategy.

The multinational dimension involved in a joint action approach is an additional strain on the institutional capabilities of the countries of the Area. Different national institutions must be selectively strengthened in order to enable them to carry out joint actions.

Priority areas for programs and projects of joint action

80. Once the basic concepts for formulation of the Plan of Joint Action have been clarified, it will be necessary to identify areas of joint action to be carried out in the Southern Area countries.

The following section presents a summary of the structural features of the agrarian economies of the five countries and in the strategic guidelines and national policies currently in force, with a view to identifying those areas of joint action considered a priori to be highly feasible.

Thus, from the following sources:

- the common characteristics of the Southern Area (Section I),
- the structural features of the agrarian economies of the countries of the area (Section II),
- the general strategy guidelines,
- an analysis of the compatibility of national policies,

it is possible to propose a tentative list of areas of joint action; these should be further developed during the subsequent stages of formulation of the Plan, i.e., when the instruments needed to attain the objectives of the Plan in each specific area of action are prepared in greater detail.

At this stage, the following order for the possible areas of joint action is proposed:

a. Joint actions pertaining to the production base of the agricultural sectors of the Southern Area:

- i. Integrated management of shared natural resources (large river basins, savannahs, inter-Andean valleys, etc.)

Several instruments can be used in order to enhance joint actions pertaining to the control, management and effective utilization of common natural resources. In this regard, existing multinational institutions could be used and their performance in this area enhanced. For example, programs for the control and utilization of water resources shared by countries of the area, designed to strengthen the base of natural resources to be used for agricultural purposes, could be developed around the tributaries of the River Plate Basin. In such cases, it may be necessary to draw up new legal instruments to spell out national responsibilities with regard to river banks, water works, soil conservation and waste disposal. It is also quite likely that, following the stages of preinvestment and joint studies, investment projects would be drawn up that promote agricultural development (e.g., irrigation districts, reforestation and soil conservation, etc.) in areas covering two or more countries and/or in subregions of a country which fit within a multinational program.

- ii. Transfer of technology and/or joint research on natural resource management and conservation issues which are of common concern

The above point provides an example of the type of joint studies or research that might be carried out in connection with natural resources shared by two or more countries. However, such studies might also be carried out in situations where there are very clear agroecological similarities (e.g., irrigation management in inter-Andean valleys of Chile and Argentina; management of tropical savannahs in the Chaco areas of Paraguay and Argentina, as well as in the cerrado region of Brazil; recovery of estuaries and marshes, etc.), even when such areas do not cover more than one country. This type of approach could be useful in cases where individual countries do not have the necessary resources for carrying out research and training on their own, inasmuch as the outcome of the joint action would be greater than the sum of the individual countries' efforts.

Multinational research and/or training programs might be suitable instruments for this type of effort (the EEC's policies on joint research during the 1980s provide a good methodological framework for designing such instruments).

b. With regard to production

- i. Strengthening and expansion of joint research and technology transfer programs

The Southern Area already has the example of programs such as PROCISUR, which helps strengthen institutional, personal and professional relations between researchers and professionals working in the agrarian sciences in the countries of the area. This successful experiment could be further expanded by increasing the coverage of its activities, either as regards crops and stockraising or as regards training at different levels. This area of joint action would call for the use of several instruments, such as horizontal technical cooperation programs, investment projects for the improvement of facilities and scientific equipment, improvement in academic standards for the accreditation of professionals in all the countries, etc.

- ii. Consolidation of comprehensive technological packages together with the well-coordinated production, throughout the subregion, of agriculture-based goods or of goods produced by other sectors (e.g., capital goods, agrochemicals, seeds), with a view to substituting imports and improving the international competitiveness of the subregion as a whole.

This area of joint action is based directly on the strategy of "integrating so as to win in third markets". It will entail entering into multinational agreements that establish priority for certain crops or stocks, in order to increase their yield and/or standardize their production in the subregion; and, subsequently, analyzing the inputs (agricultural or extrasectoral) required for the improved technologies and efficiently scheduling the supply of such inputs, preferably from sources within the countries of the subregion. A variety of instruments would be used at this point, from joint technical assistance programs to studies carried out in conjunction with private industry and, possibly, investment projects for the expansion of installed agricultural or industrial production capacity.

- iii. Strengthening of joint plant protection programs

COSAVE, an arrangement which is still in the organizational stage, provides a framework for more thoroughgoing action in this area of common interest.

It will probably be necessary to standardize national regulations for the prevention and control of different plant diseases. Other instruments would also be used, both in connection with programs pertaining to institutional strengthening and horizontal technical cooperation and with investment projects aimed at strengthening or establishing sounder bases for the improvement of sanitary conditions for plant production in areas and crops that are common to several countries of the area.

iv. Strengthening of joint animal health programs

Considerations similar to those mentioned in point iii above apply to this area of joint action. In particular, a wide range of instruments would be required to deal with problems such as that of foot-and-mouth disease, which not only reduces domestic production but also constitutes a serious obstacle to penetration in world fresh meat markets. Instruments to be considered would include investment programs and projects aimed at establishing comprehensive disease-control measures in individual countries, in parts of the subregion or throughout the subregion as a whole.

v. Promote the reaching of agreement on agroindustrial production at the subregional level, so as to standardize requirements on the quantity and quality of raw inputs.

The development of agroindustrial production in the subregion has often been hindered by shortages in the supply of raw materials from national or extraregional sources. A joint approach could help provide a basis for solving these problems at the present level of production, as well as for expanding production capacity by planning the supply of the agricultural raw materials required at the level of two or more countries within the subregion.

This area of joint action would call for several instruments, beginning with studies to identify those agroindustries that could be integrated at the subregional level, and going on to multinational investment projects for the establishment of agroindustrial plants. It may also be necessary to review and possibly amend certain national regulations in order to facilitate the free flow of agricultural inputs for these industries.

c. With regard to marketing

i. Strengthening of alliances (e.g., the Cairns Group) for purposes of joint negotiation in world fora

The current round of multinational trade negotiations in GATT has made it possible to hold negotiations on agricultural trade and production at the world level, with a view to seeding liberalization in trade and defining the capacity of the contracting parties to subsidize their agrarian production. Four of the Southern Area countries belong to an alliance that has played a major role in these negotiations (the Cairns Group). As the talks progress, joint action will be required to continue coordinating positions and present a common front vis-a-vis the other blocs involved.

This is an example of action that is fully in progress which should be followed in other international fora concerned with agricultural trade and/or production. Instruments such as the establishment of subregional research institutes or centers

could be used to strengthen the common positions of the countries of the area vis-a-vis the rest of the world.

- ii. Standardization, at the subregional level, of the "codex alimentarius" and other consumer protection regulations pertaining to fresh and/or processed foods in order to meet the requirements of the major world markets
- iii. Promotion of the establishment of subregional integrated agroindustrial complexes, in order to improve international competitiveness and raise the quality of processed foods to be sold on the domestic market

These areas of joint action fall within the scope of the strategy aimed at increasing the subregion's share in world food markets (for fresh or processed foods), while at the same time avoiding "enclave profiles", and streamlining its production apparatus in the light of changes in world markets. Indeed, the gradual standardization of regulations concerning food quality, both at the level of the main world markets and by the Southern Area countries, would make it possible to expand the domestic market and allow it to act as a reserve when external demand drops, producing changes that would substantially benefit national consumers. Many different instruments could be used in this area of joint action, such as efforts to amend legislation with a view to standardizing it among the countries, investment projects and permanent horizontal technical cooperation programs (public and private).

- iv. Promotion of the signing of agreements for establishing joint marketing enterprises targetting new niches in world markets

The joint-action approach provides a basis for apparent competitors to become partners in production and marketing. The trends in the trade of high-value agro-based products have already been discussed. The idea is to enhance national advantages through subregional alliances that will allow for greater and more uniform production and, especially, enable the subregion to gain an independent position for itself on the market. This would make it possible, on the one hand, to protect the interests of national economic agents vis-a-vis the pressures exerted by the transnational corporations and, on the other hand, to strengthen the commercial position of Southern Area products through enterprises operating on a large enough scale to have influence in the world markets. Again, a wide variety of instruments would be called for.

- v. Formulation of anticyclical policies at the subregional level, based on the coordination of the seasonal supply of and demand for products that are subject to fluctuation (vegetables, fruits, dairy products, meat, etc.)

This area of joint action falls within the framework of the strategy for strengthening subregional trade in agricultural

products. In addition, however, other objectives that are extremely important to the Southern Area countries are also taken into account; these would include programs aimed at combatting inflation and measures to guarantee an adequate food supply at all times of the year, despite unanticipated crises in production. The protocol on food production signed by Argentina and Brazil is a good example of this type of measure. Many other instruments could be used to strengthen this joint action, such as the establishment of joint commissions for specific sectors; the establishment of food reserve funds; the establishment of multinational stocks, etc. It would also be necessary to design adequate legal instruments, and to implement technical cooperation programs and investment projects.

d. With regard to institutions

- i. Strengthening of ministries of agriculture in areas pertaining to integration and/or joint action at the subregional level

Most of the ministries of agriculture of the Southern Area countries do not have the necessary installed technical capacity to carry out the analytical and operational tasks that would be required of them if the subregional integration of agriculture is increased. Hence, another key area for joint action will be the strengthening of such a capacity.

- ii. Establishment of permanent subregional mechanisms and working groups to follow up on and monitor the agrarian policies of Southern Area countries and the progress of their joint actions

Priority should be given to joint action aimed at setting up institutional mechanisms for coordinating the work of all the Southern Area countries in connection with the formulation of the Plan of Joint Action, as well as with the various stages of its implementation. Such an effort would include the establishment of "networks" or other institutional mechanisms at the technical-political level.

This area of joint action, as well as the previous one, may be viewed as a prerequisite for the implementation of almost all the other actions proposed. Indeed, the strengthening of the policy-making apparatus in the agricultural sector is essential to the preparation, follow up and monitoring of the instruments to be applied under the Plan of Joint Action. Multinational technical cooperation programs, as well as the firm political support of the Governments, will be required in order to reverse the process of deterioration of public policy-making efforts and face the challenge of carrying out a sectoral reactivation strategy. Moreover, substantial support, in terms of resources and orientation, will be required in order to build up multinational teams to carry out the joint actions.

- iii. Strengthening of other institutions of the agricultural sector in view of the new duties required of them under a process of joint action for agricultural reactivation

In the discussion of other areas of joint action, mention has been made of the duties and responsibilities of various types of public agencies, such as those responsible for agricultural research and the transfer of technology, marketing agencies, institutions responsible for plant protection and animal health, and universities and other centers providing training in agricultural sciences.

In order to strengthen the capabilities of these institutions, it will be necessary to design a wide variety of instruments, from technical cooperation programs to joint investment programs and projects.

- iv. Joint training of human resources at different skills levels

A good example of this type of instrument would be the formulation of multinational programs to provide training in areas directly or indirectly related to the agricultural sector.

In order to ensure adequate standards for this type of joint action, it would be essential to draw from the experience gained with existing programs of this nature, both in the subregion and in other parts of the world.

- 81. The above summary of possible areas of joint action is neither restrictive nor exhaustive. As the Plan of Joint Action is developed, the areas of joint action will be expanded while at the same time choices will be made as to which areas of joint action are viable and can actually be implemented by the countries in the different areas of Latin America and the Caribbean.

Finally, it should be noted that, although it will be difficult to finance some of the instruments to be applied under the Plan of Joint Action, given the current situation in the hemisphere, such financing would be greatly facilitated if several countries were to present joint proposals to the international funding and technical cooperation agencies. This practice, which has been applied successfully in other sectors of activity (e.g., binational energy programs), should be adopted by the agricultural sectors of the region.

TABLE 40
ANALYSIS OF RELATIONSHIP BETWEEN PRIORITY AREAS
AND PROPOSALS FOR ACTION

PRIORITY AREAS FOR JOINT ACTION	PROPOSALS FOR ACTION
<u>Production</u>	
Strengthening and expanding of joint programs on research and technology transfer	1. Cooperative program for agricultural research in countries of the Southern Area
Strengthening joint programs on plant protection	2. Support for the establishment of an integrated fruit fly management system in the Southern Area
Strengthening joint programs on animal health	3. Strengthening animal health and plant protection emergency and international quarantine systems in the Southern Area
	4. Evaluation of animal pests and diseases in the countries of the Southern Area
<u>Marketing</u>	
Formulating of anticyclical policies and policies to harmonize regional supply and demand	5. Economic research program: "Potential of and constraints on joint agricultural development in the countries of the Southern Area"
	6. Regional agricultural policy projects for the Southern Area*
Strengthening ministries of agriculture in areas related to integration and/or joint sub-regional actions	7. Program to upgrade ministries of agriculture of the countries of the Southern Area in activities pertaining to foreign trade and integration.
<u>Institutions</u>	
Strengthening other agricultural sector institutions that can be involved in joint action. Promote the establishment of integrated agroindustrial complexes at the subregional level.	8. Promoting investments in agricultural and agroindustrial projects in the Southern Area
Establishing subregional permanent mechanisms and working groups for follow-up and supervision of agrarian policies in the countries of the Southern Area and of the implementation of joint action	9. Institutional mechanisms for the implementation of the Plan of Joint Action and for coordination of actions in the Southern Area.*
Joint training of human resources at different skills levels	10. Regional network for postgraduate studies in the agricultural sciences*
Management and conservation of shared natural resources	11. Reciprocal support to control forest fires in countries of the Southern Area*
* Currently in consultation at the subregional level	

III. PROPOSALS FOR JOINT ACTION

A. INTRODUCTION

This section includes concrete proposals for joint action, divided into three types: programs and projects for joint action, funding mechanisms, and institutional mechanisms for implementing the Plan of Action.

The proposed actions were designed to reflect the contents of the "Strategy" (Section II), which are summarized in the preceding chapter. The relationship between the strategic proposals and the proposals for action is presented in Table 40.

Table 40 illustrates that:

- a. A close relationship exists between priority production areas and the proposals for action, since the Southern Area has experience, for example PROCISUR, that will be expanded on. Institutional strengthening and support for animal and plant health programs and projects also figures importantly.
- b. In marketing, joint participation, initiated through the Cairns Group, will be expanded, through joint projects in agricultural policy analysis and planning and by strengthening foreign trade.
- c. Close links will be developed in the institutional field to facilitate greater subregional agricultural integration. Similarly, the creation of suitable institutional mechanisms or networks at the technical-political level will be necessary to develop and strengthen the Southern Area.

B. PROGRAMS AND PROJECTS FOR JOINT ACTION

The following technical cooperation projects are the result of proposals agreed to during in the Third Advisory Meeting, and the process to identify and reach a subregional technological-political consensus to be incorporated into the Plan of Joint Action. Appendix 1 includes another series of proposals that have not been agreed upon yet at the subregional level.

1. Profiles

COOPERATIVE AGRICULTURAL RESEARCH PROGRAM FOR THE SOUTHERN CONE (PROCISUR)

FRAME OF REFERENCE

The proposals for action related to technology for the Plan of Joint Action in the Southern Area focus on consolidating and expanding cooperation mechanisms that already exist in the subregion. In this regard, PROCISUR constitutes the basic structure on which a group of new actions in strategic areas will be based, for the agricultural technological development of the countries of the region.

BACKGROUND

PROCISUR, as it exists today, originated in technological exchange activities among Argentina, Brazil, Chile, Paraguay and Uruguay promoted by IICA since the 1960s. These efforts initially concentrated on wheat, corn, livestock, pastures and economic programming and analysis, and were first formalized through the IICA-SOUTHERN CONE/IDB Project, which received funds from the IDB from 1980 to 1983. This first stage of work included activities on wheat, corn, soy beans, livestock, production systems, training, and information and documentation.

In 1984, based on the success of the IICA-SOUTHERN CONE/IDB Project, the activities were expanded to include winter grains, summer grains, oilseed crops, cattle and support activities for production systems, information, documentation, technology transfer, training and communications.

This phase of PROCISUR activities will end in 1990, and this cooperative mechanism should be institutionalized in order to ensure a basis for joint actions under the Plan for Reactivation. To that end, a draft agreement has been prepared for participating countries and IICA that will: (i) consolidate the inter-institutional cooperation and coordination mechanisms linking the national of technology generation and transfer systems ; (ii) follow through on cooperative actions already under way, and (iii) identify, develop and implement actions in new areas of common interest to the countries of the region.

THE PROGRAM, ITS COST AND FUNDING

a. Conceptual Base of the Program

The agreement which institutionalizes the Program establishes the conditions and makes provisions for the measures needed to continue technical cooperation efforts, reciprocal support and integrated action among the national agricultural research institutions of the countries of the Southern Cone, with the cooperation of the Inter-American Institute for Cooperation on Agriculture.

This type of regional support mechanism for cooperation and exchange, combined with national institutions and international and external agencies and centers, form the foundation on which technological exchange among developing countries must be based.

b. Objectives

The objectives of the Program are to:

1. Support joint actions among national agricultural research institutions of the participating countries, so as to increase agricultural technology exchange;

2. Encourage reciprocal assistance among the participating countries in order to promote the dissemination and proper use of technologies developed by each of these countries, through the horizontal exchange of know-how, experiences and genetic materials generated by agricultural research in the participating countries;
3. Identify new possibilities for integrated efforts, cooperative and/or joint actions among participating countries to maximize the use of available resources and promote the search for solutions to common problems;
4. Cooperate in coordinating the actions of national agricultural research organizations with those of international agricultural research centers;
5. Support the identification and transfer of useful know-how for agricultural development from other countries of the world to the participating countries;
6. Keep up-to-date information on the structure and operations of agricultural research organizations in the countries of the Southern Cone; and
7. Identify, prepare and implement integrated cooperation projects, including studies that will support the technological integration process.

c. Strategy

The Program will consist of two separate components involving a high level of interaction: the basic structure of the Program and the projects.

1. The basic structure will consist of a nucleus and a group of basic activities directly related to the management, negotiation and coordination of specific projects and the implementation of top-priority integration-oriented.
2. The specific integrated projects (or networks), which can concern products, functions or topics, will be developed for specific periods and be based on explicit objectives; they will use resources especially negotiated and approved for this purpose.

d. Projects and activities of the Program

The project, which is the key instrument for implementing the Program, can be defined as a group of actions and activities concerning a product, function or topic, receiving specific funding, and which will be developed within a previously established time frame, with specific objectives that are directly related to the objectives of the Program.

In addition, provisions are made for negotiating specific funding for projects in the following areas:

- Biotechnology
- Fruit and vegetable production
- Technology transfer
- Technology for small-scale farmers
- Development of human resources
- Seed technology
- Evaluation of forages
- Soil management and conservation
- Biological control
- Production systems
- Socioeconomics

The projects will include integrated activities, according to the need, involving:

1. **Reciprocal technical cooperation**, that will include: i) technical meetings and coordination; ii) seminars; iii) exchange of advisory services; iv) observation exchanges.
2. **Advisory services**, through: i) the hiring of international consultants and ii) cooperation actions provided by experts from international centers (CIMMYT, CIAT, ISNAR, CATIE, CIP, etc.) or other specialized institutions.
3. **Training**, that will include: i) short courses; ii) applied or on-the-job training; and iii) training at specialized institutions.
4. **Studies and analyses** that provide up-to-date and simultaneous information on the status of the agricultural sector and, particularly, of technology generation and transfer organizations of the participating countries of the Program, as well as those that help further the process of technological integration.
5. **Joint research**, which will provide financial support for the transfer of genetic or bibliographic materials and the purchase of materials needed to carry out research activities directly related to the integrated action included in the Program's projects.

e. Program Beneficiaries

The most direct and immediate beneficiaries of the Program's projects and activities are those who participate in the events themselves, that is, researchers, extension agents, technicians and farmers.

f. Physical Resources

Basically, the executors of the Program are the national organizations, and such they mobilize their own human resources, facilities, equipment, laboratories, etc. This support for the activities of the different projects, in terms of contributions of goods and services to the activities carried out in each country, is described and quantified in each project as the counterpart contribution.

g. Costs and Funding

The annual cost of the Program, in cash resources, as contemplated in the agreement, is approximately US\$950,000.

EXECUTOR BODIES

The Program will be headquartered in Montevideo, Uruguay and carried out by: i) the agricultural research institutions of the countries participating in this agreement; ii) other public or private research or technology transfer organizations that, through specific agreements, join in the cooperation effort; iii) IICA, which will be the administrative agency for the Program; iv) international centers and organizations, through their participation in specific projects, and v) with financial support from national or international, government or non-governmental donor entities, for carrying out the specific projects.

BENEFITS AND VIABILITY

The almost ten of years cooperative efforts among the national agricultural research organizations of the countries of the Southern Cone not only serves as the best validation of the technical viability of this type of integration, but also illustrates what can be achieved and what potential benefits can be expected.

-STRENGTHENING ANIMAL HEALTH AND PLANT PROTECTION EMERGENCY AND INTERNATIONAL QUARANTINE SYSTEMS IN THE SOUTHERN AREA

FRAME OF REFERENCE

BACKGROUND

The agricultural sector of the countries of the Southern Area is important not only as the main supplier of foodstuffs and agricultural products consumed in the region, but also as a provider of exportable surpluses, the volume of which exceeds agricultural imports by a ratio of 5 to 1. It thus contributes effectively to generating foreign exchange and to the overall economies of the countries.

Agricultural export models adopted by the countries, and the need to prevent the introduction and/or spread of diseases and pests subject to quarantine 1/ have led the governments of the countries to request the support of international technical cooperation organizations, such as the Inter-American Institute for Cooperation on Agriculture (IICA)

in strengthening the services offered by national animal and plant health organizations and in improving the training of technical personnel in these organizations in a number of fields, particularly in regard to the diagnosis and identification of exotic diseases and pests, inspection techniques, quarantine treatment, and emergency actions.

THE PROJECT, ITS COST AND FUNDING

a. Conceptual base of the project

The Project is founded on the following conceptual and technical bases:

1. The commercial exchange of agricultural products and international travel give rise to a highly active mobilization of animals, plants and animal and plant products.
2. Pathogens, their vectors and animal and plant pests can spread easily from one geographic area to another together with their hosts and in by-products.
3. The absence of diseases or pests in a particular geographic area gives rise to a population (animal or plant) that is very vulnerable to the attack of pathogens and exotic pests.
4. The introduction and subsequent establishment of pathogens and exotic pests where susceptible hosts exist usually causes significant economic losses resulting from the decrease in the volume and/or quality of agricultural products, the costs of control measures adopted, or quarantine restrictions applied by importing countries. Markets can be lost as a consequence, particularly where the "zero risk" concept prevails.
5. The preservation of the animal and plant health status quo is, therefore, of vital importance if a country or region is to maintain or increase the possibilities of placing its agricultural products on international markets.
6. The use of exclusion and/or eradication methods as a means of control has been shown to be an effective tool in preventing the entry, establishment and spreading of agricultural diseases and pests in vast geographic areas.

1/ Diseases and pests subject to quarantine are those that represent a potential threat to the economy of a country or region. This category includes diseases and pests that are: a) exotic for the country or region; b) not exotic, but are not widespread and/or cause damages of little or no importance, but could become severe and uncontrollable.

7. These control methods have already been used successfully in the Southern Area, particularly in connection with very specific cases (foot and mouth disease in Chile, African swine fever in Brazil, Mediterranean fruit fly in Chile).
8. The effectiveness and success of these control methods depend primarily on the technical capability of official agricultural health services in identifying and detecting pathogens (and/or their vectors) and exotic pests, as well as on the timely adoption of emergency measures in response to the entry and/or detection of new animal or plant health problems subject to quarantine.

b. Objectives

The objectives of this project are as follows:

General objective

To prevent the entry and/or spreading of pests and diseases subject to quarantine and prevent them from affecting international agricultural trade.

Specific objectives

1. To establish animal health and plant protection emergency systems for use by national animal health and plant protection services in the countries of the Southern Cone.
2. To improve the training of professional, technical and non-technical personnel of national agricultural health services in diagnosing diseases and pests subject to quarantine and applying of animal and plant health emergency measures.
3. To train and/or upgrade professional, technical and non-technical personnel in charge of international agricultural quarantine services in surveillance and inspection techniques of agricultural products at international ports of entry.
4. To support the implementation and equipping of national agricultural health services to facilitate and/or improve the operation of agricultural emergency and international quarantine services.

c. Strategy

In order to establish animal health and plant protection emergency systems, this project will be based on the use of organization, structuring and training methodologies developed to date by the Mexican-American Commission for the Prevention of Foot and Mouth Disease and Other Exotic Diseases, the Division of Plant Protection and Quarantine (PPQ) of the Animal and Plant

Health Inspection Service (APHIS) of the United States Department of Agriculture (USDA), the North American Plant Protection Organization (NAPPO), the European Plant Protection Organization (EPPO), the United Nations Food and Agriculture Organization (FAO) or other animal and plant health organizations.

One of the main actions of the project will be to train personnel, mainly trainers. For this purpose, national or international level seminars will be developed for those in charge of national services, and on-the-job training for those in charge of operating units at the national level, with support from specialized consultants.

Support for the improvement of the implementation and equipping of quarantine and diagnostic laboratories will also be one of the project's activities.

Efforts will be made to use the experiences of the countries themselves in several of the aforementioned aspects, thus encouraging horizontal cooperation. The experience and installed capacity of IICA in the countries of the region will be used in implementing, coordinating and managing the Project.

d. Components of the Project

For logical and practical reasons, two components will be considered for this Project:

1. Strengthening of national systems of international agricultural quarantine and
2. Establishment and/or strengthening of animal and plant health emergency systems.

e. Overall Goals of the Components

Component 1

Strengthening of national agricultural quarantine services.

Goals

1. Upon completion of the Project, changes in the technical and operating efficiency of the agricultural inspection and quarantine services that facilitate and accelerate animal and plant health certification processes for agricultural exports and imports will have taken place. The implementation and equipping of quarantine laboratories will have improved.
2. Upon completion of the Project, 1210 technicians will have been trained in inspection and quarantine techniques.

Component 2

Establishment and/or strengthening of animal health and plant protection emergency systems.

Goals

1. Upon completion of the Project, animal health and plant protection emergency services will have been established in all the countries, within the official agricultural health bodies. These services will operate within the appropriate institutional and legal framework, and have the organizational, administrative and operating ability to make timely diagnoses and implement eradication and/or control operations for diseases and pests subject to quarantine. The teams that are set up will have the necessary tools to implement the actions.
2. Upon completion of the Project, 272 professionals, 103 technical staff members, and 825 field agents will have been trained.

f. Project Beneficiaries

The main beneficiaries of the Project will be national animal health and plant protection programs of the Southern Area, since their technical ability to prevent, diagnose and eradicate diseases and pests subject to quarantine will have been strengthened, thus contributing to the preservation of the state of animal and plant health in the countries of the region.

g. Costs and Funding

The total estimated cost of the for year project is US\$2,496,400.

ORGANIZATION FOR IMPLEMENTATION

a. Executor Body of the Project

The executors of the project will be:

1. For the area of animal health

The Inter-American Commission on Animal Health (COINSA)-Southern Area, comprised of the national directors of animal health in the countries of the region.

2. For the area of plant protection

The Board of Directores of the Plant Protection Committee (COSAVE), comprised of the national directors of plant protection of the countries of the region.

BENEFITS AND JUSTIFICATION

a. Technical Feasibility

Through the application and adaptation of models and methods developed in the region and at the international level, this Project will strengthen institutional aspects, technical training and the instrumentation of international agricultural quarantine services. It will also strengthen and/or encourage the establishment and operation of animal health and plant protection emergency services in the countries of the Southern Area.

b. Legal Feasibility

The laws and regulations that govern the activities of government animal health and plant protection services consider one of their main functions to be the prevention of exotic diseases and pests and recognizes these organizations as the executor bodies for control and eradication programs for these diseases and pests.

c. Institutional and Financial Feasibility

It is well known that all of the agricultural health services of the countries of the Southern Area have, within their organizational infrastructure, a sector that deals with the inspection and supervision of imported and exported products. In regard to animal health, all official services have sectors that are in charge of the surveillance of and battle against exotic diseases and, in some countries, there is a sector that is in charge of organizing animal health emergency systems. A similar sector, however, has not been established for plant protection.

-EVALUATION OF ANIMAL DISEASES AND PESTS IN THE COUNTRIES OF THE SOUTHERN AREA (Title change from previous one: Strengthening of Redsur (Southern Network of Veterinary Diagnostic Laboratories))

FRAME OF REFERENCE

Knowledge of the economic impact of animal diseases and pests on livestock production, productivity and marketing is fundamental for establishing priorities for their prevention, control and/or eradication. It is also necessary for justifying investments in the human, material and financial resources needed to carry out animal health programs.

This project aims to strengthen the animal health services of the countries of the Southern Area by implementing national units in charge of gathering, processing and analyzing data on the presence of animal diseases and pests and making an economic evaluation of damages they cause. The units are also in charge of upgrading the technical capacity of the animal health laboratories, by establishing a technological exchange mechanism among the laboratories.

On the other hand, in spite of efforts made over the past few years to modernize animal health laboratories and train their personnel, various evaluation studies indicate the poor availability of infrastructure and resources, and a low level of training; they stress the need to create a comprehensive mechanism for the laboratories that will facilitate technological exchange among them.

In summary, in order to acquire a source of information that will enable them to establish priorities and justify their health programs, veterinary services must have the organizational, administrative and operating ability to gather, process and analyze reliable data from animal health laboratories and information gathered directly from the establishments.

THE PROGRAM, ITS COST AND FUNDING

The conceptual bases of the project are to introduce a proven methodology into veterinary services of the countries of the Southern Area for determining, with a high degree of reliability, what the economic impact of animal diseases and pests is on livestock production, productivity and marketing.

The objectives of the project are:

1. To implement and strengthen national animal health laboratories in the countries of the Southern Area in order to ensure the reliability of diagnoses of diseases and pests, by establishing a subregional horizontal technical exchange mechanism in this field.
2. To implement national units to gather, process and make an economic analysis of data on the prevalence, incidence and distribution of diseases and pests.
3. To establish a subregional mechanism to disseminate the information generated in the countries.

This project is divided into two components: the implementation of a mechanism for evaluating the economic impact of animal diseases and pests, and the establishment of a technological exchange mechanism among animal health laboratories of the countries of the Southern Area (REDSUR).

The beneficiaries of the project will be animal health services, which will receive a reliable mechanism to rank and justify their health programs; animal health laboratories, which will witness an increase in their technical capacities; schools of veterinary sciences, which will receive the appropriate information to orient their research programs; and farmers in general, who will receive basic information needed to establish prevention, control and/or eradication programs.

The following activities will be developed in the project:

- a. Establishment of institutional mechanisms to implement and execute the two project components.

- b. Training of personnel from animal health laboratories and national units.
- c. Equipping laboratories and national units.
- d. Testing of economic impact evaluation system for pests and diseases in the pilot area, evaluation of results, and application of the system at the regional level.
- e. Operation of diagnostic and applied research programs.

The total estimated cost of the project is US\$1,334,200.

BENEFITS AND JUSTIFICATION

National animal health services, research and teaching institutions have the basic structure required to enable them to benefit from the aforementioned training programs and apply the methods acquired, as long as the necessary material and equipment are available.

This project involves the detection of conditions that are unnoticed or underestimated by the farmers, but which significantly affect the production and productivity of their animals (i.e., paratuberculosis; deficiency and parasite diseases, neonatal diarrhea, etc.), problems that have relatively economical and easy solutions in regard to their application, with the advice of private official or research veterinaries.

-ECONOMIC RESEARCH PROGRAM: POTENTIALS AND LIMITATIONS FOR JOINT AGRICULTURAL DEVELOPMENT IN THE COUNTRIES OF THE SOUTHERN AREA

FRAME OF REFERENCE

- a) The preparation of the Plan of Joint Action for Agricultural Reactivation in Latin America and the Caribbean opens the way for academic discussions in search of answers to and confirmation of the questions and hypotheses on which the Plan is based. Latin American thinking in regard to economics is going through a profound crisis in that the important changes these economies have undergone over the past twenty years, and the shifting position of the hemisphere within the world context, do not correspond to the theoretical frameworks that have predominated since the 1950s, which were basically set within the structuralist schemes of ECLAC. The crisis of the early 1980s and the seriousness of the foreign debt point up the urgency for new ideas.
- b) The countries of the Southern Area have followed a very important course in economic development in their universities and other research centers, which has been strengthened over the last fifteen years. Agriculture has been a relatively privileged area for study by economists. It has the necessary research teams to tackle the studies that are identified.
- c) IICA is fully equipped to carry out an economic research program. It has highly trained specialists and is capable of bringing together the best minds from the academic field.

The experience of the Cooperative Research Project on Agricultural Technology (PROTAAL) is very significant in this regard. From 1977 to 1982, IICA coordinated a program in which an important group of research projects on the generation, transfer and adoption of technology was carried out in more than ten countries of the region. Researchers from various countries, specializing in social sciences, participated in this program. The teams of researchers adopted a common methodology and held various seminars in which they discussed the progress and results of their work, which led to studies of value to the different countries, and to syntheses/abstracts that brought together a new view on technology in Latin America and which today serves as a conceptual alternative for dealing with this topic.

THE PROGRAM, ITS COST AND FUNDING

a. Conceptual bases of the proposed program

The discussions resulting from the preparation of the Plan of Joint Action cover three main areas. First, an attempt is made to establish the capacity of agriculture and agroindustry to spur economic development in the Southern Area. Second, since the Southern Area is the main food exporting region of Latin America, the dynamic nature of agriculture is associated with the conditions needed to be competitive and with the possibility of penetrating international markets. Third, and this is what makes IICA's Plan innovative, is the implication that this dynamic capacity --basically in regard to exports-- can be generated through joint actions undertaken by two or more countries of the Area.

b. Objectives

The general objective of this program is to contribute to generating new thinking on the agricultural sector of the Southern Area and its role in the development process of the region.

The objective of the economic research program, within the context of the Plan of Joint Action designed by IICA, centers on determining the potential and limitations of the economies of the Southern Area for carrying out a joint agricultural/agroindustrial development process.

c. Strategy

In general terms, the strategy to be followed responds to the following objectives:

- 1) Steps must be taken toward reaching a clear conceptual and theoretical definition of the topic to be researched. This will be achieved through an initial discussion of the basic hypotheses, the results of research projects carried out at the national level, efforts to synthesize the above at the area level, and an ongoing review and updating of the hypotheses, which will finally bring about the desired effect.

- 2) When selecting topics for projects, priorities established in the Plan of Action, as well as the common concerns of the organizations that are carrying out agricultural development and integration strategies, must be kept in mind. Efforts should be made to establish coordination with FAO, ECLAC, ALADI and other specialized organizations.
- 3) The program will seek to have the empirical studies adhere to strict, related methodologies that produce comparable and compatible results. This strategy seeks to ensure the highest level of work possible and thus guarantee the validity of the results, as a basis for political decision making. This will help to support the opinions of the national academic teams.
- 4) Efforts will be made to check the hypotheses, progress and results against the views of economic policy makers, through consultations with the ministers of agriculture.
- 5) The strategy addresses the need for transferring the results of research to different levels and intends to introduce innovative mechanisms to that end. It is aimed mainly at those who make sectoral policies, foreign trade policy, etc.

The results of the research should be disseminated to academia, technical personnel of the public sector and to entrepreneurial sectors.

These findings are of particular interest as undergraduate teaching materials and as thought-provoking materials for graduate studies.

The "translation" of the results of this research into verifications or recommendations that can effectively be used requires a special type of methodology that must be dealt with in a specific manner.

- 6) Exchange among researchers from the different countries will be encouraged so as to generate academic links that go beyond simply setting up institutional networks, thus creating an ongoing joint economic research process.

c. Components of the program

The program contains four components:

- 1) The coordination of the program includes preparing the conceptual framework, supervising empirical studies, synthesizing information and follow-up.
- 2) The research projects are geared to the concerns set forth in point b and will cover areas dealing with:

- i. The role of agriculture and agroindustry in the overall economic strategy. Similarities and differences among national strategies.
 - ii. The potential of and limitations on expanding intraregional trade. Studies will be made on the variables that determine whether these countries increase the trade of agricultural and agroindustrial commodities with their neighbors. The effect of the different instruments used by integration policies will be analyzed.
 - iii. The impact of national agricultural policies on the regional process will be explored and alternate policies will be proposed. The critical approximation of integrative policies concerning agriculture in effect, particularly the Common Agricultural Policy (CAP), are important reference points for this area of investigation.
 - iv. The possibilities of coordinating specific policies --foreign trade, monetary and exchange policies-- among the countries of the Area, and their effect on regional agricultural development.
 - v. Competitiveness of the main agricultural and agroindustrial items in these economies. This area includes the estimates of protection, the definition of comparative advantages, the role of technology, etc.
 - vi. Conditions for allowing the countries of the region to enter international food markets. A basis for implementing a joint export strategy will be sought to strengthen the position of these countries in the world market.
 - vii. Possibilities --and current limitations--for introducing new agricultural/agroindustrial products into the different segments of international agricultural food markets.
- 3) Efforts will be made to strengthen a joint economic agricultural research infrastructure at the area level, by holding academic seminars, the exchange of researchers among research centers, and participation in future research programming.
 - 4) The dissemination of the results of research to different levels will give rise to different types of publications, seminars, conferences, etc.

e. Beneficiaries

The direct beneficiaries of the program will be the researchers who are invited to participate in the same.

Indirect beneficiaries will be the potential users of the results of the research carried out within the program.

f. Activities

The following are activities that will be developed during the first phase of the 30-month program.

The activities will be developed in three stages:

Stage I - (6 months)

This first stage will involve preparation of activities for launching the research project.

The activities will be the responsibility of the coordination component.

- i. Preparation of the hypotheses, definition of priority topical areas, and the preparation of methodologies.
- ii. A discussion seminar on the conceptual bases and methodologies of the research projects.
- iii. Preparation of proposals for research by the selected national teams, on the topics agreed to, and based on conceptual and methodological guidelines approved in the seminar.
- iv. Evaluation of the proposals by the coordination component and discussion of amendments/adjustments to the same, with a view to standardizing methodologies, etc.

Stage II (18 months)

- i. Development of research by national teams. Approximately ten research projects lasting an average of twelve months can be carried out.
- ii. Follow-up on the research by the Coordination component.
- iii. Design of methodologies for synthesis studies.
- iv. Exchange of researchers among national teams and the coordination team.
- v. Discussion meetings for teams working in common technical areas.
- vi. Seminar to exchange progress made on research.
- vii. Preparation of informative materials to report on partial results or research progress.

Stage III (12 months)

This stage will begin once the national research teams have completed the studies. The activities are primarily aimed at synthesizing, disseminating and giving continuity to the research.

- i. Review, by the coordination component, of the final research reports of the national research teams, and discussion seminars in each country.
- ii. Regional discussion seminar on results of national studies.
- iii. Synthesis studies at the Area level, carried out by the research teams that are ad hoc members of the coordination component.
- iv. Design of follow-up methodologies for the processes that were the object of the research projects, and up-dating mechanisms.
- v. Publication of national studies.
- vi. Preparation of materials for dissemination at different levels, based on the results of the national studies.
- vii. A final seminar in which the results of the syntheses will be discussed, and the follow-up methodologies and the bases for implementing the second phase of the research program will be considered.
- viii. Publication of syntheses.
- ix. Preparation of materials for dissemination, at different levels, of the final results of the program.

ORGANIZATION FOR IMPLEMENTATION

The economic impact research program will have a coordination team at the Area level, that will be situated in IICA. The Institute will designate the coordinator and select, in consultation with the governments, the academic institutions that will participate in the program.

The national teams will participate in the discussion of the general conceptual guidelines and methodologies, and they will propose their specific research projects to the coordination team.

-PROGRAM ON STRENGTHENING OF MINISTRIES OF AGRICULTURE OF THE COUNTRIES OF THE SOUTHERN AREA IN ACTIVITIES PERTAINING TO FOREIGN TRADE AND INTEGRATION

FRAME OF REFERENCE

- a. The countries of the Southern Area constitute the main export region for agricultural/agroindustrial products of Latin America. The weight of these sectors in the external strategy of these economies has been of historical importance.

- b. The external strategy plays an important role in the current models and determines the nature of macroeconomic policies.

As a consequence, sectoral objectives are secondary and production is strongly affected by the macroeconomic policy, diminishing the importance of agricultural/agroindustrial policies.

- c. This effects the institutional framework as the ministries of economy, planning offices --those responsible for macroeconomic definitions-- are strengthened and the ministries of external relations are called upon to play increasingly important roles in foreign trade.

The ministries of agriculture have a role to play as a result of their traditional organization, which is aimed at problems more directly linked to production than to international situations.

In Argentina, there is an international agrarian service, a unit of the secretariat of agriculture, in charge of matters of protocol that affect the secretariat. Over the past years, the service has taken on a more professional nature and has begun to deal more with trade matters.

In Brazil, the Coordination Unit for International Agricultural Affairs (CINGRA) is part of the Inter-Ministerial System for Technical and International Cooperation.

The ministry of agriculture in Chile has implemented a department of international trade and technical assistance.

The ministry of agriculture in Paraguay supervises agricultural exports through various offices, but does not have a specialized unit for foreign trade.

The ministry of livestock, agriculture and fisheries in Uruguay does not have a specialized unit either. There is, however, within the programming and policy directorate, a team that processes data on international food markets.

- d. The Plan of Joint Action for Agricultural Reactivation in the Southern Area, currently being prepared by IICA, envisages having a strong effect on the foreign trade of agricultural/agroindustrial products, which focus on reactivating intraregional exchange and on implementing joint strategies for entering extraregional food markets.

The ministries of agriculture, as the bodies responsible for carrying out the Plan, and governing bodies for national agricultural policies, will face an important challenge in regard to the effect on the overall foreign trade policy, and in bringing agricultural and agroindustrial policies into line with the Plan's objectives for increasing exports.

Therefore, the need to strengthen the ministries and enable them to specialize in the area of foreign trade becomes more important and urgent. At the same time, the importance that the Plan gives to joint actions highlights the interest in having institutional strengthening carried out from a joint point view, which facilitates understanding and helps implement the institutional mechanisms of an agricultural integration policy.

THE PROGRAM, ITS COSTS AND FUNDING

a. Conceptual bases of the program

The program sets forth the following general principles:

1. First, it should be noted that the objectives proposed at the institutional level will be effectively achieved only if the ministries of agriculture receive strong support at the political level.
2. The foreign trade strategy of each country is the result of the general guidelines of its economic model, and the limits that the external context imposes on it. This strategy includes and, at the same time is conditioned, by the performance of the production sectors which support it.
3. As progress is made toward establishing joint actions among the countries of the Area -already joined by formal integration mechanisms of varying scope- the suitability of the ministries of agriculture as participants in formulating national foreign trade policies will facilitate mutual understanding for identifying and overcoming the obstacles that exist for achieving integration (as is the case with sanitary or transportation problems), and will encourage joint actions in different fields: multinational agroindustrial export development programs, development of marketing capabilities to gain access to international markets, etc.
4. Institutional solutions for managing agricultural matters at the international level could imply reforms of varying degrees, such as the organization of high-level institutions.

b. Objectives

First, the program proposes to upgrade the ability of the ministries of agriculture of the countries of the Southern Area to participate in formulating agricultural foreign trade policies within the framework of the overall foreign strategies of each country.

Secondly, it plans to create linkage mechanisms among the ministry of agriculture units and experts that deal with foreign trade and integration.

c. Strategy

The program seeks to develop a number of parallel activities in the five countries, aimed at achieving the proposed objectives.

Three basic instruments will be used for institutional strengthening: training of human resources, develop closer ties among the experts of the organizations whose actions are being coordinated, and a free exchange of information among the units involved in the program.

d. Components of the program

The program has three components:

1. The establishment of "nuclei" or working groups and the design of the three-year program of activities.
2. Training of members of the groups and the ministry staff in areas related to foreign trade.
3. Establishment of an information exchange system among the units involved in the program.

e. Program Beneficiaries

The direct beneficiaries of the program are the ministries of agriculture in that their capability for participating in agricultural foreign policy will be enhanced.

f. Activities

The program includes the following activities, which will be carried out simultaneously in the five countries:

1. Identification of the institutional area, within the ministries of agriculture, in which the working groups defined in the program will be located.
2. Selection of technical staff from the ministries of agriculture and external relations who will make up the groups, as those from well as the public or private organizations that should be included in the group. The selection should be based on background and ability; there should also be an age limit.
3. Appointment of groups, definition of scope of activities and goals of the three-year working program.
4. Leveling course on foreign trade topics for senior staff members of the ministries of agriculture. This course will serve to generate interest, create the necessary environment, and provide an opportunity to rank the tasks assigned to the working groups.

5. Organization of seminars and training courses to be held in the five countries at different times and on different topics to which members of other national groups will be invited. These activities will facilitate the sharing of know-how and experiences accumulated by the experts from each country, with colleagues from the rest of the Area.

Training activities should be offered in the fields of cooperation, foreign trade, trade policies, negotiation techniques, etc., with the participation of staff members from the ministries of agriculture, external relations and trade. They should also encourage participation by representatives from the private sector.

6. Organization and setting up of a national information system and information transfer mechanisms among the five countries.
7. Follow-up for information system and semi-annual evaluation of the same.
8. Implementation of an exchange program for technical staff members among the groups from the different countries, and the establishment of apprenticeships in member countries of the European Economic Community (EEC), the United States of America, Canada, etc.
9. Organization of periodic meetings for those in charge of the working groups in order to exchange experiences and evaluate the progress of the Program.

ORGANIZATION FOR IMPLEMENTATION

The program will be carried out with the technical cooperation of IICA which will coordinate the three-year Program.

The advisory team designated by IICA will be made up of a consultant on institutional affairs, one on foreign trade and one for computerized information systems. The consultant on foreign trade will coordinate and supervise the program.

2. Ideas to be developed

-SUPPORT FOR THE ESTABLISHMENT OF A COMPREHENSIVE FRUIT FLY MANAGEMENT SYSTEM IN THE SOUTHERN AREA

a. Description of the Problem

The presence of the Mediterranean fruit fly (Ceratitidis capitata) and other flies from the tephritidae family in the Southern Area constrains the development of the fruit and vegetable subsector, leads potential markets for fruit and vegetable products to set up health barriers in importing countries, causes local markets to reject products due to inferior quality, causes economic

losses in excess of 30% to the small farmers, and increases production costs due to the need for both pre-and post harvest control measures.

The presence of fruit flies in the countries of the Area causes the following problems:

- Production and marketing of fruit and vegetable products is restricted at the national and international levels.
- Little is known about the precise distribution of important species within the areas of fruit production.
- The general lack of information in regard to the levels of infestation and of the preferred hosts makes it difficult to select the most appropriate control method.
- More research must be made on the taxonomy, biology, ecology and behavior of the different species, as well as in regard to control methods.
- It is necessary to establish an integrated management system for the different fruit flies.
- Efforts must be made to encourage national, regional and intraregional coordination actions to detect and combat fruit flies; establish quarantine systems; carry out research and gather information that will make it possible to detect "free zones" and thus increase the national and international trade of fruit and vegetable products.

b. Objectives of the project

To strengthen the organization and technical structures of plant health institutions, with a view to establishing integrated fruit fly management programs in the Southern Area.

c. Activities

1. Diagnosis of the fruit fly situation

- Sampling through trapping adult flies and fruits in the countries in order to establish existing fruit fly species and identify free areas. Identification and census of hosts of the different species, annual fructification periods and degrees of preference.
- Information on the movement of adults within specific zones compared to the availability of foods needed for egg laying. Correlation of fluctuations of populations with hosts and climate. Studies on the taxonomy, biology, natural enemies and control of native fruit fly species.

2. Application of integrated management methods

- Development of treatments to reduce production losses. Development of alternate treatments to replace the use of ethylene dibromide (EDB), to allow the exportation of fruits and vegetables from the Area. Gathering and analysis of fruit fly control technology. Preparation of forms for recording, storing and analyzing methods and practices to combat fruit flies.

3. Training of technical staff and farmers

- Train technical staff in identification of fruit flies and range of fruit hosts; in sampling and mapping systems; in gathering and recording of data; and in breeding, identification and control of native fruit fly species. Courses, seminar-workshops and on-the-job training will be offered. Training will also be offered in handling and computerizing data generated by the project.
- Talks, hands-on demonstrations and field trips will be used to train farmers.
- Bulletins and procedure manuals will be published, and all the techniques available in the mass media will be used to demonstrate the benefits and operation of the project.

d. Strategy

The general strategy joins and coordinates the efforts of the countries of the Area in order to establish integrated fruit fly management systems that use legal, cropping, mechanical, chemical, biological and sterilization control methods efficiently and effectively.

The project complements the actions of the Animal Health and Plant Protection Information and Data Monitoring System for Latin America, in regard to the actions of this project in the Southern Area in the field of plant protection.

In order to disseminate information on the economic impact of diseases and pests, the project will establish contact with the central unit of the Animal Health and Plant Protection Information and Data Monitoring System for Latin America, in San Jose.

e. Budget

IICA	Local Governments	External Resources
US\$482,010	Infrastructure and	
Installed capacity	plant protection	
in the Southern Area	personnel	

f. Duration

Four years. From January 1989 to December 1992.

C. **FUNDING MECHANISMS**

-PROMOTION OF INVESTMENT IN AGRICULTURAL PROJECTS IN THE SOUTHERN AREA

FRAME OF REFERENCE

In compliance with Resolution X of the Ninth Inter-American Conference of Ministers of Agriculture, the Inter-American Board of Agriculture charged IICA, as the specialized organization of the inter-American system, to prepare, in collaboration with the governments of the other organizations of the inter-American system and other specialized organizations, a Plan of Joint Action in support of agricultural revitalization and economic development in Latin America and the Caribbean.

Among the guidelines set forth for the preparation of the Strategy of Joint Action, the ministers of agriculture recommended that the Strategy should focus on:

- i. joint actions among countries, at the regional and subregional level, to solve concrete problems;
- ii. achieving maximum complementarity and synergy for the different initiatives to revitalize the sector;
- iii. the need for financial and technical assistance from donor countries and organizations;
- iv. proposed mechanisms for inter-institutional coordination; and
- v. the establishment of priorities for joint actions and initiatives so that the best possible use is made of available resources.

In September 1988, in Asuncion, the vice ministers of agriculture of the Southern Area (Argentina, Brazil, Chile, Paraguay and Uruguay) studied a document submitted by IICA, entitled "Strategy of Joint Action for Agricultural Reactivation in the Countries of the Southern Area: Ideas for Discussion."

The following objectives were established in this document:

- i. Enhance the role of the agricultural sector in the revitalization and economic development of the countries of the Southern Area in light of the current crisis;
- ii. Strengthen common production capability through joint actions and policies that maximize national efforts, as well as joint actions geared to increasing the capacity and role in world markets;

- iii. Increase the efficiency of agrarian and agroindustrial production by introducing effects of scale through integration-oriented measures and through alliances with third countries;
- iv. Increase the bargaining power and relative strength of the Southern Area countries in world markets, through permanent alliances built around agricultural development; and
- v. Help solve structural problems in the national agrarian economies, through a gradual harmonization of policies on incentives, technological development, marketing of agricultural products and strengthening of institutions.

In order to achieve the aforementioned objectives, the vice ministers, in the Asuncion meeting, highlighted the need to carry out concrete actions in relation to:

- the consolidation of the existing structures for technical agricultural cooperation;
- economic research on agricultural integration;
- strengthening of ministries of agriculture;
- agroindustrial integration; and
- establishment of a preinvestment fund.

-CONCEPTUAL BASES OF THE INVESTMENT PROMOTION PROGRAM

Given the importance of the proposed Investment Promotion Program for agroindustrial development, attention is first given to the analysis of the basic concepts that will govern the action in this sector; consideration is then given to other investments, which will be called "strategic," and which will facilitate investments in agroindustry and other agricultural activities.

a Agroindustrial Development

- i. A broad concept of agroindustrial complexes is adopted, one which includes the production and marketing of agricultural products, the industries that transform these products, including production phases that ensure their conservation and preparation for marketing, and industries that produce inputs and capital goods for agriculture.
- ii. The basic premise is that the technification of agricultural activity is essential if development of this complex is to be feasible. This applies to productivity increases and cost reductions as well as to generating an aggregate demand for agriculture outputs.

- iii. The five countries of the Southern Area have reached a different level of agroindustrial development based on various conditions.
- iv. Some countries of the Southern Area, particularly Brazil, face food supply problems that could be alleviated through complementary regional actions.
- v. These countries, or at least some of them, have difficulties in obtaining inputs and capital goods for agriculture that reflect their specific productivity and cost structures.
- vi. The five countries are exporters of agroindustrial commodities and face the limiting conditions imposed upon them by international markets in which each country penetrates the market according to its own strategies. Harmonization of these strategies by multinational export enterprises would both favor food security in the Area and reinforce the bargaining power of the region.
- vii. The agricultural revitalization processes experienced by the countries of the Southern Area over the past years were not generally associated with an increase in intraregional trade, since they took place independently from the process of integration.
- viii. National agroindustrial processes did not respond to specific policies, but rather were brought about within the framework of overall industrialization policies, whether for import substitution or the promotion of exports.
- ix. Joint actions aimed at encouraging agroindustrial integration will be essentially aimed at private entrepreneurs from the different countries, without ignoring the important role of public enterprises that operate in agroindustry or complementary areas.

b. Strategic Investments in the Agricultural Sector

Chapter II of this document, which serves as support for the consideration and selection of subregional actions in the Southern Area, presents an in-depth examination of the concept of strategic investments, both public and private, in infrastructure, the production base, marketing and institutions, which affects regional development. In it, priority sectors for joint investment are identified.

-SELECTION OF INSTITUTIONAL METHODS OF ACTION

a. Precedents for the Effectiveness and Use of Preinvestment Funds by the Private Sector

In studies made after the meeting of vice ministers of agriculture, in Asuncion, to consider the establishment of a

preinvestment fund, special emphasis was placed on the priority objective of encouraging private investments. An analysis was made of the experiences with preinvestment funds from the Inter-American Development Bank (IDB). The IDB is the organization with the most experience in setting up preinvestment funds and has contributed to funding these in Latin America and the Caribbean.

Evaluations made by the IDB indicate that in Brazil and Mexico the private sector has made significant use of preinvestment funds.

The situation in Brazil is especially instructive. The Financial Agency for Studies and Projects (FINEP), a public entity under the jurisdiction of the ministry of science and technology, serves as a preinvestment fund.

However, the importance of FINEP as a preinvestment fund lies in the fact that the planning secretariat and the National Economic and Social Development Bank are developing a strategy that is consistent with sectoral and products studies, and which aims to identify areas and projects for investment.

An examination of the situation in the countries of the Southern Area and other countries in the region leads to the conclusion that the existence of preinvestment funds to finance feasibility studies is not necessarily the main incentive for the private sector to take the initiative for investing in new fields. Initiatives result more from intense efforts previously made to identify and promote projects.

b. The Identification and Promotion of Investment Projects

Agroindustrial entrepreneurs from the five countries should be the protagonists in the actions to identify projects. The establishment of subregional agroindustrial complexes requires entrepreneurs who are willing to invest in agroindustrial activities of importance to the region and to participate in joint ventures with entrepreneurs from other countries of the area and even outside the area.

Therefore, one of the first aims of the strategy to be followed in the program proposed below is to identify, attract and bring together entrepreneurs of the region, placing them in the position to generate initiatives for joint agroindustrial activities that lead to investment projects.

Secondly, efforts will be made to identify areas for agroindustrial development that are appropriate for multinational investments.

c. Precedents at IDB for Financing Studies to Identify and Promote Investment Projects

As mentioned before, financing for studies to identify projects is one of the items included in the IDB's preinvestment loans to international organizations such as the Andean Development Corporation (CAF), the Caribbean Development Bank (CDB) and the Central American Bank for Economic Integration (BCIE).

Mention should also be made of two other components that are usually included in IDB projects which set up preinvestment funds: technical cooperation and funding for training. These two components are usually non-reimbursable or have very easy conditions when earmarked for institutional strengthening of executor organizations or counterpart national organizations.

d. Other Organizations and Resources to be Considered in Relation to Promotional or Project Identification Studies

The IDB and the European Economic Community (EEC) are actively involved in laying the groundwork for promoting investments by the member countries of the EEC in Latin America. To this end, on October 10, 1988, Enrique Iglesias, the president of the IDB and Claude Cheysson, on behalf of the EEC, signed a memorandum in which they indicated particular interest in:

1. cofinancing studies of investment projects and encouraging linkages between potential European and local associates;
2. cofinancing technical cooperation related to feasibility and market studies in regard to European-Latin American joint ventures for which European investors qualify, according to EEC definitions; and
3. identifying financial intermediaries who, together with the EEC and European industrial associates, can contribute to the capital of the joint ventures.

Also, for the benefit of Latin American countries, the EEC has donated 20 million ECUs to establish the so-called "Cheysson facility" to formulate investment projects in joint ventures.

-PROPOSAL ON THE IDENTIFICATION AND PROMOTION OF INVESTMENT IN THE SOUTHERN AREA

In view of the above and the considerations on the prospects and methods to encourage new integrationist investments, mainly from the private sector, a proposal has been developed aimed at overcoming the main limitations of this type of investment. A proposal has been made to establish an **INVESTMENT PROMOTION PROGRAM** which, in the experimental stage, will be uncomplicated to implement, at the institutional level, and inexpensive for the governments.

The objective of the program will be to identify investment projects and investors. The investors who benefit from the Program will be public or private enterprises or cooperatives or national or multinational small-farmer organizations and, should the case arise, risk-capital investors from outside the Area.

The governments will also benefit from the Program in that it offers the bases for identifying and establishing public investments that are essential for promoting the development of the agricultural sector. The Program will also expand concepts on areas in which the private sector is responsible for making investments which will benefit the sector and establish innovative concepts on responsibilities shared between the private and public sectors.

To this end, it is proposed that the countries of the Southern Area request that the IDB fund a non-reimbursable regional technical cooperation project to establish an **INVESTMENT PROMOTION PROGRAM**, emphasizing agricultural reactivation projects and integration. IICA will be in charge of implementing the program, with support from an advisory commission which will include representatives from the governments. The Commission will be under an administrative board which will also have government representatives. The program will be closely tied to the private sector, sources of investment and international risk capital.

a. Identifying Areas for Investment Projects

The Investment Promotion Program will identify integration-oriented projects in the following areas:

- "Integrated" or "integrating" agroindustrial projects. The executor unit of the program, together with consultants, will determine the sectors to be studied, based on the type of projects to be prepared. Appendix A outlines some of the criteria to be used in defining the types of agroindustrial projects.
- Public or private investment projects for joint actions related to the production base, production, marketing and agricultural institutions of the Southern Area. These will be strategic investments that will help open new areas of investment in agroindustrial production and in agricultural enterprises.

b. Institutional Mechanism

The governments of the countries of the Southern Area, which will be the beneficiaries of the IDB technical cooperation project which establishes the Investment Promotion Program, will charge IICA with the implementation of the program.

IICA will organize an executor unit in one of the participating countries.

The participating countries will set up an administrative board and an advisory commission for the Program, made up of one representative from each government.

c. Identification of Investment Projects

The program, pursuant to its objectives, will rank the implementation of consultative and collaboration mechanisms with the private sector, including small-scale farmer cooperatives and organizations, and with sources of risk capital in the Area and outside the Area.

d. The Priority of Integration

The coordinator of the program, together with the advisory commission and with the support of the appropriate public and private organizations, will negotiate promotional treatment with the governments of their respective territories for national or international integration investments. This treatment, which will be termed "integration priority," will include, among other things, tax and import advantages, etc., that will be effective for an undetermined period.

e. Identification of Strategic Investments

During consultations to determine the sectors to be studied, the program will include an analysis of the impact on the sector under consideration, the existing infrastructure, institutions and services. The studies will also include an examination of the problems.

f. Funding for the Investment Promotion Program

The program, which will last four years, will be established through a non-reimbursable IDB technical cooperation project. The beneficiaries of the program will be the governments of the countries of the Southern Area. Nevertheless, the project to design the program will be submitted by IICA, with the support of the participating governments and the IDB, to prospective donors for cofunding, together with the IDB. Among the possible donors are the World Bank, the European Economic Community (EEC) and FONPLATA and governments that fund technical cooperation activities in the Southern Area.

g. Alternatives for Funding Technical and Economic Feasibility Studies and Design and Engineering Studies

1. One alternative for financing technical and economic feasibility studies and design and engineering studies of projects for which an agreement exists, in principle, between investors and the governments that are willing to grant "integration priority," would be that they request the IDB to make these studies through contingent non-reimbursable technical cooperation.

2. National organizations will finance preinvestment studies (technical and economic feasibility studies and design and engineering studies) of the investment projects identified by the Investment Promotion Program, set up as recommended, and for which an agreement exists, in principle, between investors and the governments that are willing to grant "integration priority."

-ACTIVITIES

The following activities respond to the objectives and strategies outlined above.

During Phase I, preparatory tasks will be carried out to set up the infrastructure needed to implement the program. Phase II will initiate studies to identify projects and make the first contacts with the entrepreneurial sector. Phase III will carry on with the preinvestment studies, while promotion activities are developed.

The total cost of the project will be approximately US\$3,000,000.

APPENDIX

BASES FOR TYPOLOGY OF "INTEGRATED" OR "INTEGRATING" AGROINDUSTRIAL PROJECTS

The following are some of the criteria to be used in classifying agroindustrial projects for possible inclusion in the Program:

1. Type of Activity

a) Bi- or trinationnal integration of agroindustrial chains

There is a broad range of possibilities due to the multiple phases of agricultural and industrial production that can be integrated, and the many technical-legal mechanisms available to achieve integration.

The program will cover initiatives for the expansion and strengthening of existing agroindustrial complexes, especially proposals that open up new product lines that justify their existence through integration.

The following will be used as criteria in implementing these projects:

i) Complementing of ecological characteristics

For example, one possibility is breeding high quality, low-cost calves in Uruguayan pastures, which will be fattened with grains from Argentina. This will justify the installation of a modern refrigeration plant that will take top-quality meat products from La Plata River area to markets of high-income countries.

Similar complementary actions could lead to the installation of Argentine concentrated feed plants associated with Brazilian poultry breeding.

ii) Proper use of idle operating capacity

In the past, some plants in Brazil processed Uruguayan meat and that could be converted into joint ventures. Can the present expansion of Uruguayan wool products, currently exported dirty, washed or combed to Asian markets, be absorbed by neighboring textile industries?

iii) Physical proximity that makes it possible to cut transportation costs

Two possible examples: strategic location of a multinational dairy plant which would make it possible to process milk produced by farmers in the border region and supply the neighboring countries; installation of multinational sawmills in forest zones near borders.

iv) Complementation of industrial products

A binational dairy basin can divide its lines of production among specialized plants located in both countries, according to the demand of the respective countries.

Higher-aggregate level agroindustrial products can use raw material processed in larger-scale plants that exist in one of the countries.

v) Addition of agricultural supply to be processed in larger-scale plants or by more diversified industrial complexes. For example, industrialization of citrus products in fruit growing regions on both sides of the border.

vi) Shared access to new markets

Agreements between industrial processors from various countries to complement and specialize production so as to become competitive in international markets.

Possible agreements between Argentine and Uruguayan dairy product industries or between Argentine and Brazilian edible oil industries.

b) Production of capital good inputs for agriculture and for agroindustry

This opens up an interesting field of approaches:

i) Industrialization of agriculture with a view to increasing productivity and reducing costs --reproduction of comparative advantages-- requires vigorous efforts to expand the production of inputs and capital goods that adhere to the specific requirements of these countries.

Proposals that deal with these regional production system focus on common phases: research and development, acquisition of raw materials, primary processes, etc. Of particular interest is the fact that they diversify their production in order to take care of national or subregional specific needs. Fertilizers, seeds, forest nurseries, genetic materials for poultry breeding, etc.

ii) Countries with highly developed agroindustries have specialized in a second stage: manufacturing equipment for agroindustries. This is a field to be considered in the context of protocols on capital goods.

iii) The region includes Argentina and Brazil, countries which, in relation to the rest of Latin America, have strong capital goods industries. It would be interesting if they could provide Latin America with agricultural equipment especially appropriate for the needs of these countries. The possibility of motivating the establishment of certain prototypes of tractors, for example, carrying a regional brand, that could penetrate the ALADI market, would be an important initiative.

c) Research and Technological Development

Studies will be made of enterprises dedicated to research and development of new technologies that could be adopted for regional agroindustrial production. Studies must be made of the legal framework required for the intraregional trade of technology.

d) Marketing

The growing development of conservation, packaging, presentation and marketing, and restrictions that countries must overcome in order to introduce their products into world food markets, makes it important to support investment projects in areas that jointly cover the needs of the countries of the region.

Bottling plants for products from other countries; packing plants for export fruits and vegetables, strategically located near the borders; bi- or trinational exporting enterprises that jointly negotiate a basket of foods produced in these countries.

2. Destination of Production

The projects that will be presented to the preinvestment fund must seek to expand the regional trade of agroindustrial products at different levels.

a) At the border level, consolidate points of multinational development around nearby urban areas that make up an important market.

- b) At the regional level, increase the trade of these products among the three countries that have a wide margin for expansion: due to the insignificant portion of overall foreign trade they represent, and due to a possible increase in domestic demand in response to a more progressive redistribution of income.
- c) The region's participation in providing food to ALADI countries has been historically low. Integrated agroindustrial development among the countries of the Southern Area can pursue a joint strategy of increasing participation in Latin American markets, seeking to replace imports from outside the hemisphere and thus increase the impact of integration.
- d) Finally, since this is the key food exporting region of Latin America, expansion of regional trade will bring about greater and more defined participation in world food markets. In this regard, the Fund will support initiatives that seek to generate improved conditions of competitiveness - vis-a-vis integration.

D. INSTITUTIONAL MECHANISMS FOR IMPLEMENTING THE PLAN OF JOINT ACTION AND COORDINATING ACTIONS IN THE SOUTHERN AREA

Institutional consultative mechanism

During their meeting in Santiago, Chile, in March 1989, the five ministers of agriculture of the Southern Area countries agreed to establish an institutional consultative mechanism to provide follow-up on the implementation of the Plan of Joint Action in the subregion. This mechanism will also make it possible to carry out actions related to the production and marketing of agricultural products, and to rural development in the subregion.

The mechanism will be entitled the Advisory Council for Agricultural Cooperation in the Countries of the Southern Area (CONASUR):

The political body in charge of the coordination and integration of CONASUR will be its Advisory Council, made up of the ministers of agriculture of the countries of that subregion. Its executive body will be a Coordination Secretariat, provided by IICA.

CONASUR will have an important role to play in relation to the Plan of Joint Action, and this will be to reach agreement on specific measures aimed at strengthening subregional action in the process to reactivate agriculture in the member countries, and to forge close ties with these countries and the countries of the other subregions.

Furthermore, CONASUR will serve as the highest-level sectoral forum for analyzing problems related to the development of rural areas, agriculture, forests, fisheries, the conservation of renewable natural resources and environmental protection in the member countries. It will also propose solutions in the form of joint and coordinated actions and measures.

Below is a transcription of the Letter of Understanding on which the ministers of agriculture of the Southern Area have agreed.

LETTER OF UNDERSTANDING BETWEEN THE SECRETARIAT OF STATE FOR AGRICULTURE, LIVESTOCK AND FISHERIES OF THE REPUBLIC OF ARGENTINA, THE MINISTRY OF AGRICULTURE OF THE REPUBLIC OF BRAZIL, THE MINISTRY OF AGRICULTURE OF THE REPUBLIC OF CHILE, THE MINISTRY OF AGRICULTURE AND LIVESTOCK OF THE REPUBLIC OF PARAGUAY, THE MINISTRY OF LIVESTOCK, AGRICULTURE AND FISHERIES OF THE REPUBLIC OF URUGUAY AND THE INTER-AMERICAN INSTITUTE FOR COOPERATION ON AGRICULTURE TO ESTABLISH THE ADVISORY COUNCIL FOR AGRICULTURAL COOPERATION IN THE COUNTRIES OF THE SOUTHERN AREA

The Secretariat of State for Agriculture, Livestock and Fisheries of Argentina, represented by Felipe Solá, the Ministry of Agriculture of the Republic of Brazil, represented by Iris Rezende Machado, the Ministry of Agriculture of Chile, represented by Juan I. Domínguez Covarrubias, the Ministry of Agriculture and Livestock of the Republic of Paraguay, represented by Hernando Bertoni and the Ministry of Livestock, Agriculture and Fisheries of the Republic of Uruguay, represented by Pedro Bonino Garmendia, referred to herein as "the ministers of agriculture" and the Inter-American Institute for Cooperation on Agriculture, represented by its Director General, Dr. Martín E. Piñeiro, herein referred to as "IICA,"

CONSIDERING

That IICA is a specialized body of the inter-American system, for technical cooperation in the field of agriculture and rural development,

That the governments of the Republic of Argentina, the Federal Republic of Brazil, the Republic of Chile, the Republic of Paraguay and the Republic of Uruguay, all signatories of the Convention on IICA which took effect on December 8, 1980, are empowered to sign letters of understanding with IICA to facilitate and promote the development of activities which may be carried out in their respective countries,

That from March 1988 to March 1989 three advisory meetings were held at the level of vice ministers or deputy secretaries of agriculture to study the formulation of the Plan of Joint Action for Agricultural Reactivation in Latin America and the Caribbean, during which special emphasis was given to the countries of the Southern Area,

That as a result of the aforementioned meetings there was consensus as to the need to create a permanent institutional mechanism for consultation on the many aspects related to agricultural cooperation among the countries of the Southern Area,

That during the third Advisory Meeting, held in Santiago, Chile on March 7 and 8, 1989, IICA was requested to prepare a document to create a consultation mechanism, based on the guidelines established by the vice ministers in said meeting,

AGREE**FIRST: PURPOSE**

To establish the Advisory Council for Agricultural Cooperation in the Countries of the Southern Cone (CONASUR). CONASUR is the institutional mechanism for consultation and coordination of the ministries of agriculture in matters related to rural and agricultural development, forestry, fisheries, the conservation of renewable natural resources, and environmental protection; as well as in their relations with international technical and financial cooperation agencies.

SECOND: ADVISORY COUNCIL

The Advisory Council, which is the political body responsible for coordination and integration, and is made up of the ministers of agriculture of the countries of the Area, shall meet at least once a year and have the following basic functions:

- a. Serve as the maximum sectoral forum for the study of problems dealing with the development of rural areas, agriculture, forests, fisheries, the conservation of renewable natural resources and environmental protection in the member countries, and to propose solutions to same through joint or coordinated actions.
- b. Serve as the permanent body for consultation, orientation and exchange of experiences related to development policies and programs of the agricultural sector in the subregion.
- c. Agree on concrete measures to strengthen joint subregional action related to the agricultural reactivation process in the member countries, and their relations with the countries of the other subregions.
- d. Encourage the adoption of joint stances for subregional relations in the international market for inputs and products from the sector, as well as in international fora to strengthen the bargaining capabilities of the subregion.
- e. Promote relations with regional and international organizations and agencies to guide and support initiatives, and channel technical and financial aid earmarked for activities related to the development of rural areas, agriculture, forests, fisheries, the conservation of renewable natural resources and environmental protection, at the subregional level, urging them to work through CONASUR in dealing with their affairs and deciding on the ways in which to coordinate the cooperation they offer.
- f. Consider reports and recommendations on the situation of the agricultural sector and its development in the countries of the subregion.
- g. Serve as a coordinating and support body for subregional mechanisms, programs and projects already under way in the Southern Area, or in the process of being implemented, such as PROCISUR and COSAVE.

- h. Support the operation of the Coordination Secretariat, and assign it tasks and responsibilities deemed necessary in relation to the development of rural areas, agriculture, forests, fisheries, the conservation of renewable natural resources and environmental protection.
- i. Approve the annual program budget and the rules and regulations of the for the operation of the Council and the Coordination Secretariat.
- j. Negotiate and provide resources which commit the ministries of agriculture to financing CONASUR actions.

THIRD: COORDINATION SECRETARIAT

- 1. The Coordination Secretariat is the executive body of CONASUR. Its work covers coordination and consultation in order to implement the agreements and resolutions of the Advisory Council. It is led by a coordination secretary who can be assisted by one or more temporary or permanent technical staff members, in accordance with the needs of the job and available financial resources. The secretary shall also have the secretarial support and infrastructure required to carry out his/her duties.
- 2. The coordination secretary shall be selected and appointed by IICA, in consultation with the Advisory Council, and must be a citizen of one of the member countries of CONASUR.
- 3. The coordination secretary, under the supervision of the Advisory Council, shall represent CONASUR and shall be responsible for managing and administering the Coordination Secretariat in accordance with the rules and procedures of IICA.
- 4. The coordination secretary shall have the following specific functions:
 - a. Serve as secretary of the Advisory Council and participate in its meetings, without a right to vote.
 - b. Promote and negotiate, together with the president of the Advisory Council, technical and/or financial assistance to carry out studies and formulate and implement subregional agricultural projects.
 - c. Advise the Advisory Council on matters related to agricultural policies and subregional development.
 - d. Promote active participation of the countries in deciding on, formulating and implementing subregional policies, programs and projects.
 - e. Prepare, in consultation with the countries, the annual proposed program budget of CONASUR, and submit it to the Advisory Council.

- f. Prepare and submit to the Advisory Council an annual report on the activities and financial status of CONASUR.
- g. Administer the financial resources allocated to the Coordination Secretariat to implement its activities, pursuant to the rules and procedures of IICA.
- h. Serve as liaison between IICA and other technical cooperation institutions.
- i. Disseminate official information on CONASUR and the results of its activities.
- j. Issue and enforce technical and administrative provisions, within its responsibilities.
- k. Supervise the staff of the Coordination Secretariat, to improve the efficiency of the services offered and the implementation of the activities.

FOURTH: PARTICIPATION OF THE COUNTRIES

The ministers of agriculture of the countries of the Southern Area agree to:

- a. Participate, through their respective ministers, on the Advisory Council, and to draw up the rule of procedure of CONASUR, pursuant to the provisions established herein.
- b. Allow for collaboration of national liaison technicians who must provide advisory services to CONASUR, as well as the services of other specialists needed to carry out tasks assigned by the Advisory Council.
- c. Provide institutional support required to implement the functions of the Coordination Secretariat.
- d. Contribute financial quotas established by a consensus agreement of the Coordination Secretariat.
- e. Provide facilities, technical-administrative services and any other logistic support required, in the country, to carry out activities entrusted by the Advisory Council.

FIFTH: IICA SUPPORT

IICA shall support CONASUR by:

- a. Appointing a member of its international professional personnel to carry out the duties of Coordination Secretary, and, if warranted, may cover the expenses of a local professional to assist the Coordination Secretary.
- b. Providing an office, a secretary, equipment and materials needed to operate the Coordination Secretariat.

- c. Appointing a staff member at IICA Headquarters to serve as a permanent link with CONASUR.
- d. Offering the participation of the IICA Offices in the member countries of CONASUR, in order to:
 - i. Act as liaison office between the Coordination Secretariat of CONASUR and the national authorities in the countries of the Southern Area.
 - ii. Support the systematization of know-how, problems and needs in each country, as they pertain to areas under the competence of the Coordination Secretariat of CONASUR.
 - iii. Promote, develop, support and provide feedback on activities carried out under the Coordination Secretariat of CONASUR.
 - iv. Supervise, participate, collaborate with national authorities and technical personnel on tasks assigned in accordance with CONASUR's annual plan of operation.
 - v. Support the Coordination Secretariat in the administration of CONASUR financial resources in the country.

SIXTH: FINANCIAL RESOURCES

1. CONASUR shall operate with resources from three sources:
 - a. Contributions from member countries
 - b. IICA contributions
 - c. Special funds
2. The contributions of the member countries shall be set by consensus agreement of the Advisory Council, and may be amended in the same manner.
3. The contributions of IICA shall be sufficient to put into effect the support called for in Clause Five of this document. Resources to cover this support shall be allocated in the biennial program budget approved by the Inter-American Board of Agriculture at its regular meetings.
4. The special funds shall consist of contributions from different sources to finance special programs or projects approved by the Advisory Council.
5. Separate accounting records shall be kept for each fund, in accordance with the specific rules and regulations approved for each and based on the agreements relevant to each.
6. The financial resources of CONASUR shall be administered by the Coordination Secretary, pursuant to the financial rules of IICA.

SEVENTH: DURATION OF THE AGREEMENT

This Letter of Understanding shall have a duration of four years, and shall go into effect upon signing. It shall be renewable by mutual written agreement, at least sixty days prior to its expiration, or may be replaced with a technical cooperation agreement prior to or on the date of its expiration.

Within the first two years of this agreement, an independent consultant shall evaluate the progress of same and the impact it has achieved in the respective countries. The Advisory Council shall secure or provide the resources needed to fund this evaluation.

EIGHTH: OBLIGATIONS OF THE PARTIES

The parties agree to comply fully with the obligations stipulated, unless prohibited from so doing by a force majeure or an act of God. Should such a case arise, and be duly documented by the interested party or parties, said party or parties shall be exempt of guilt.

NINTH: CONSULTATIONS

The signatories accept the right of the institutions providing financial aid to consult individually or collectively with the signatories on the progress and development of this agreement.

In witness thereof, the Ministers of Agriculture of Argentina, Brazil, Chile, Paraguay and Uruguay, or their duly authorized representatives, and the Director General of IICA hereby sign this Letter of Understanding, in six original versions of equal validity, to take effect as of _____.

Felipe Solá
Secretary of State for
Agriculture, Livestock
and Fisheries of the
Republic of Argentina

Iris Rezende Machado
Minister of Agriculture
of the Federal Republic
of Brazil

Juan I. Domínguez C.
Minister of Agriculture
of the Republic of Chile

Hernando Bertoni
Minister of Agriculture
and Livestock of the
Republic of Paraguay

Pedro Bonino Garmendia
Minister of Livestock,
Agriculture and Fisheries
of the Republic of Uruguay

Martin E. Piñeiro
Director General of the
Inter-American Institute
for Cooperation on Agriculture

IV. APPENDICES

APPENDIX I

SUMMARIES OF PROJECTS UNDER NEGOTIATION

REGIONAL NETWORK FOR GRADUATE STUDIES IN THE AGRICULTURAL SCIENCES

FRAME OF REFERENCE

Background and Justification:

The objective of this project is to design and develop a number of mechanisms for integrating graduate studies in the agricultural sciences in the region.

Graduate studies are limited by the basic infrastructure available (libraries, facilities, instruments, chemicals, etc), as well as by the size and characteristics of the general technological research and development system on which graduate studies programs are based (range of topics investigated, intensity and competitiveness of the research, flexibility of current research projects to admit trainees, etc.).

The goals of the project are to: i) create a regional network for linking existing graduate programs; ii) create a regional doctoral program that channels and gives a marked integrational emphasis to initiatives already under way at the doctoral level in different universities; and iii) test the mechanisms created, fine tune them, demonstrate their feasibility and strengthen them.

THE PROGRAM, ITS COST AND FUNDING

1. Conceptual Bases of the Program

- a. Current programs are designed to graduate approximately 160 students with Master's degrees, while only one of the universities (Porto Alegre) offers a doctoral program. This represents an average of 20 graduates per university per year.
- b. The limiting factor that should determine the size of graduate programs is the volume and intensity of the research activity carried out by state and private universities into which graduate research programs are to be inserted.
- c. Throughout the region, undergraduate studies are general in nature. Theoretically, the programs last five years but in practice, they actually last six or more, while in more advanced countries, under-graduate programs are shorter and more specialized.
- d. Deficiencies in most library infrastructure must be eliminated in order to meet the objectives. The system of agrarian science periodical and newspaper libraries must be strengthened and regionally integrated.
- e. A situation that must be overcome is the hesitancy of many centers of the region to establish doctoral programs. Great efforts must be made to publicize internationally the progress made in the region. The doctoral program is proposed as a research training mechanism in connection with research into original and innovative solutions for the problems affecting the region.

- f. Program curricula should be flexible and students should be allowed to select experimental topics for their theses.
- g. When possible, the doctoral program should be a parallel program, and not follow the master's program, given the excessive duration of the undergraduate program and the heavy academic load of the students.
- h. There are no regional initiatives for graduate programs, except those set forth in this project. Nor are there any specific mechanisms to encourage and promote regional exchange and complementary activities at the graduate level.

2. Objectives

The general objective for regional cooperation in the graduate program can be divided into three partial objectives:

- a. To support the implementation of master's programs in the universities of the region that are currently in the process of establishing such programs, providing the necessary support to help these universities become full participants in regional integration.
- b. To take what is currently an isolated group of graduate programs and make them into an integrated regional network, establishing the appropriate mechanisms for the exchange of ideas and resources.
- c. To enable the network to deal with regional problems in an original and innovative manner, through the creation of an integrated doctoral program.

3. Strategy

This project must be based on a strategy that takes into consideration all types of conditions that can affect current graduate programs, ranging from historical reasons to conditions of employment and the legal structures of the participating countries. For practical purposes, this strategy must interfere as little as possible with existing programs. It should encourage regionalization with the appropriate incentives, but, at the same time, it should be dynamic and ambitious in emphasizing the regional nature of new programs.

The network will be created to promote the exchange of ideas and human and material resources, and make use of instruments that make these exchanges possible.

4. Components of the Program

a. **The Doctorate Program on Topics of Regional Scope**

The following topical areas are tentatively proposed for the program:

- **Plant Protection** - This vital topic is generally given secondary importance in plant production programs. Emphasis is given to the diagnosis and control of known diseases and pests.

Nevertheless, there is a scarcity of top-level specialists for dealing with fungus pathogens, plant viruses, bacterial diseases, etc.

- **Improved Plant Genetics** (Phytotechny) - This area has not been sufficiently studied in existing programs. The experimental aspects of this topic lend themselves more to doctoral than master's studies, since it is necessary to study several generations in order to obtain the desired results.
- **Animal Production Systems** (Production of wool, milk, etc.) - Although the traditional livestock wealth of the region is a result of already defined methods used in the handling and reproduction of cattle and sheep herds, it should be noted that these methods can also be improved. As the need for changes arise, whether because of the socioeconomic needs of the production units, or because of the volume, type and quality of the final product (milk, wool, white meats, etc.), greater efforts will have to be made in the areas of reproduction management and animal nutrition.
- **Intensive Vegetable and Fruit Production** - Little attention is given to this specialty in the region. Existing programs consider it only in passing.
- **Use and Conservation of Regional Natural Resources** - Natural resources offer a broad field for research and innovation that require a thorough, cooperative approach.
- **Agroindustrial Technology** (Food industries) - This is an area of great interest for a rich agricultural region in which agroindustrial development is only in the initial stages.
- **Agroeconomical Aspects of Integration** - Regional integration is a political objective that has received ample consideration recently. In the case of agriculture, the path from political discussions to the concrete realization of integration must go through a quantitative scientific analysis of the methods, prospects and results of the process.

The list of topical areas should also be revised and updated by the steering committee, after consultation. The doctoral program will draw upon human and material resources already existing in the institution or institutions that serve as headquarters for each topical area, but will also receive additional support.

b. Consolidation of new graduate programs

Institutions in the region that have been delayed in implementing graduate studies, but which plan to establish such studies in the immediate future, must receive positive support so that they can actively participate, as soon as possible, in both doctoral programs on regional problems and basic activities geared toward encouraging

the regionalization of existing programs. New master's programs should not be overloaded in terms of credits and students; quality should not be sacrificed to quantity, and experimental aspects of the program should be given top priority.

c. Promoting the regionalization of existing programs

This component will receive funding support for basic activities that include the exchange of human resources and information, primarily through scholarships for doctoral studies, the exchange of professors and researchers, and intensive courses.

d. Strengthening and coordination of the scientific information system

The key to any graduate system is its library and, particularly, periodicals and newspaper libraries.

The economic crisis has coincided with an almost exponential increase in the number of scientific and technical journals, as well as a price increase far above the inflation rate. These two factors have drastically affected the periodicals and newspaper libraries in the different universities, endangering one of the essential elements of graduate programs.

5. Beneficiaries of the Program

The following are the institutional beneficiaries of the program:

First, the national educational and agricultural research systems of the region. Second, the ministries of agriculture and other public institutions of the region that have an ongoing need for more highly qualified technical personnel for different aspects of research. Finally, the private sector which will gradually increase its need for technology.

Total direct and indirect beneficiaries number approximately 1,827 professionals.

6. Goals and Duration

The present project includes a group of concrete actions that will be implemented over 5 years and expire at the end of 8 years.

The main component of the project is the doctoral program in previously-established areas of priority and based on freely chosen proposals. The program will graduate the first class in the 5th year, and is expected to graduate 1-2 doctoral students per university per year after the 6th year.

7. Activities

This program will include a number of basic activities geared to achieving the proposed objectives.

The proposed activities can be grouped under the following four items:

a. Scholarships for Doctoral Studies

Long term scholarships (up to 4 years) for preparation of doctoral dissertations. The scholarships will include additional aid -up to the equivalent of the amount received by the holder of the scholarship- that will be go to the group or laboratory hosting the student, to help defray the costs of experiments and registration.

b. Teaching and research staff

- Hiring of teaching and research staff for long-term contracts
- Scholarships for teaching staff for specialization studies (up to one year), inside or outside the region

c. Infrastructure and scientific equipment

- Investments in scientific equipment needed for launching new programs, which may be subregional in scope or correspond to the doctorate programs of regional scope
- Installation and building related to new and innovative programs.

d. Intensive courses

Organization of intensive courses and seminars involving experimental teaching techniques; as well as conferences, discussions and tutoring concerning issues of vital current interest.

RECIPROCAL ASSISTANCE TO CONTROL FOREST FIRES IN THE COUNTRIES OF THE SOUTHERN AREA

1. Background

a. The Problem of Forest Fires

For many decades forest fires have caused immeasurable damage to the productive and protective vegetation of the countries of the Southern Area.

Most forest fires are caused by man and in various ways destroy and disrupt the delicate balance of flora-fauna-soil-water-man.

With only a few exceptions, there are no complete statistics on the occurrence of forest fires and the damage they cause in Latin America. Nevertheless, the magnitude of the problem and the increasing possibilities for more fires can be seen as a result of increased population and the resulting need for land.

In order to prevent and combat forest fires, public and private organizations must establish regional and national land protection programs which bring together technological know-how, human resources, materials and funding.

The prevention of forest fires includes actions aimed mainly at educating people in order to create an awareness for the need to respect and protect forest resources.

This approach includes actions that must be taken prior to combating or extinguishing forest fires.

Fighting forest fires puts both men and resources to the test.

Existing public and private organizations in the countries of the Southern Area carry out some of these necessary activities. Efforts range from well-planned actions to isolated and poorly organized actions.

The topic of forest fires, a problem common to all the countries of the Southern Area, has not yet been discussed in any international forum due to a lack of communication among organizations and people involved in similar activities in the Southern Area.

b. The Specific Problem

The lack of communication among public and private organizations in the countries of the Southern Area involved in some way or other in controlling forest fires makes it impossible to take advantage of the benefits of the exchange of technology and experiences, benefits that would improve the levels of protection for forest resources.

2. Origin of the Proposal

The proposal aims to open the way for technical cooperation among the countries of the Southern Area, thus making it possible to share advances made in some countries in regard to preventing, detecting and combating forest fires; exchange technical information; help in training forest fire fighters, both volunteers and professionals; provide international support in case of large-scale forest fires or fires in bordering areas, and organize actions where regional integration would provide comparative advantages.

3. Objectives

a. **Specific Objective**

To decrease the destructive effects of forest fires in the countries of the Southern Area through joint actions.

b. **Intermediate Objectives**

1. To establish a permanent link between public and private organizations involved in forest fire protection in the countries of the Southern Area.
2. To strengthen the organization of public and private institutions involved in preventing and combating forest fires in each of the countries of the Southern Area.
3. To improve the level of technological know-how in the participating institutions.
4. To promote the improvement and exchange of resources among institutions.

4. Impact of the Project

a. **Institutional**

The establishment of and increase in international communications now makes it possible to receive technology and cooperation that helps solve problems of the forestry agencies of each country in connection with the organization or strengthening of forest fire prevention programs.

b. **Sectoral**

Forest fire prevention systems in the countries of the Southern Area are improved, thus providing better protection for forestry resources in each country.

5. Strategy

- a. The participating entity will be established under an international organization, which will provide support and backing.
- b. Upon approval of this initial profile, the international organization will convene a meeting of the public institutions of each country of the Area involved in the prevention of forest fires.
- c. Once institutions and people are identified, the participating entity will encourage links between neighboring countries in order to carry out concrete field activities to combat forest fires.

REGIONAL AGRICULTURAL POLICY PROJECT FOR THE SOUTHERN AREA**Objective of the Project**

The specific objective of the project is to strengthen the technical and managerial capabilities of the governments in designing, analyzing and providing advisory services and selecting economic and investment policies for the agricultural sectors of the Southern Area, within the context of subregional integration.

The project should include the following activities:

a. Training on the following topics:

- i. impact of macroeconomic policies on the agricultural sector;
- ii. information systems for decision making on economic policies. Important issues to be considered are the type of information needed to make decisions and the mechanisms to be used to generate this information for the ministers.
- iii. planning of public investments.

b. Technical support

The project should set up a mechanism or forum that will contribute to the technical-political discussion of agriculture, trade and integration. It should also establish a system to exchange experiences in order to expand on experiences of interest developed in the five countries.

The specification of training activities must take into consideration the fact that some countries in the region have teaching institutions and professionals with experience in these topics, and that IICA has also been successful in this field; this will provide a basis for future actions.

Likewise, considering the complementarity between this project and the project on economic research into the potential of and restrictions on agricultural development in the Southern Area, the aforementioned training and technical support activities will be determined, keeping in mind that the research findings of the aforementioned project could be used in actions of this nature.

The cost of the 3-year project is approximately US\$150,000.00.

APPENDIX 2

LIST OF PROCISUR PROJECTS

I. SUMMARY OF BASIC PROCISUR PROJECTS

A. **CORN AND RICE PROJECT**

General Objectives:

To identify, strengthen and consolidate a permanent system of reciprocal support, exchange of know-how and cooperation and integrated actions among national research institutions of the participating countries of PROCISUR, related to new technology, and which will make it possible to increase the production, productivity and profitability of corn and rice crops, at the lowest possible cost.

Specific objectives

- a. To increase the exchange of genetic material available in the countries of the Southern Cone (national institutions must be opened up to this type of action since private enterprises tend to have the monopoly on genetic material);
- b. To strengthen technical cooperation programs, with special emphasis on genetic improvements, with a view to obtaining high-yield cultivars that are more stable and adaptable to the region;
- c. To promote and disseminate know-how and new technology generated by each country individually, through a horizontal exchange of information;
- d. To encourage periodic meetings of researchers who work on joint research in different countries;
- e. To promote joint cooperation programs for observing diseases and pests common to the countries participating in the agreement.

Operating Strategy

The basic strategy used by PROCISUR to obtain the objectives established when the project began can be grouped into three types of activities:

- a. reciprocal cooperation,
- b. advisory services, and
- c. training.

Activities

The following activities will be carried out during the execution of the project:

Coordination meetings, technical meetings, seminars, exchange of national advisory services, exchange of observers and cooperative research work.

Proposed organization of the technical team for development of the program

This will include:

- a. International coordinator, technician provided by one of the participating countries;
- b. National coordinators, technicians from the countries serving as coordinators;
- c. National specialists, technicians from the participating countries who are specialists in specific topics;
- d. National specialists from the program;
- e. Facilities, experimental field, machinery, etc. All technical equipment will be provided by the countries.

Total Budget (in US\$)

The total budget will be US\$596,500.00

B. WHEAT PROJECTGeneral Objectives

To maintain and expand, at the regional level, a permanent system for coordination, reciprocal support, exchange of know-how and joint and integrated actions related to the cultivation of wheat.

Specific Objectives

- a. To provide and encourage opportunities for the establishment of regional genetic improvement programs.
- b. To support cooperative work on the population of pathogens affecting wheat, identification of their origin and work to incorporate these genes into genetic material of interest to the genetic improvement programs of the countries of the region.
- c. To provide opportunities to increase know-how on wheat diseases and pests, promoting cooperation among countries, with special emphasis on epidemiology and control; encourage and support the exchange of germplasm of interest to the participating countries.
- d. To encourage the use of existing facilities in the region with a view to developing services of regional interest.
- e. To work in cooperation with the other projects, with a view to making a greater and better use of opportunities available in the PROCISUR program.

Project Activities

The following activities will be carried out during the implementation of the project:

Coordination meetings, technical meetings, seminars, exchange of advisory services, exchange of observers, consultations with specialists from international centers and joint research.

Total Budget (in US\$)

The total budget will be US\$210,000.00

C. SOYBEAN PROJECT

Soybeans, of great economic importance to Brazil, Argentina and Paraguay, and holding potential for Bolivia, Uruguay and Chile, is a commodity that shows great promise for regional integration in connection with the development of the primary sector.

Justification of the Project

The soybean project is an international cooperative activity whose main objective is to accelerate the process of technology generation and transfer among the countries of the region.

The ecosystems of the countries of the Southern Cone are similar, and thus the results obtained in any given country can be adopted by the other countries of the region.

Organization

The soybean project will be a part of a larger program that will have a central element, headquartered in Montevideo and comprised of a governing committee, an executive secretary and a support secretariat.

Activities

The new project will be limited to technical meetings, seminars, exchanges, consultation and observation activities, and short courses at the national level.

Project Cost in US\$

The total cost of the project will be US\$556,000.00

Expected Benefits

The following benefits will be achieved:

- a. Consolidation and strengthening of exchange and cooperation mechanisms.
- b. More harmonious regional development as a result of the improved use of production technology.
- c. Maximization of the use of human and financial resources.
- d. Greater speed in obtaining results from complex research and in disseminating technologies generated by the project.
- e. Improved training for researchers.

D. GRAZING-CATTLE FOR BEEF PROJECT**General Objectives**

- a. To identify possibilities for integrated action, consolidating inter-institutional actions among the countries, strengthening cooperation activities initiated with the programs that have been in effect to date (IICA-SOUTHERN CONE/IDB, IICA/IDB/PROCISUR);
- b. To encourage actions that strengthen national research institutions in the countries of PROCISUR in order to solve local livestock production problems;
- c. To generate know-how, design technology and coordinate actions to bring about a continual increase in the efficiency of cattle production, meat/hectare yields and improve the quality of the product and the profitability of pasture systems.

Specific Objectives

- a. Through adaptive experimentation, to validate promising technologies within real production systems. Small-scale farmers facing similar problems can be identified through rapid studies, and demonstration units will be used;
- b. To develop applied basic research that makes it possible to solve meat production problems that arise when adapting technology or carrying out adaptive experimentation;
- c. To study the factors that determine beef cattle production, developing the methodology needed to solve food, nutrition and management problems in the main production systems.

Operating Strategy

The operating strategy to achieve the aforementioned objectives is based on the organization of PROCISUR.

Project Activities

In implementing the project, the following activities will be carried out:

Meetings, seminars, exchange of national advisory services and observation activities, international advisory services and training.

Total Budget in US\$

The total cost of the project is approximately US\$497,500.00.

II. SUMMARIES OF PRIORITY PROCISUR PROJECTS

A. **BIOTECHNOLOGY PROJECT**

Justification

The current state of biotechnology in these countries indicates that there is still much to be done. Problems of tropical agriculture should be solved by the researchers of the countries that would benefit from these solutions, such as those in the Southern Cone and the Caribbean.

General Objective

The general objective of PROCISUR II-Biotechnology is to facilitate the integration of the countries of the Southern Cone in order to create scientific and industrial competence in biotechnology geared to specific needs. In order to achieve this objective, a strong research and development structure must be created at the country level to make the biotechnology industry feasible.

Operating Strategy

The strategy will focus on various activities:

- a. establishment of research groups, through the exchange of researchers;
- b. training in new technologies by carrying out courses in countries that already have the appropriate infrastructure;
- c. development of integrated research projects;
- d. follow-up and evaluation, and;
- e. project management.

In addition, the following basic activities will be developed, among others: short courses, in-service training, training in other institutions, observation exchanges, and the exchange of genetic and bibliographic materials.

The total cost for the four-year project is approximately US\$1,173,500.00.

B. FRUIT AND VEGETABLE PROJECT

The countries of the southern hemisphere, particularly Argentina, Bolivia, Brazil, Chile, Paraguay and Uruguay, offer conditions favorable to the production of quality fruits and vegetables. Considering the seasonal differences that exist between these countries and high consumption countries, the availability of labor and/or production costs, these countries can be seen as potential suppliers of fruit and vegetable products.

Obviously, these ambitious goals for fruit and vegetable exportation cannot be reached without first going through certain stages that make it possible to produce the volume and quality of products demanded by foreign markets. An important stage is adapting technology to production, which requires that technology studied in similar environments be created and/or adapted. Know-how can come mainly from Latin American countries that have acquired expertise in specific areas, and which are willing to exchange this information.

Given that the fruit and vegetable sector covers a broad range of products, the project covers those that are of greatest general importance: onions, tomatoes, garlic, asparagus, melons, strawberries, citrus fruits, table grapes, apples, peaches, pears and plums. The project aims to improve the quality, productivity and life of fruits and vegetables and thus increase the domestic market, substitute imports and particularly provide incentives to increase intra- and extraregional exports.

Objectives of the Project

- To cooperate in the development of systematic genetic improvement programs;
- To exchange know-how regarding the post-harvesting of vegetables;
- To share information generated in the region on protected and forced crops.

Organization for Implementation

The project would have a general coordinator, who will guide the national coordinators in project activities, and maintain contact with the organization or organizations that fund the project and sponsor it.

The total cost of the project will be US\$1,472,500.00.

C. TECHNOLOGY TRANSFER PROJECT

The experience developed by the Cooperative Program for Agricultural Research in the Southern Cone (PROCISUR) over the past nine years clearly indicates the importance of PROCISUR as a catalyst in the horizontal technology transfer process among the countries of the Southern Cone.

Due to the volume and quality of its activities, the Program significantly contributes to upgrading national agricultural research institutions.

The basic objectives of the project are:

- a. To promote, among the participating countries, the exchange of successful experiences in transferring technology to small-scale farmers;
- b. To support the participating countries in their efforts to become a part of the technology generation and transfer process;
- c. To encourage and promote private participation in the technology transfer process for small-scale farmers;
- d. To identify and support the development of joint actions among the countries;
- e. To encourage and support the efforts of the national institutions of the participating countries in their studies of the variables that affect the adoption of technology;
- f. To encourage adaptation of technology available in other countries in participating countries.

The proposed activities include project programming and evaluation, studies and the evaluation of technology transfer, the integration of technology generation and transfer processes, technology transfer for the private sector, methodological strategies in the technology transfer process, and the development of human resources in areas of technology transfer.

The project will have one international coordinator and national coordinators in each country.

The total cost for the 4-year project is approximately US\$1,459,425.00.

D. TECHNOLOGY FOR SMALL-SCALE FARMERS PROJECT

Small-scale farmers are those who have access to only a small parcel of land, regardless of the type of land tenure system. Production from this small piece of land can account for part or all of the subsistence of the farmer and his family, and when the products reach the market, the farmers receive just enough to live on, without being able to save or improve their standard of living. Their resources are: abundant labor and land, and little capital.

The need for specific technology for small-scale farmers, which utilize their available resources as well as possible, is now being considered throughout the region. Concrete actions taken in this regard are few and far between and the way is being paved with difficulty.

Objectives

Project objectives are:

- a. To contribute to the understanding and development of technology for the whole production system of small-scale farmers;
- b. To support joint actions and reciprocal assistance among research institutions, on topics specifically geared to small-scale farmers in order to increase the exchange of technology and thus take advantage of progress made in this area;
- c. To encourage reciprocal exchange among and within the countries with public and private institutions as a way of cooperating in the search for solutions to common problems, developing means of cooperation.
- d. To contribute to food security in the countries and to curb migration to the cities;
- e. To promote the institutionalization of the project in the medium term.

The project will have a general coordinator and a secretariat that will receive the information, serve as a link to the countries and be in charge of organizing the proposed activities.

Proposed Activities

Activities will mainly include coordination meetings, coordination and briefing meetings, meetings to exchange ideas, training meetings, the creation of a central information file and one such in each country, as well as support for small research projects.

Organization for Implementation

The technology for small-scale farmers project will be one of the cooperative projects integrated into PROCISUR. Therefore, it will be governed by the cooperation agreement signed between the research

institutions of the participating countries (Argentina, Bolivia, Chile, Paraguay and Uruguay) and IICA. Basic project staff will be a coordinator and a secretariat, headquartered in the Montevideo IICA Office.

The total cost will be US\$1,600,000, of which US\$1,275,500 will be from external funds and US\$324,500 (20%) will be the counterpart amount provided by the countries of the Southern Cone.

E. HUMAN RESOURCES DEVELOPMENT PROJECT

Technological development is the key to enabling the countries to achieve socioeconomic development, which is then reflected in a continual increase in the standard of living. All this is made possible through the generation and dissemination of the appropriate technology or the transfer of know-how from other regions.

Research institutes must have large, organized groups of human resources in order to obtain financial resources to pay for training programs, to efficiently administer personnel development projects and to manage qualified human resources.

Project Objectives

The objective of the project is to help improve the structure and quality of the sectors responsible for human resources in institutions involved in research and the dissemination of same in the participating countries.

The participating countries have made great efforts to upgrade their personnel. Much more still needs to be done, given the substantial differences in the levels of technology and efficiency in the agricultural sectors of the countries of the Southern Cone and in other areas.

Society at large and government authorities must be convinced of the need to invest in training personnel. Human resources must be managed efficiently.

It is evident that the organization of the human resource development sector of research institutions is a key element for fulfilling their institutional mandates.

The beneficiaries of the project will be:

- directors of institutions,
- qualified managers and staff members of the human resource sector, and
- qualified managers and staff members involved in computerized information and fund raising.

The project will be coordinated by an international coordinator and by national coordinators in each country.

The project proposes only those training activities that will benefit the human resources sectors of the institutions.

The total cost of the 3 year project is approximately US\$1,011,350.00.

The network will be directed by the board of directors of PROCISUR which, together with its executive secretary, will supervise the technical, administrative and budgetary aspects of the network. The network will function within each country through the institution that represents the country on the board of directors.

The duration of the project will be three years. Given the nature of the project, this term can be extended for another three years. The implementation of the project involves reciprocal technical cooperation activities, international consultations, training, support for research and the exchange of genetic and bibliographical materials.

The total budget for the three-year project is approximately US\$976,290.00.

H. SOIL MANAGEMENT AND CONSERVATION PROJECT

Repeated diagnoses of the situation in the countries of the region indicates that a lack of soil conservation practices has severely affected the productivity of crops. They have also shown an accelerated expansion of the agricultural frontier into marginal lands, which has brought about devastating effects on the environment, perhaps unequaled anywhere else in the world.

Project Objectives

- a. To develop soil conservation practices;
- b. To develop technological inputs, such as the appropriate tilling equipment for the soils of the region;
- c. To prepare regional weather and soil charts and maps when national information is insufficient;
4. To standardize measures and records to streamline the exchange of information;
5. To generate a data bank for use by other environmental projects.

The proposed structure for implementing the project is similar to the current structure of PROCISUR, with a central administration nucleus, an ongoing proposal and review of activities by national coordinators, carried out to reflect the needs of the researchers in each country.

The proposed actions will consist mainly of technical meetings, seminars, courses and joint efforts.

The total budget for the four-year project is approximately US\$2,680,000.00.

I. BIOLOGICAL CONTROL PROJECT

The biological control of pests is of critical importance for the countries of the Southern Cone in view of the serious environmental situation caused by the application of highly toxic, broad spectrum products, which are frequently used excessively on various crops in these countries.

Generally speaking, Brazil and Chile have made greater efforts and achieved greater results in regard to biological control by developing programs geared specifically to this end.

Objectives

In general terms, the objective of the project is to increase the use of biological controls for organisms harmful to agriculture in the countries of the Southern Cone, emphasizing basic and applied research activities, technology transfer and the implementation of cooperation programs among the countries with similar pest problems.

The activities to be developed include: technical meetings, national advisory services, observations, short courses, on-the-job training, training in other institutions, the exchange of bibliographical materials and support for research.

The project will have an international coordinator who, together with the appointed national coordinators, will designate top level specialists in each country to be in charge of specific project activities related to each priority problem.

The total cost for the four-year project is approximately US\$1,199,060.00.

J. PRODUCTION SYSTEMS PROJECT

Since 1980, vigorous efforts for cooperation and reciprocal assistance have been made among the national agricultural research institutions of the countries of the Southern Cone, with support from IICA, and funding from the IDB, through the IICA-Southern Cone/IDB Program (1980-1983) and the IICA/IDB/PROCISUR Program (1984-1990).

Since its inception in 1980, activities related to production systems have been a part of the cooperative programs of the Southern Cone, which indicates the high degree of interest for and priority assigned to this topic.

General Objective

The general objective of the project is to consolidate cooperation among the national institutions that participate in the agricultural technology generation and transfer process in PROCISUR countries, with a view to improving the conditions of the agricultural sector by upgrading and developing activities using the systems approach.

Specific Objectives

The specific objectives of the project are as follows:

- a. To promote the exchange of experiences related to institutional organization and the development of operating structures that facilitate the use of the systems approach, thus accelerating the generation, transfer and adoption of agricultural technology;
- b. To encourage, through cooperative actions, the use of the systems approach for ranking and planning activities related to agricultural research and technology transfer;
- c. To contribute, through mutual assistance, to identifying problems and proposing solutions within the framework of the different production systems in the countries;
- d. To make it possible for the region to benefit from the support of the international scientific community and, particularly, the international centers in connection with methods and procedures;
- e. To encourage reciprocal support in the training of human resources, encouraging and improving the use of systems approach methods and techniques in the generation and transfer of technology;
- f. To promote the development of effective communications mechanisms that facilitate the exchange of scientific and technical know-how and experiences among professionals, thus contributing to the solution of similar problems.

The project will carry out activities related to coordination, reciprocal technical cooperation, consultations, training, studies and analyses.

The total cost for the five-year project will be US\$1,117,650, of which US\$871,250 will be a cash contribution, and US\$246,400 will be from counterpart contributions.

K. SOCIOECONOMIC PROJECT

This project will be drawn up at a later date. Nevertheless, at the moment, two studies closely related to the project are being developed, which will provide background and establish the basic guidelines and description of the socioeconomic project.

The first study, concerning agricultural research organizations in the countries of the Southern Cone, is being carried out by at least one cooperating entity in each of the countries of the Southern Cone, IICA specialists, a technical aid from Spain, with general coordination being provided by the Director of PROCISUR. The objective of the study is to obtain an updated analysis of the status of agricultural research organizations in the countries of the Southern Cone. The study is based on the present situation and includes information on the past 15 or 20 years.

The other study covers the possible economic impact of PROCISUR. Dr. Robert Evenson, a well-known research evaluation specialist, from Yale University in the United States, has been hired as a consultant.

The socioeconomic project will be prepared by late 1989 or early 1990.

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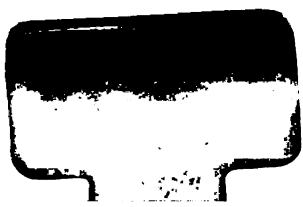
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