FORUM FOR THE AMERICAS ON AGRICULTURAL RESEARCH AND TECHNOLOGY DEVELOPMENT (FORAGRO): IN THE ROAD TOWARD ITS CONSOLIDATION FOR COOPERATION

1. Introduction

This document provides a brief summary of the context in which agriculture operates in LAC from the technological perspective and describes FORAGRO's main objective and achievements. Also the main issues that have emerged in the Americas related to the construction of a shared vision and agenda on the question of research and technological development. The shared vision is presented here is the outcome of the FORAGRO's international meeting "Agriculture with Knowledge" held in Mexico in September 2000 and constitutes the Declaration of the participants of the meeting.

2. Problems and challenges in agriculture from the technological perspective

The challenges. Primary agriculture contributes approximately 7% to the Gross Domestic Product of Latin America and the Caribbean (LAC). Under an expanded concept of this sector, including its linkages with industry, this contribution, on average, accounts for 25% of the total value of the economy. However, despite the relative decrease in agriculture's contribution to the region's economy, its economic importance remains unchallenged. The aggregated indexes of agricultural production in the Region show an improvement in the last decade, with annual growth agricultural GDP of between 2 and 3%. Nevertheless, in terms of production of basic foods, LAC is caught in a situation where there is a relative balance between production and population growth, with a danger that this (per capita) growth may turn negative without warning, as happened in past decades.

The challenges and opportunities offered by the new world political and economic order are great, but the scenarios that emerge for overall economic growth and for the Region's agriculture, especially in the tropical areas, are of great concern. In general terms, the Region is unlikely to attain 6% average growth in GDP, as projected at the end of the last millennium, at least not in the short term. But most worrying of all, it will not emerge from poverty unless it adopts a development model that incorporates a new vision of the rural setting and of agriculture itself, with a substantial capitalization of human resources, positively confronting the competitive pressure in a context of trade liberalization. Specifically, we suggest that it is not viable to begin a process of sustainable development without strengthening the agricultural sector and promoting its growth.

Renewed vision and role of agriculture in LAC. Given the systemic influence of the agricultural sector, the need to implement reforms and actions to supersede the traditional notion of it solely as a primary sector, has become evident. The countries of the Region are adopting new approaches and ways of interacting to create a renewed vision of agriculture with three basic elements: a. Rural areas defined as the socio-political scenario where relations are articulated among the different social and economic agents, agricultural production, the environment and the rest of society; b. Commercial-agrifood chains, under which primary agricultural activity is articulated with the rest of the economic system backwards (inputs) and forwards (transformation processes and markets) and sideways with the inclusion of trade and consumption; c. Interaction of production chains and rural areas. Implementation of the new vision has led the Region to work towards a decisive process of productive, commercial, human and institutional transformation.

Based on the above, and on the consensus of hemispheric meetings with top government authorities of the agricultural sector, (for example in the context of the Ministerial Meeting organized by IICA in Chile and Brazil, IDB's Agri-food Strategy and the meetings of FORAGRO itself), we can say that as we begin the third millennium, agriculture in LAC is the basic motor that will drive economic development. Its role is now conceived beyond that of supplying food, supporting processes of urbanization and industrialization, as happened with the development model of the period 1960-80. The new role contemplates four basic functions for this sector: contribution to economic growth; contribution to social development as provider

of food at reduced prices; source of employment contributing to the relief of poverty; sustainable use of the Region's natural resources and environmental protection; for example, by increasing productivity, it is possible to reduce the pressure on the land.

Situation of agricultural production and productivity in LAC. The aggregated agricultural production indexes in the Region showed an improvement during the nineties, but as mentioned previously, from the perspective of food production, it is necessary to take steps to prevent the sector's performance and per capita growth from turning negative at any moment, as happened in past decades. Below are some aspects to consider:

The Region shows dynamism in its exports, but also in imports. Thus, in most cases, the growth in exports has barely been sufficient to pay for growing food imports. In per capita terms, the region today exports less agricultural value than it did 20 years ago. Certain sub-regions, such as the Caribbean, show negative balances in their agricultural trade balance, while some countries that are considered agricultural producers are joining the ranks of net food importers.

Significant changes have occurred in the composition of production, with the substantial growth of products in the oil, fruit and vegetables complex, and to a lesser extent meat products and their derivatives. At the same time, there has been decreased production of sorghum, cotton, cassava, potatoes, and wheat and to a lesser extent, coffee, rice and beans. This situation has resulted in a major change in the production structure in the past 20 years, improving the market share of products with better commercial prospects and integration with the agro-industrial sector, and substantially reducing market share of basic staples.

Changes in the production structure and the expansion differential in production have occurred mainly because of increases in area under cultivation, a total of 23 million hectares in 22 years. These conditions have led to a marked subregional specialization in agriculture, and in fact to a geographic concentration of capacities, which have yielded better results for the countries of the Southern Cone, compared with other sub-regions.

There is an important impact of yields on foods and basic grains, where changes in production occur basically due to greater productivity. However, the Region has reduced its cultivated areas by nearly 2.5 million hectares. In terms of fruits, particularly tropical fruits, the situation is exact opposite to that of animal feed and staple grains. Production has increased, in essence, because a greater area is under cultivation, and the effect of increased yields has been very limited. Despite the above, the region has substantially increased its share of international trade in fruits.

One issue that unfortunately remains relevant, especially in some countries, is urban and rural poverty. There are nearly 200 million poor people, of whom nearly 35% live in rural areas. One important fact is that in most of the countries located in the tropical belt (Andean and Central Regions, Northern Brazil, Southern Mexico and some parts of the Caribbean) the proportion of people who live from agriculture is above 50%, in contrast with those with temperate ecosystems. In other words, poverty persists in the Region and is concentrated in the tropical and subtropical areas.

Despite its strategic wealth in natural resources, such as biodiversity - the Region contains five centers of origin and diversity of species and crops of major economic importance to the world – it is suffering the consequences of an accelerated deterioration in its ecological capital. Three major reasons for this are: a development model that excludes rural dwellers and producers who live in fragile zones; the use of technologies and development of productive systems that are not environmentally-friendly and are based on a notion that the supply of resources is inexhaustible and an excessive transfer of agricultural and rural resources to the rest of the economy. This has meant that the agricultural frontier, in terms of land, cannot be expanded. For example, there are 11 countries in LAC that may no longer have productive soils in the next 25 years.

Agriculture from the perspective of technology. The technological gap with the world's leading countries is widening with respect to many crops. Regional research has responded to a political and economic model

that prioritized the contribution of agriculture to the food supply and to facilitate the development of other sectors.

Although significant efforts have been invested in technology development, these have proven to be inadequate compared with the results achieved in other continents at a time of economic and commercial liberalization. This highlights the region's lack of competitiveness in many food items, except for the grains and oils complex in the Southern Cone.

In recent decades, research in many countries of the tropical belt did not give priority to investment in tropical crops such as fruits, because it was given a low priority in the prevailing economic model, for the reasons stated. According to studies carried out by IICA with support from the IDB, in the early nineties barely 14% of total investments in the NARIs were assigned to the category of fruits, compared with nearly 70% to staples food.

The above shows that in the past the Region, with some exceptions, has focused more on products with comparative disadvantages, especially in predominantly tropical countries. By contrast, countries with temperate ecosystems have been able to take better advantage of these priorities, which are later seen to coincide with comparative advantages. Meanwhile, the supply of available foreign technology has certainly coincided more with the temperate countries.

Products with comparative advantages that require technology reinforcement in the region already have major competitors, not only in developed temperate countries but also in other developing countries. If the region fails to strengthen its production structure and adapt knowledge and apply it to the market, and does not influence the priorities of international agricultural research, it may fall into a strategic error in the immediate future.

Investment in public research in LAC (near 0.4% of the Agriculture GDP) has declined alarmingly and there has been a de-capitalization of specialized human resources, particularly in the national institutions of the countries where, paradoxically, agriculture is an important economic factor. Total funding for public research infrastructure in LAC decreased by around 10% (in 1985 dollars), between the periods 1981/85 (US\$424 million) and 1992/93 (US\$384) according to IICA figures. It should be noted that in 1999 there were substantial cutbacks in the regional budget, from nearly \$1 billion dollars at current prices in 1997, to a figure close to \$640 million. It should be noted that the total amounts are highly influenced by the budgets of EMBRAPA, INIFAP, INTA and CORPOICA and as a result, the rest of the investment is very low. In the last two decades LAC has been the only continent with negative growth in annual public investment in research.

Synthesis of agricultural problems from a technological perspective. The above shows that LAC is in a process of "disengagement" from knowledge and the technology development, at least for tropical agriculture, at a crucial point in the development of sources of competitiveness. In fact, growth was based in good part on the availability of natural resources, incorrectly assumed to be plentiful.

In the past, public research institutions concentrated their efforts on primary production; placing less emphasis on other value added activities in the productive chain. Research in tropical countries focused more on traditional food crops that offer fewer competitive advantages in national and international trade, neglecting products such as fruits and vegetables, where the region enjoys clear advantages.

The challenge is to reposition agriculture, not only within LAC, but also globally, and develop strategies to avoid continuing with inefficient production on the first link of the chain, despite the opportunities, but with little horizontal expansion based on an increasing the area under cultivation.

The agricultural scenarios of LAC are not homogeneous. Those in the temperate zones of the north and south differ from the scenarios of the high mountain plains or those of the wet and dry tropical lowlands and medium-elevation hillsides, such as those in Central America, the Andean countries and some Caribbean nations.

Consequently, it is not possible to speak of absolute regional priorities, given the region's diversity. In the case of agriculture in temperate ecosystems, the situation of technological engagement is better than in the tropical areas. This is the case with soybean and wheat, where the results of other areas have been used, including the recent import of transgenics such as "RR soybean". In tropical areas, with the exception of rice, there is no available technological counterpart for the Region. The differentiation of technological strategies is a matter that must be resolved.

Another aspect is the challenge facing countries with respect to environmental problems, which often appear to be separated from the issue of natural resources. The Region's technology development system has adopted these environmental problems as a priority and this has represented another disengagement from technology. Degradation takes place within an economic context where producers faces high interest rates, high inflation, the need to expand or intensify production, and where the need to conserve natural resources is not fully incorporated within the technology strategy and the investment required for this purpose.

With regard to food security, this is a mainly urban problem with political repercussions, though it is also associated with efficiency in the production and distribution of food. At the same time, a large proportion of the region's small producers farm lands with less productive potential, and therefore the production strategy is not efficient. Therefore poverty as a subject for research has not been attractive, politically speaking. If we analyze the indirect effects (reduction of food costs, employment) of technology, the panorama is clearer; but when it comes to the direct effects, the matter is more difficult, even though there are several examples of the fact that technology does have direct effects in combating rural poverty. What is certain is that in terms of reducing poverty, the direct and indirect effects are important. This has not been fully incorporated in the Region's research agendas.

Under this general panorama, the institutional response to technology has occurred in a context of major disparities between stated priorities and what happens in practice, something that is reflected in the institutional reality.

3. Development of FORAGRO

Background. In response to the phenomenon of globalization, the growing inter-dependence that characterized the end of the twentieth century and the process of institutional development and diversification that has taken place in the science and technology sector during the late nineties, countries have become increasingly aware of the need to strengthen hemispheric and global cooperation in technology research and development (R&D) beyond the subregional level. In February of 1996, the *First Consultation Meeting among the National Agricultural Research Systems of Latin America and the Caribbean* was held in **Santa Fe de Bogota**, Colombia. The purpose of this event was to analyze recent successful cases of regional R&D cooperation and technology transfer in the agricultural sector and find ways to strengthen regional cooperation in this field. The Meeting proposed the creation of a Regional Forum for Agricultural Research and Technology Development (FORAGRO).

In October of 1997, the Inter-American Board of Agriculture (IABA), comprising the Ministers of Agriculture of Latin America and the Caribbean (LAC), approved resolution No. 327, which endorsed the creation of FORAGRO and instructed IICA to establish its Technical Secretariat.

In May 1998, a meeting of FORAGRO was held in **Brasilia**, with the participation of its members, including representatives of public and private research institutions, cooperative research programs, such as the PROCIs, universities, NGOs, FONTAGRO and international research centers. The purpose of the meeting was to review the steps taken in setting up the Forum, report on the establishment of the IICA Technical Secretariat and discuss participants' proposals regarding the Forum's role, key topics and operational aspects. There was strong support both for the initiative itself and for the proposals concerning its role. Since the meeting of Brasilia (1998) and of the Executive Committee of **San Jose de Costa Rica** (1999), the member countries have endorsed the Forum's importance, highlighting the initial efforts of its

creation and defining its mission and its role. In September 2000, the most important meeting of FORAGRO took place in **Mexico** city with the participation of participants from more than 30 countries of the Americas and other continents who endorsed the Forum role as the main mechanism for dialogue and consensus on technological policies from a regional perspective.

Nature of FORAGRO. The Forum was conceived as an independent mechanism to facilitate discussion and work towards the definition of a Regional agricultural research and technology agenda that responds to its members' needs and to the phenomenon of globalization. One of the Forum's key roles is to influence policies to promote agricultural development from the perspective of technology. This conception of the Forum takes account of the fact that its members - and the Forum itself - act within the context of political and economic integration in the Americas and globalization, where it is increasingly necessary to operate through information networks. FORAGRO therefore promotes efforts to strengthen and develop integrated actions of hemispheric scope with subregional mechanisms such as PROCIANDINO, PROCICARIBE, PROCISUR, PROCINORTE, PROCITROPICOS and SICTA and equivalent networks as well as with FONTAGRO of hemispheric scope.

In addition, it complements its institutional innovation actions with FONTAGRO, a fund created to support the financing of agricultural research in the region. The NARIs, FORAGRO, PROCIs and FONTAGRO, among others, are an essential component of the System of Research and Technological Development of the Americas, "SIRIDET".

Mission and objectives of the Forum. FORAGRO works to facilitate dialogue, coordination and strategic alliances among the different actors that comprise the National and Regional Agricultural Research and Technology Development Systems, and between these and the international system of agricultural research. The idea is to develop a technical agenda with political influence, in the most positive sense of the word, aimed at:

- Reassessing agriculture in LAC, adopting a renewed vision of the sector as a central component of economic development in the region.
- Repositioning of R&D on the political and economic agendas of the countries and of the Region, to influence the design and instrumentation of policies.
- Supporting the definition of a regional R&D agenda (regional priorities, strategies for collaborative action, information, actors) based on a shared prospective vision of agriculture.
- Establishing a hemispheric presence, adding value to national and subregional action, participating in the definition of policies at regional and international level.
- Supporting development of an organic vision of the regional research system (FONTAGRO, PROCIS, SICTA and other networks and Regional Centers, such as CARDI and CATIE, University research networks).
- Facilitating homogeneous access by countries to new knowledge and technologies developed in the Region and worldwide.
- Facilitating an organic participation by the Americas in the research systems of other regions of the world and in international systems; serving as an indicator and a vehicle to express the region's demands; influencing, in the good sense of the word, the priorities and actions of the international research system in response to the Region's needs.
- Supporting the consolidation of an Inter-American technological innovation system to facilitate the interaction of institutional actors involved in R&D, and promote joint action on common problems.

General lines of Action. Since the initial phases of organizing FORAGRO, the stakeholders have discussed the main lines of actions around which its activities are being organized. The following have been included:

<u>Looking to the future</u>: Prospective vision of the agricultural sector and the rural milieu, and their strategic role in the socioecomic development of the Americas.

<u>Regional R&D Agenda</u>: Identification of the regional priorities, strategies for collaborative action, information and actors base on shared, prospective vision of the sustainable development of agriculture.

<u>Supply and exchange of information</u>: To foster the development of a hemispheric agricultural information system from the R/D perspective.

<u>Public and private partnership</u>: Studies of successful cases and dissemination of the experiences on public and private partnerships in the fields of technological innovation and integrated management of natural resources.

<u>Alliances and cooperation for R&D:</u> Support for regional joint research programs and projects through networking in priority areas for regional reciprocal cooperation.

<u>Exchange of experiences</u>: Among the NARS and NARIs in the areas of strategic planning, policies, organization of technological innovation and the management and implementation of technological research and development processes.

<u>Knowledge and Society</u>: Appropiation of technology, intellectual property and the circulation of knowledge, and the implications of the new ways the private and public sectors are appropiating knowledge (IPR). <u>Agrobiodiversity and new biotechnologies</u>: Genetic resources for agriculture and agroindustry and regional/subregional biosafety programs.

Main results of FORAGRO. The Forum was established two years ago, and during that time has gradually developed its role and functions. Below is a brief summary of the main actions and results obtained to date:

- 1. Support for the hemispheric dialogue and the regional agenda
- Shared vision of foragro: meetings in Bogota, Brasilia, Costa Rica and Mexico
- Shared vision of agriculture from a technological perspective
- Meeting Mexico 2000 Agriculture with Knowledge: coordination 11 papers
- Studies and analyses in support of the dialogue:
 - Scenarios for Agricultural Production and Technological Innovation in LAC
 - Strategic Elements for Directing the Development of Agricultural Research in LAC (with FONTAGRO)
 - Regional Trends in the Institutional Framework and Capacity for Agricultural R&D
 - Agricultural Research in LAC: The Paradox of its Financing
 - Toward the Development of a Shared Vision of R&D in LAC
 - Summary of Tenets for the Dialogue

2. DEVELOPMENT OF THE INFORMATION SYSTEM

- Development of and Agreement on INFOTEC
- 3. FOSTERING ALLIANCES BETWEEN ACTORS AND COOPERATION
- MUSALAC
- PROCINORTE
- Interaction with PROCIs and FONTAGRO
- 4. LINKAGES WITH THE GFAR AND THE CGIAR
- Meeting on Information Systems
- Strengthening of Alliances: case studies
- Joint Participation in Meetings of FORAGRO/GFAR
- Development of Overall Shared Vision
- 5. EXPERIENCES IN COOPERATION AMONG PUBLIC, PRIVATE AND INTERNATIONAL ACTORS
- PRECODEPA, RELACO, PROMECAFE, PROCISUR, SIAGRO, FONTAGRO, DIRECT PLANTING SYSTEMS, COFUPRO
- 6. TECHNICAL AND POLITICAL PRESENCE
- Forum of Ministers of Agriculture in Brazil
- Inter-American Board of Agriculture: IICA 1998-2002 MTP
- Board of Directors of FONTAGRO
- "Science for Life" event, International Meeting of EMBRAPA
- Meetings of GFAR: Beijing, Washington and Dresden
- Meeting of GFAR on Agricultural Information Systems
- 7. DISSEMINATION OF FORAGRO AND ITS PRODUCTS
- Pamphlet
- Web Site www.iicanet.org/foragro
- Publications
- Electronic Forums
- 8. CONSOLIDATION OF TECHNICAL SECRETARIAT (Res. JIA 327)
- Directorate of Area of Science, Technology and Natural Resources
- Contributions of human resources, see money, IICA structure, Regional Centers and TCAs in the countries.
- 4. Hemispheric Dialogue: Mexico 2000 "AGRICULTURE WITH KNOWLEDGE".

Purpose of the Meeting. The FORAGRO's first meeting of the third millenium was "Mexico 2000 AGRICULTURE WITH KNOWLEDGE held in September 6-8 2000 in Mexico City. The objective was to discuss agriculture and the rural milieu as a strategic aspect of development in the Americas and, in this context, to incorporate knowledge, science and technology within a framework of equity and natural resources sustainability, in order to ensure the welfare of the population. In this setting, the participants we will examined:

a. The renewed role of agriculture and its strategic function, with emphasis on policies, institution, capabilities and resources that can be tapped incorporating knowledge and technological innovation.

b. The Contents and elements of a shared vision of the challenges and opportunities for agriculture from the technological standpoint, and how to move forward to create an agenda for the Americas which will contribute to strengthening agricultural research and technology development.

Description of the meeting. The meeting was developed in five sessions. Each session had keynote speakers who made presentations on issues related to the main topic of the session. Also distinguish panelists made comments on the presentations. The sessions and the presentations covered the following topics:

Session 1: Agriculture with knowledge

- Toward a shared vision of agriculture and the rural milieu from the technological standpoint
- The strategic role of agriculture and the rural milieu: performance and possible scenarios

Session 2: Policies and institutions for technological innovation

- Management of institutional change for agricultural technology development.
- Institutional transformation for technological innovations: trends and changes
- Institutional innovations in other continents.

Session 3. Partnerships and institutional strengthening for technological innovation

- Technological capabilities and trajectories in the Region and the World
- From reciprocal cooperation to technology integration.
- Partnerships for the development of international agricultural research in a globalized world

Session 4. Financing technological innovation

- The new economy and investment in technology
- The funding or research and technological development in the Americas: Modalities and Sources
- CGIAR's orientation and investments and the regional needs.

Session 5. Synthesis and conclusions

- Highlights of the Meeting
- Declaration of Mexico 2000

Summary – key points for preparing a work plan for FORAGRO

The following priority topics were identified at the meeting, and will form the basis of the Forum's actions in the coming years:

- 1. To carry out actions aimed at <u>repositioning the role of agriculture and science and technology</u> as strategic variables in the economic development of the region. These actions also include the search for greater <u>political support from and new alliances with the legislatures</u> in the region, so that agriculture and the rural milieu can achieve their full potential in contributing to solve the key problems of the region.
- 2. To carry out actions aimed at <u>showing the risks of under-investing in scientific and technological development for agriculture</u>, as one argument when attempting to convince policy makers and planners to allocate resources to R&D in amounts that are in keeping with economic development in the region.

- 3. To promote the transfer of knowledge and technology, and <u>facilitate technical cooperation with the</u> <u>national and regional R&D systems</u>, <u>specifically in lobbying for political support for science and technology</u>.
- 4. To carry out actions aimed at <u>increasing articulation and cooperative linkages between the Americas and the international research system and centers for advanced research</u> in developed countries. Such actions are strategic in narrowing the technological gap between the region and the rest of the world, and as a means of gaining greater access to scientific and technological knowledge that may be of great use to agriculture in the Americas. This involves ensuring that the priorities of LAC are included in the work plans and investments of the CGIAR, and moving faster in the development of competitive technology for staple foods.
- 5. To point up the need to reinforce the modernization of agriculture, by <u>strengthening the infrastructure</u> <u>and human resources for R&D</u> in the public and private sectors, with a view to incorporating new knowledge into production processes that will make it possible to import less food and compete successfully on the international level.
- 6. To support educational reforms that will facilitate the transition of the regional agricultural sector from an agrarian view to an agriculture based on knowledge and innovation. This involves respect for native peoples, their cultures and their ancestral practices, as well as the search for effective alternatives for incorporating the new paradigm into small-farm economies.
- 7. To focus efforts on the promotion of more equitable agricultural development in the region, by <u>reinforcing scientific and technological capabilities in the poorest or least endowed regions, especially in the tropical areas of the Americas.</u>
- 8. To support the national research systems in <u>promoting and internalizing the new paradigm of innovation, in substitution of the agrarian paradigm</u>, by promoting greater connectivity among actors, within a framework of plurality. This action also includes the promotion of technological integration, more exchanges and better use of the information and technologies available in solving shared problems, and the promotion of new horizontal cooperation actions in R&D aimed at finding solutions to shared problems in border areas of common interest, and in general, in shared ecosystems.
- 9. To promote exchanges on best practices in institutional modernization and transformation processes, with emphasis on agricultural R&D, in the context of agriculture with knowledge.
- 10. To carry out actions aimed at involving the private sector and universities more in the orientation and actions of FORAGRO, in keeping with the institutional transformations taking place in national and regional R&D systems.
- 11. To promote actions aimed at generating greater interest and participation on the part of the international banking system in funding actions intended to incorporate knowledge into agribusiness.

These topics are mentioned succinctly in the declaration issued at the FORAGRO meeting held this year in Mexico, and are the basic input being used to prepare a **2000-2002 Plan of Action for FORAGRO**, which will be prepared in conjunction with the members of the Forum.

Declaration of Mexico 2000 AGRICULTURE WITH KNOWLEDGE

"The participants from more than 30 countries of the Americas which include national agricultural and forestry research institutes, universities, private sector, regional and international institutions and centers, NGOs, producer associations, in the second meeting of the Regional Forum on Agricultural Research and Technology Development (FORAGRO), meeting in Mexico City from September 6 to 8, share a strategic role of agriculture and the rural milieu based on the following principles:

- Agriculture and the rural milieu are strategic in the development of the Americas to reduce rural and urban poverty and strengthen food security.
- The competitiveness of agriculture and the new rurality based on the sustainable use of the many natural resources of the region, in a globalized economy depend increasingly on knowledge and technology.
- The creation and maintenance of technological capabilities require political will, sufficient resources and effective management.
- The current challenge related to taking advantage of the new opportunities of agriculture needs a profound institutional transformation which includes changes in policy, rules, organizational adjustments and human capital development.
- There is a technology gap that is especially critical in tropical agriculture which should be given priority to close it.
- The challenges and opportunities of globalization make it necessary to integrate collaborative efforts and strategic alliances into scientific and technological cooperation among countries.

Under these principles and with the full support of the participants in the meeting the following is affirmed:

- 1. We recognize FORAGRO as a forum suited to facilitating dialogue and reflection on the strategic issues of agriculture and technological innovation.
- 2. We share the goal of increasing in the next decade investment in research to at least 1% of the agricultural GDP.
- 3. That the results of research must generate an important social and economic impact taking into consideration the conservation of natural resources and traditional small-farmer practices.
- 4. We support the importance of providing FONTAGRO and other mechanisms with financial resources to facilitate the consolidation of the agricultural and forestry research networks.
- 5. Special forums will be convened on topics related to legislation, measurement of impact and transfer for agricultural and forestry research.
- 6. FORAGRO must use its influence to ensure that the priorities of agricultural and forestry research in the Americas are included on the agendas of the international research systems.
- 7. We recognize the relevance of the cooperative research programs (PROCIs) as a foundation for supporting the execution of the guidelines of FORAGRO, as well as the importance of the private sector, universities, NGOs and producers in the preparation of a shared research agenda.
- 8. The General Directorate of the Inter-American Institute for Cooperation on Agriculture (IICA) is asked to set time aside during the eleventh Inter-American Board of Agriculture (IABA) and the ministerial forum for the presentation of the conclusions of the second FORAGRO meeting.

These and other actions contributed by the participants in the forum order the FORAGRO executive committee to prepare a plan of action that includes a strategy for positioning and reassessing agriculture with knowledge to reduce poverty in the rural milieu and address the issues related to food and competitiveness in agriculture in our countries.

The participants in the second FORAGRO meeting" September 8, 2000, Mexico, D.F.

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