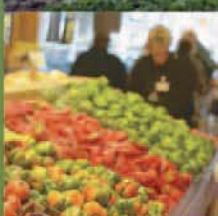


AGRICULTURE: A STRATEGIC ISSUE

Status of and Outlook for Agriculture and
Rural Life in the Americas 2005

Executive Summary



Inter-American Institute for Cooperation on Agriculture

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Executive Summary

2005

**Report of the State of and Outlook for
Agriculture and Rural Life in the Americas**



Inter-American Institute for Cooperation on Agriculture

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Foreword

At the Third Summit of the Americas (Quebec City, April 2001), the Heads of State and Government of the Americas *“recognized the fundamental importance of agriculture as a way of life for millions of rural families of the Hemisphere and as a strategic sector in our socio-economic system, and took note of the importance of developing its potential in a manner compatible with sustainable development.”*

The General Directorate of IICA will be presenting its annual report on the State of and Outlook for Agriculture and Rural Life in the Americas to the Thirteenth Regular Meeting of the Inter-American Board of Agriculture (IABA), in Guayaquil, Ecuador (August 2005). This year’s report validates the assertion of the Heads of State and Government: agriculture is a strategic issue.

The report acknowledges that an important first step was taken, at the political level, in repositioning agriculture as part of the hemispheric dialogue when the leaders included it in the Declaration of Quebec and endorsed the AGRO 2003-2015 Plan of Action at the Special Summit of Nuevo Leon (2004). Much remains to be done, however, to translate this support into priorities that are reflected in public policies and in the allocation of resources.

To take this second, crucial step, the countries must recognize that the importance of agriculture and the rural milieu is undervalued, because the indicator that is generally used when allocating public resources is primary agriculture’s contribution to the gross domestic product of the region’s economies.

To point up the true importance of agriculture and the rural milieu, IICA conducted a ground-breaking study, followed by others carried out in the countries and by other international organizations. All confirmed the

1 Third Summit of the Americas, April 2001. Declaration of Quebec City and Plan of Action (Section 10. Agriculture Management and Rural Development).

2 Rules of Procedure of the Inter-American Board of Agriculture. Chapter I, Asp. 3A and Chapter IV Art. 23d.

Institute's findings: agriculture's true importance is greater than official statistics suggest.

With this confirmation, and taking the vision for 2015 set forth in the AGRO 2003-2015 Plan of Action as an objective image, the report for 2005 establishes the constraints in the context in which agriculture and the rural milieu operate (section II), analyzes the recent performance of agrifood chains and rural territories and the status of food security (section III), considers the outlook for the main variables keyed to the trends observed (section IV) and concludes with a description of the four main challenges that need be taken into account in determining the strategic actions for the 2006-2007 Hemispheric Agenda and the regional and national agendas (section V).

In presenting this study of the state of agriculture and rural development in the Americas, in light of the reports prepared by the General Directorate, we hope to have underscored the issues that require the Board's attention, or regarding which it may make recommendations to the Member States or the General Directorate itself.

Chelston W.D. Brathwaite
Director General

Agriculture, a strategic issue

Summary¹

The Heads of State and Government of the Americas acknowledged the importance of agriculture and rural life at the Third Summit of the Americas (Quebec 2001), and endorsed the AGRO 2003-2015 Plan of Action at the Special Summit (Monterrey 2004). As a result, both agricultural and rural life are again on the inter-American agenda. This recognition, however, has not necessarily translated into changes in political priorities or in the allocation of public funds.

The underlying cause of this situation is the fact that the contribution of agriculture and the importance of rural life are undervalued in official statistics, which focus on primary production alone. However, a pioneering study by IICA concludes that, when all aspects of agriculture are taken into consideration, its actual contribution is considerably greater. Recent studies by the

World Bank and the ILO and in other countries concur with these conclusions.

Policy framework and factors in the context. This report begins with a presentation of the policy framework (Chapter I), drawing attention to the fact that the AGRO 2003-2015 Plan of Action provides an objective vision of agriculture and rural life in 2015. In chapter II, the factors in the international and regional context that have an impact on agriculture and rural life are analyzed. **At the international level**, the focus is on the relevant aspects of globalization and trade opening, as well as agricultural health problems derived from increased trade; a technological model that contributes to exclusion; the importance of the new information and communication technologies (ICTs); the implications of climate change; and the emergence of China and India as major players on the world scene.

At the hemispheric level, several critical issues exist: persistent poverty in Latin America and the Caribbean (LAC), making it a region that is increasingly unequal in terms of the distribution of wealth and land; problems in accessing basic services; the poor quality of infrastructure in rural areas; the lack of sufficient decent employment opportunities; and, in several countries, migration and remittances from abroad, as important phenomena and forces for stabilization in those societies. In Chapter III, the focus is on the **recent performance of agriculture and rural life**, specifically:

- The growth observed in agricultural production between 1998 and 2000 has shown signs of slowing; the small economies of the Andean, Caribbean and Central regions, which depend heavily on agriculture, have shown the weakest growth.
- Although the Americas continue to be the only region in the world that is a net exporter of food, in recent years, its agrifood trade balance has been weakening.
- While it is true that food production has increased in the Americas, it has not been equal in all regions. For example, it has been positive in the Southern Region, but negative in the Central Region, due to

differences in the level of public investment and the availability of technology.

- Even though it is clear that knowledge is essential for competitiveness, only limited progress can be reported and investment in science and technology is insufficient.
- The competitiveness of the countries of LAC is based primarily on the existence of natural resources. However, this agricultural development model will not be sustainable in the medium and long terms since there is little possibility of expanding the agricultural frontier.
- Natural disasters have been occurring with greater frequency, having the greatest impact on the Caribbean, Central America and some countries of the Andean region.
- Rural poverty and indigence continue to be a serious problem in LAC, where there are at least 222 million poor, including 97 million living in extreme poverty. Among the rural population, 75 million are poor, of which 46 million live in extreme poverty.
- The low level of productivity of agricultural labor would appear to be the primary reason for low rural wages, which has led to a noticeable

- increase in non-agricultural activities in the rural labor market since the 1990s. Indigenous peoples account for ten percent of the total population of LAC, and their level of development is alarming; they are far below the average for the rest of the population vis-à-vis most the indicators of development.
- The ministries of agriculture find themselves in a dilemma. They must tackle new challenges and, at the same time, cut back their support for the agricultural sector due to a lack of resources.
- Public spending on agriculture and rural areas grew in real terms in almost all the countries of the hemisphere during the last decade. However, their share of total public spending has been declining.
- The private sector is gradually becoming involved in the institutional transformation of agriculture, assuming public duties in agricultural health and food safety, and to lesser extent in R&D.

Chapter IV analyzes the outlook for agriculture and rural life, and concludes that:

- The global economy is expected to grow strongly in the next decade as a

result of the recovery of the world's leading economies. Latin America and the Caribbean are expected to grow by an average of four percent per year.

- The agricultural sector in the United States of America and the European Union will undergo major changes in terms of domestic policies in support of the sector and export subsidies, which will have a negative impact on their agricultural trade balances.
- China is a market of great interest. As a result of increased purchasing power and more open trade, China will have to consume part of its production of grains, and to import greater amounts of soybeans, wheat, corn, barley, fruits and meat, which could represent trading opportunities for producers from the hemisphere.
- Agricultural production worldwide is expected to continue growing as a result of increases in productivity, not the expansion of the agricultural frontier. However, consumption will grow at a slower rate than production.
- Agricultural trade will continue to grow, but will not reach the growth rates observed in the 1990s.

- Prices of some commodities may rise (for example, as a result of the reduction of subsidies), while others may fall (as a result of oversupply or slower growth in demand).
 - The health, organic, prepared and ethnic food segments of the agricultural markets will increase, but production will gradually be adapted to respond to changes in demand and to comply with health and quality standards.
 - Shorter and more vertical agrifood chains will become more prevalent, meaning that small-scale farmers who cannot meet the demands of large-scale marketing may be left behind. These farmers will have to differentiate their products or cater to specific market niches.
 - Poverty in rural areas will not be reduced until the technological gap between modern agroindustrial and the traditional small-scale production sectors is narrowed, and the analysis of the distribution of the benefits of technology is incorporated in its design.
 - The rural poor will become more vocal in their demands. In response, government authorities must foster a formal political dialogue aimed at solving the problems of unequal distribution of income and land, as well as the allocation of resources to education and training.
 - In the area of the environment, the governments will adopt effective controls and policies designed to prevent the continued degradation of natural resources, and private enterprises will become aware of, and began to internalize, environmental costs.
 - In many countries of LAC, agriculture will continue to use technologies whose competitiveness is based on natural resources. The competitiveness of many rural territories in LAC is based on the existence of favorable agroecological conditions, which may not be sustainable over time.
 - Climate change may affect the agroecological conditions to the point where territories with a temperate climate could produce products more typical of tropical climates.
- Four challenges.** Contrasting the recent performance of agriculture and rural life with the outlook described above, and taking as an objective image the vision of the AGRO 2003-2025 Plan, the last chapter (V) proposes four major challenges:

1) Producing for the market.

The actors in agrifood production chains must stop focusing on supply and begin to base production on demand. This will only be possible if: i) they keep abreast of changes in the world order, be it to tap the opportunities offered by new markets or to take strategic actions against potential competitors; ii) they take actions in anticipation of reforms in the multilateral framework, in order to benefit from the elimination of subsidies; iii) they monitor changes in demand, with a view to adapting both products and manufacturing practices; v) they gain the confidence of consumers by complying with AHFS requirements; vi) new competencies, strategies and work plans are defined for the ministries of agriculture; and vii) public-private initiatives aimed at the development of agribusinesses are fostered.

2) Riding the wave of the technological revolution.

Producing for the market also means that agriculture and rural areas must embrace the technological revolution. Agriculture must be diversified and modernized in such a way that it will be compatible with natural resource conservation,

economically viable, based on knowledge management for the market and centered on technology innovation processes aimed at agribusinesses. To accomplish this, the flow and management of information must be improved by integrating the rural and agricultural sectors into the digital world, rethinking the institutional models and providing public research institutions with more financial and human resources.

3) Reducing poverty and improving income

distribution. It is necessary to create decent employment opportunities in agricultural and non-agricultural activities in rural territories, and to promote the adoption of a national development model that views rural issues as strategic issues and is aimed at eliminating poverty and inequity. This will be feasible if the current style of growth is changed, shifting the benefits to the poorest, recognizing the true contribution of all the actors in the chains, improving the distribution of benefits, fostering social collaboration, and strengthening the families and dignity of rural inhabitants.

4) Fostering the development of the capabilities of the actors in the chains and rural territories. This challenge is instrumental in creating the conditions needed to tackle the first three successfully. Farmers must become agricultural entrepreneurs. To do this, they must acquire additional knowledge, improve their management skills, learn to interpret the demands of the markets, become familiar with the regulations that

govern trade, and, above all, base their business decisions on accurate and up-to-date information. New organizational capabilities will also have to be created to incorporate family farming and small-scale farmers into the production-supply chain. They will also need new abilities, skills and knowledge to enable them to participate in non agricultural activities in rural territories and gain access to better jobs.



A first step in the right direction

ong absent from political dialogue and a low priority in public policies, agriculture and rural development are once again in the political spotlight. However, little has changed as regards resource allocation, the material expression of the priorities set for public policies.

During the Third Summit of the Americas, held in Quebec in 2001, for the first time the Heads of State and Government acknowledged the key importance of agriculture as a way of life for millions of rural families in the Americas, and its strategic role in creating prosperity and achieving the sustainable development of socioeconomic systems in the hemisphere.

Responding to this development, that same year the ministers of agriculture took the first steps to translate the mandates of the Heads of State and Government into actions by setting them forth in the Declaration of Bavaro. At their next meeting, held in

Panama in 2003, the ministers of agriculture of the Americas signed the AGRO 2003-2015 Plan. In the plan, they established a series of strategic objectives designed to focus the efforts of the leaders of agriculture and rural life in the Americas, proposed the strategic actions needed to carry out the initiative and assumed commitments with regard to its implementation.

At the Special Summit in Monterrey (2004), the Heads of State and Government acknowledged the efforts of the ministers of agriculture. They incorporated the AGRO 2003-2015 Plan into the Declaration of Nuevo Leon, validating it politically as an instrument for social development, rural prosperity and food security, and converting it into a presidential mandate.

The AGRO 2003-2015 Plan establishes a common vision of agriculture and rural life through 2015. To make that vision a reality, the ministers of

agriculture pledged to promote six biennial agendas containing a set of strategic actions whose implementation the governments are to promote, working with the stakeholders of the agricultural sector and others responsible for the development of agriculture and the improvement of rural life.²

The 2005 Report on the State of and Outlook for Agriculture and

Rural Life in the Americas, whose subtitle is “Agriculture, a strategic issue,” offers an overview of the performance of agriculture and the rural milieu in the hemisphere, the outlook and the challenges facing the countries. The ministers of agriculture can draw on it to formulate better the strategic actions to be included in the 2006-2007 Hemispheric Agenda.

Recognition of the true importance of agriculture

The acknowledgement in political circles of agriculture’s strategic importance has been reinforced by the findings of recent studies, which conclude that the contribution of expanded agriculture is much greater than official statistics usually suggest, since they consider only primary agriculture.

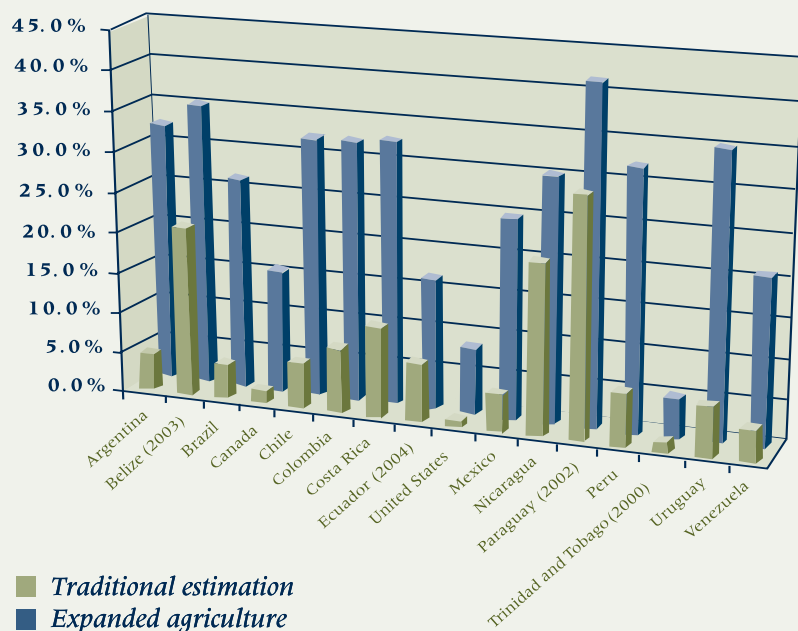
In early 2004, IICA published a groundbreaking study aimed at gauging agriculture’s true contribution to the economy. Focusing on 11 western-hemisphere countries, the study³ showed that when primary activities (crops farming and stock raising) are combined with other activities directly related to them (agroindustry and food),⁴ agriculture’s share of gross domestic product (GDP) increases

by between 2.9 and 11.6 times (see Figure 1).

It is frequently asserted that agriculture contributes little to the economy and that its importance is declining. That study contradicted such notions.⁵ The research found that in the 11 countries studied, on average, 74% of primary agricultural production is used as inputs and contributes to the development of the other sectors of the economy, whose production would not be possible without the help of primary agriculture (forward linkages). Agriculture also requires a large amount of inputs, so that its growth boosts productive processes in the rest of the economy (backward linkages).

Figure 1

Agriculture's contribution to GDP



Source: IICA.

Given the purchases and sales of inputs, goods and services originating in the sector, expanded agriculture is considered an important factor in the development of domestic economies.

Subsequent research in other countries (Belize, El Salvador, Nicaragua, Paraguay, the Dominican Republic and Trinidad & Tobago) confirmed the findings of the first study, as can be seen in the above figure.

The importance of agriculture is underlined when other contributions are considered that traditionally have been overlooked or undervalued. They become evident when

agriculture is considered from a territorial standpoint, taking into account its ties with non-agricultural activities, natural resources and rural society. Factors come into play such as the generation of employment and income (both agricultural and non-agricultural), environmental services, the landscape and natural spaces that are a source of recreational and tourism activities, the conservation of biodiversity and water sources, etc., all of which contribute to the attainment of rural prosperity, democratic governance and freedom from social unrest in the countries.

The importance of agriculture and rural life is also emphasized by the findings of recent research by other international agencies and studies carried out by the countries themselves. The World Bank (Ferranti et. al., 2005)⁶ concludes that the countryside's contribution to development is greater than usually thought and bigger than official statistics suggest. It estimates that the contribution of agriculture and other activities related to national development in Latin America and the Caribbean (LAC) is double its percentage of GDP. It also affirms that the development of the rural economy and rural communities is essential for national well-being.

In its World Employment Report 2004-2005,⁷ the International Labour Organization (ILO) concludes that "(...) in today's world of widening inequality," the

growth of productivity and the creation of decent employment are key issues that policymakers must consider. It also points out that "since agriculture remains a major part of the economy in most developing countries and employs a very large number of the world's poorest people (...), agriculture should not be put aside if the priority is the reduction of the poverty" and that "neglecting the agricultural sector during the process of industrialization can constrain the development process."

The studies conducted in the countries include a report presented in Brazil⁸ that shows that agribusiness in that country accounts for 33.8% of GDP, 44% of exports and 37% of employment, and that the growth of agribusiness (8.37% in 2003) drove the expansion of the domestic economy.

The internacional context: shaping the future of agriculture

The international context is dominated by the globalization processes and trade liberalization, which are forging ahead, driving each other and posing major challenges for agriculture and rural life. A new supranational institutional architecture is being developed at varying speeds and intensities, with new rules of the game being created for

agricultural and rural actors as part of the process.

During the last two years, within the framework of this new international institutional architecture, agriculture has been one of the key issues in the trade negotiations in the various political, economic and technical scenarios. The countries have

recognized the importance of what is decided in the negotiations, and the consequences for agricultural trade policy. They know that the negotiations taking place in 2005, and the implementation of the agreements adopted in the Development Round (Doha 2001), will provide the basis for the bilateral and multilateral trade agreements that are signed.

Following the limited results of the Ministerial Meeting in Cancun (2003), the approval of the “Doha Work Programme: Draft General Council Decision of 31 July 2004” marked the end of an 18-month hiatus and focused the negotiations on concrete topics and consensus building on the core issues: market access, export subsidies and domestic support. This program has led to progress within the WTO, with the aim being to reach agreements that will continue the reforms in agricultural trade in the run up to the next Meeting of Trade Ministers, slated for late 2005 in Hong Kong.

In this interaction between the globalization processes and trade liberalization, and the new rules of international trade, important concerns have been raised regarding the benefits and costs of such processes.

One concern is the fact that the globalization process in which agriculture has been immersed for over two decades has mostly

benefited companies with a lot of economic, human and technological capital, usually linked to the export sector. Small and medium-sized enterprises (SMEs) in rural areas, which do not possess the same resources, have been excluded from the benefits generated in international trade.

A second concern is related to the rise in the appearance and spread of diseases as a result of increased trade, which has hit consumer confidence. Traditional agricultural health and food safety programs are unable to cope with the increased requirements and new regulations. Intended to guarantee consumers better-quality, safer products, they are promoted by international organizations, governments and companies in response to the demands of consumers. Hitherto these programs concentrated on developments within the country, but gradually they have had to adopt comprehensive systems (AHFS) capable of meeting the challenges of globalization and the growth of trade, and effectively protecting human, animal and plant health, but without becoming constraints or barriers to the world’s agricultural trade.

The third great concern stems from the new technological paradigm that impacts agriculture and its competitiveness in world markets. In the recent past,

research and technological innovation were the result of a public effort and their products became public goods that benefited society as a whole. Today, however, the efforts are centered on the development of knowledge-intensive technologies that are appropriable, i.e., they are private goods. These new technological goods are mainly produced by the private sectors of the most developed countries and are subject to intellectual property rights (e.g., agrobiotechnologies and the new information technologies).

The Internet and information and communication technologies (ICTs) have increased the amount of information available and speeded up its dissemination. However, it has become increasingly difficult to keep it in the public domain (due to the control of information, restricted access, the length of time for which it can be used, etc.). While it is true that the levels of connectivity in LAC have increased rapidly, they are still very low in comparison with other regions of the world.

A fourth concern is related to the climate change caused by greenhouse gas emissions, for which human beings are responsible, which have intensified droughts, floods and changes in precipitation and reduced the amount of water available. These

developments pose a threat to agriculture and rural life. Inability to adapt to climate change and vulnerability to these phenomena increase in rural areas, due to poverty, the degradation of natural resources, the failure to plan land use and the lack of a serious plan to counteract the damage caused by climate-related disasters.

In this new context of globalization and economic opening, in recent years new economic players have appeared who have had an impact on the world scenario, not only in the economic area, but also in the political and cultural domains. China and India are two cases in point.⁹ China is becoming a world power, having quadrupled its GDP in less than 30 years and as an efficient industrial producer with low labor costs. Furthermore, as the land it has available to grow crops is insufficient to meet its population's growing food needs, it represents a huge potential market. India's economy has grown at an average annual rate of 6% since 1990, poverty has fallen by over 10 points and exports of goods rose 32% per year between 2000 and 2003. Given the above, these two countries are attractive potential markets for the agrifood exports of the Americas.

Critical issues underpinning the regional context

Latin America and the Caribbean: the inequalities remain

The single biggest critical issue facing LAC is the fact that it continues to be the region of the world with the most skewed income distribution. Poverty and inequity, mainly in rural areas, are the principal challenge for the countries. The inequality has become more pronounced because the countries have reduced their investment in rural areas, creating a vicious cycle whereby most resources are sucked into urban areas.

Given the weak growth of Latin American economies and the limitations of the government aid programs for the most vulnerable sectors, most of the countries are unlikely to meet the Millennium Goals, while liberalization and opening-up do not necessarily guarantee food security¹⁰.

The limited economic and social achievements of the LAC countries are largely due to the differences in productivity and income levels. These, in turn, are the result of the science and technology and education and training models and policies that have been implemented in the region. Most countries have

failed to develop and implement sufficient science and technology (S&T) policies, while educational and training policies have not responded rapidly and effectively to the needs of the productive sector, focusing on academic content that has little to do with the needs of businesses.

The limited number of jobs available, low wages, insufficient income from agricultural activities and inadequate access to infrastructure and services (e.g., health, education and roads) force many thousands of Latin American and Caribbean citizens to migrate in search of better living conditions.

As a result of the growing migration, LAC now receives more remittances from abroad than any other region of the world (worth US \$38.5 billion in 2003). The trend in 15 countries between 1992 and 2003 is shown in Table 2. In many cases, these resources are the main source of foreign exchange, surpassing traditional exports, direct foreign investment and the resources provided by international cooperation agencies (IDB, 2005)¹¹

Emigration and remittances act as stabilizing factors in many economies and societies in the region

Table 1

Latin America and the Caribbean (15 countries): rate of growth of remittances and percentage of the rural population living below the poverty line

<i>Percentage of the rural population living below the poverty line (around 2002)</i>	<i>Annual rate of growth of remittances (1992-2003)</i>		
	<i>Over 100%</i>	<i>Less than 100%</i>	<i>Decrease</i>
Over 60%	Nicaragua Bolivia	Guatemala Honduras Paraguay	
Over 35% and less than 60%		Venezuela Dominican Republic Colombia Mexico Peru El Salvador Brazil	
Less than 35%	Costa Rica		Panama Chile

Source: UNCTAD (<http://www.unctad.org>) and ECLAC.

These remittances have a stabilizing effect on the balance of payments, balancing national accounts, maintaining exchange rates, minimizing the impact of recessions in the domestic economy and permitting higher growth rates. However, they have a dollarization effect on the economies and, although they help the recipients, mainly the rural poor, meet their basic needs (nearly 95% of remittances are used for consumption), only a small proportion of the money is invested.

Achieving hemispheric integration via regional blocs

Latin American countries have long benefited from the system of preferences operated by the United States and Europe. However, the developed nations have announced their intention of ending this arrangement, making Latin American exports less competitive in their main markets.

As hemispheric integration via the FTAA is not advancing fast

enough, the countries are endeavoring to achieve it through regional integration. Indeed, the slow progress of the FTAA negotiations has led several countries to negotiate and sign bilateral and multilateral free trade agreements with other countries in the region, thereby achieving better conditions for access or at least guaranteeing the conditions granted unilaterally.¹² For example, the five Central American countries and the Dominican Republic signed a free trade agreement with the United States (dubbed “CAFTA”) and three Andean nations are currently involved in a similar negotiating process with that country.

Free trade agreements are also being promoted with countries outside the hemisphere, such as MERCOSUR’s negotiations with the European Union and some initiatives that have been undertaken with countries in Southeast Asia.

Certain progress is being made in the subregions. For example, the Andean Community of Nations is trying to implement a common external tariff. Efforts to establish a Caribbean single market and economy (CSME) are also under way. This would permit the free movement of goods, services, capital and human resources within the region. All the Caribbean countries are expected to join this mechanism by 2006. In the Central Region, important

steps have been taken to achieve further integration and create a customs union in the short term. A mechanism for settling trade disputes has already been adopted. In the Southern Region, the political commitment to integration has grown since 2003, following a change of government in some countries. The MERCOSUR countries have made progress with the creation of a suprarregional institutional framework to offset the setbacks in the process of creating a customs union.

The institutional reforms in agriculture: unfinished business

Another critical issue facing the region concerns the reforms undertaken since the 1980s to meet the requirements of the international financial organizations and following the paradigms of the Washington Consensus. These reforms have not had the expected beneficial effects on agriculture or the rural milieu, and in many cases have not even been completed. In addition, the countries were forced to limit public spending and investment, with the consequent financial and operational weakening of national institutions. Many of these institutions find themselves in a paradoxical situation: to meet the demands of a more open, competitive

environment, they are asked to perform new functions - but with a smaller budget.

The importance of heterogeneity at the hemispheric level

The Americas are a mosaic of races, cultures, languages and differing economic, social and political situations. Agriculture and rural territories are no exception as far as this diversity and heterogeneity are concerned; indeed, they are the source of many of the differences and reinforce them. Therefore, the strategies and policies designed to achieve the strategic objectives of the AGRO 2003-2015 Plan must take into account the different conditions that exist within regions or integration blocs, and within individual countries.

The following is a summary of some outstanding features of the agricultural sectors and rural territories in the different regions of the Americas.

In the Andean Region, poverty alleviation, improving the socioeconomic status of indigenous populations and efforts to combat corruption are the issues highest on the agendas of the respective governments. Most of the population of this region lives in poverty and a high percentage lives in extreme poverty,

leading to serious social conflicts and threatening governance.

The inequality in income levels is also very pronounced: the richest 10% of the population receives between 35.6% (Venezuela) and 46.5% (Colombia) of income, while the poorest 20% receives only between 1.3% (Bolivia) and 4% (Venezuela). Inequality and poverty are more critical in rural territories, where the indigenous population is very important, accounting for 71%, 47% and 38% of the population of Bolivia, Peru and Ecuador, respectively.

In the Caribbean Region, the main concerns have to do with the deterioration of natural resources and the vulnerability of the island economies. Furthermore, the preferential treatment that the countries' sugar and banana production receives in the European market is due to end in 2007. These products are then likely to have to compete on an equal footing in the international market. In general, the region's agricultural sector is fragile and finding it very difficult to cope with the challenges posed by trade liberalization. The reasons for the sector's fragility include the islands' ecological vulnerability, agricultural policies that have little impact, low scientific and technological levels and, in particular, the lack of sufficient land for agriculture and the inadequate agrarian structure.

In the Central Region, the critical issues are the continued existence of high levels of poverty, despite higher growth rates; demographic pressure; integration into the trade liberalization processes; and the limited, embryonic level of technological change in comparison with developed countries. In 2001, half the population of Central America (50.8%) lived in poverty and nearly one quarter (23%) in extreme poverty. Nor has technological change had much of an impact on the situation; on the contrary, the results have been poor and very uneven. Finally, national institutions have proven to be inadequate to deal with the trade opening processes initiated by the countries.

The countries of the Northern Region do not share the same critical issues; while the United States and Canada have high performance indicators, Mexico's numbers are closer to those of other Latin American countries. Although poverty in the United States and Canada is not on the same scale as in LAC, the people most affected continue to be rural dwellers. The number of people

involved in agriculture in these territories has fallen as a result of the trend toward large-scale, capital-intensive production based on cost-efficient family systems. This has reduced poverty levels and they look set to continue declining.

In Mexico, agriculture can be divided into two large categories: modern agriculture with high yields, more like that of the country's northern neighbors; and smallholdings and subsistence farms, usually geared to local markets. Despite these internal differences, and contrary to what its denigrators affirm, NAFTA has edged Mexico closer to the development levels of its trading partners.

Growth in the Southern Region was hit by the Asian crisis of 1998. The terms of trade fell, trade slowed and the financial conditions deteriorated. However, in 2003 a combination of favorable circumstances (especially the upturn in the demand for commodities in the Asian countries) helped get the region's economic growth back on track.

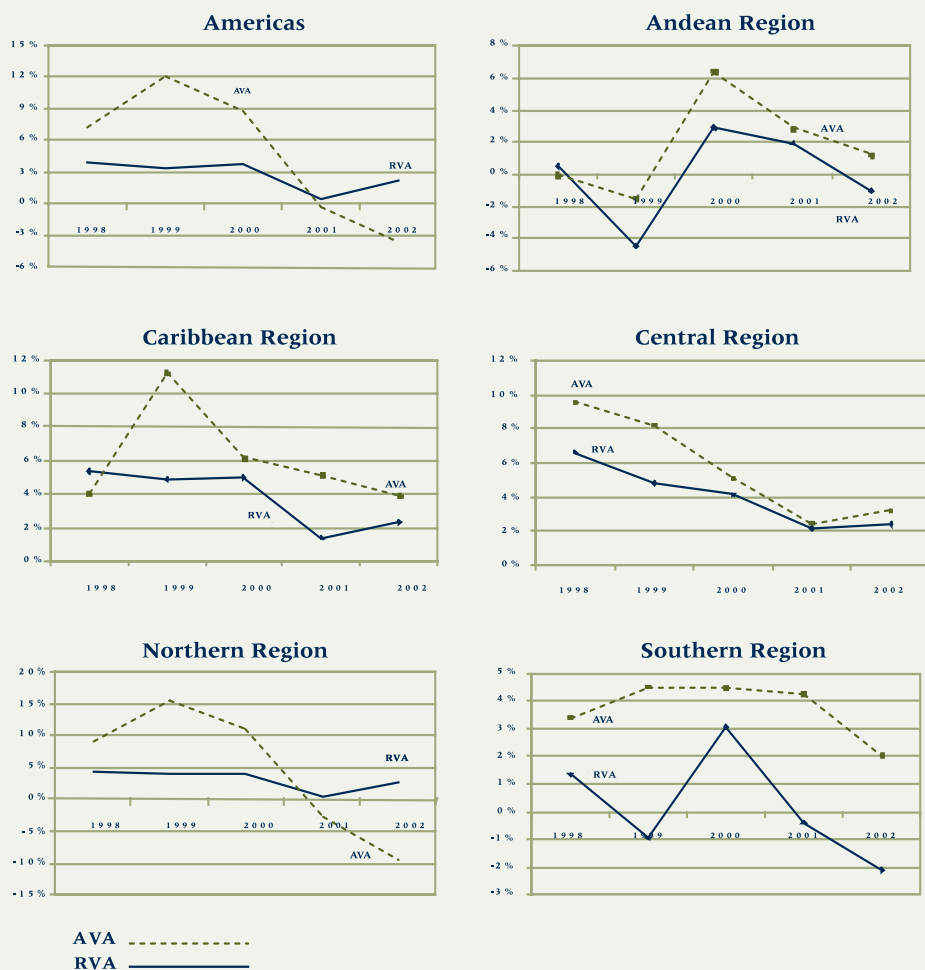
The performance of agriculture: progress is being made but problems and concerns continue to exist

The main findings of this report are organized under elements of the four dimensions on which the conceptual model of the AGRO

2003-2015 Plan is based: the production-trade dimension, the ecological-environmental dimension, the social-cultural and

Figure 2

Growth of Agricultural Value Added vs. Rest of Value Added, by region, 1998-2002



Source: IICA, with data from World Bank.

human dimension, and the political-institutional dimension.

Agricultural production is growing... but less quickly

At the hemispheric level, agricultural production, measured in terms of agricultural value added (AVA),¹³ grew at significant rates between 1998 and 2000. It then slowed in 2001 and 2002,

with specific differences between regions and products (see Figure 2).

The GDP of the small economies of the countries of the Andean, Central and Caribbean regions is largely determined by the AVA. The fact that they recorded the lowest growth rates of AVA for the period 1998-2002 is a matter of concern.

The Andean Region grew by an average of 1.8% per year between 1998 and

2002, bouncing back strongly from the disastrous effects of El Niño in 1994. Growth began to slow from 2000 onward, however.

The Caribbean Region recorded average annual growth of 2.3% between 1998 and 2001, due to the strong growth experienced in 1998 and 1999. The next year saw the start of a slowdown, however, caused mostly by natural disasters.

The poor economic performance of the Central Region as a whole (annual average growth of 1.68%) was mostly due to the effects of natural disasters (e.g., Hurricane Mitch) and the markets (falls in coffee prices and banana and sugar exports).

The AVA of the Southern Region grew the strongest, at a steady annual average rate of 3.5%. Growth slowed slightly in 2000, following the agricultural sector's outstanding accomplishments in 1999, a trend that became more marked from 2001 onward.

The Northern Region experienced the most sluggish growth during the period 1998-2002 (1.5%). Its agricultural production increased rapidly during the first two years of the period (7.7% annually), but the following two years saw a slowdown, with a 3% fall in AVA in 2001, due to the severe droughts in wheat-growing areas, and 12.3% in 2002, due to the crisis in the livestock sector caused

by sanitary problems.¹⁴ The performance of Canada and the United States was similar during the period concerned, while in Mexico the growth was sustained.¹⁵

Agrifood trade is growing, but the positive agrifood balance of trade has been declining

Between 1998 and 2002, the Americas continued to be a net agrifood exporting continent. In 2002, the agrifood balance of trade recorded a positive balance of US\$38.8 billion, although it was down 7.1% on the previous year.

The trend was the same in all regions except the Caribbean. However, the relative importance of the agrifood sector's share of total exports varied from 46.5% in the Central Region to 8.3% in the Northern Region. The average for the entire hemisphere was 11.2%. Agricultural imports accounted for over 12% of total imports in all the regions, except the Northern, where the figure was 5.4%. The agricultural component accounted for an average of 5.8% of total imports in the Americas.

Trade within the continent proved to be of vital importance for the agricultural sector, since 45% of agricultural exports went to other countries within the

*The Americas: index of revealed comparative advantages (RCAs)
by tariff chapter, 1998-2002*

	Growing	Diminishing
Positive	<ul style="list-style-type: none"> 1 Live animals 3 Sea products 5 Other products of animal origin 6 Live plants and floriculture products 7 Vegetables, roots and tubers 11 Products of the milling industry 12 Oil seeds and oleaginous fruits 14 Vegetable plaiting materials and other vegetable products 17 Sugars and sugar confectionery 23 Waste from the food and feed industries 24 Tobacco and substitutes 33 Essential oils 35 Albuminoidal substances, glues, enzymes 38 Tinctures 41 Skins and hides 51 Wool and hair 52 Cotton <p>Percentage of agricultural exports 45.0%</p>	<ul style="list-style-type: none"> 2 Meat and edible offal 8 Fruits 9 Coffee, tea, maté and spices 10 Cereals 15 Fats and oils 16 Preparations of meat 20 Preparations of vegetables and fruits 21 Miscellaneous edible preparations 29 Mannitol and sorbitol 43 Furskins 50 Silk <p>Percentage of agricultural exports 46.5%</p>
Negative	<ul style="list-style-type: none"> 4 Dairy produce, eggs and honey 13 Juices and vegetable extracts 18 Cocoa and its preparations 19 Preparations of cereals 22 Beverages, spirits and vinegar 53 Other vegetable textile fibers <p>Percentage of agricultural exports 8.5%</p>	<p>Percentage of agricultural exports 0.0%</p>

Source: IICA, with data from United Nations(PC/TAS).

Americas and 63.5% of agricultural imports came from other parts of the hemisphere. The United States received the largest percentage of exports from other countries in the Americas (20.9%), and was the biggest supplier of imports (21.1%).

The competitiveness of agrifood trade is improving but there are worrying signs

The results of the studies carried out for the different tariff chapters

suggest a relative improvement in the situation described in the report for 2003,¹⁶ according to the index of revealed comparative advantages (RCA), which analyzes both export and import trends.

The data presented in Table 2 suggests that over 90% of the agrifood products traded by the hemisphere have a positive comparative advantage. However, only half of these products have an advantage that has grown over time (1998-

2002). The advantage of the rest (46.5%) continues to be positive, but is clearly on the decline. The other 8.5% of exports have a growing negative advantage; in other words, although they are at a disadvantage with respect to their competitors, the situation improved over the course of the period involved.

However, the fact that over half the agrifood products traded exhibit diminishing comparative advantages (46.5%) or negative ones (8.5%) is a cause for concern, due to the implications for the medium term.

At the individual level, some countries have improved their advantages in regard to important export products; while others have seen their traditional export products become less competitive. For example, banana exports are very important for some Central American, Caribbean and Andean countries, but only Belize, Honduras, Nicaragua and St. Vincent and the Grenadines report a growing positive comparative advantage. The advantages of countries like Dominica, Ecuador and Panama, on the other hand, are diminishing, even though bananas account for 62%, 40% and 25% of their agricultural exports, respectively.

The same situation occurs with soybean oilcake and residues. Bolivia and Paraguay have a

growing positive advantage, while the advantage of Argentina and Brazil is gradually diminishing, even though these products are very important to their balance of trade. Argentina and Brazil saw a slight reduction in their revealed comparative advantage, but this was due to a bigger increase in the comparative advantage of imports with respect to the comparative advantage of exports.

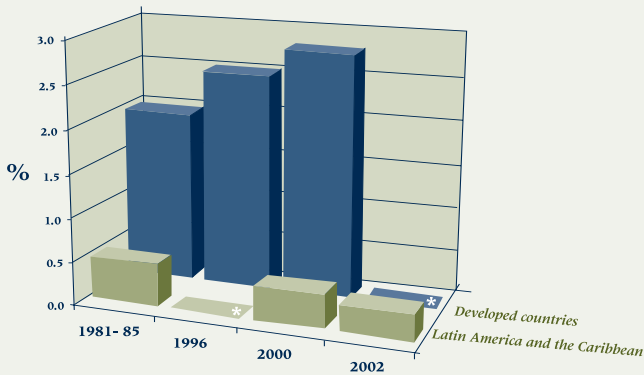
Similar situations occur with other agrifood products. Countries highly dependent on a specific product report diminishing comparative advantages, or even disadvantages. A case in point is the United States, which has a diminishing negative comparative advantage in regard to meat. This is due to the fact that the revealed comparative advantage in imports is bigger than that of exports. During the period 1998-2002, this product accounted, on average, for 2.2% of U.S. imports and 1.6% of its exports.

Technology as a factor in agricultural competitiveness

Although more agricultural goods are being produced and exported than previously and aggregate average yields are growing, this growth is not the same in all the regions of LAC. While the

Figure 3

Intensity of Investments in Agricultural Research
(Percentage of Agricultural Gross Domestic Product)



* Data not available for Latin America and the Caribbean in 1996
* Data not available for developed countries in 2002

Source: IICA, 2000 / Study of 30 research organizations in Central America, 1993;
ASTI database for public spending in 1996;
Preliminary data from FAO / FORAGRO Directory Project for 2002.

average rate of growth of food production has been positive in the Southern Region, it has been negative in the Central Region. This disparity in intraregional productivity is still considerable in the case of numerous products and largely the result of the dwindling investment in public research.

One of the reasons for the limited impact of technology and innovation on the competitiveness of agriculture is that LAC invests little in knowledge (see Figure 3). Compared to the developed countries, the amounts invested in agricultural research in the LAC countries are insufficient and much less than the ideal. They

have also fallen markedly in recent decades.

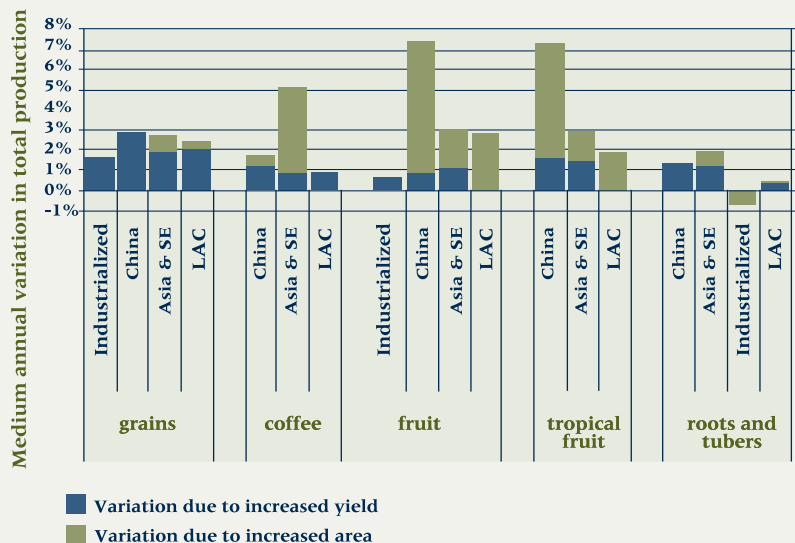
Major disparities also are to be found within the developing countries of the hemisphere - in this case, disparities between the technology used by cutting-edge agriculture and traditional agriculture. This situation limits the promotion of technological innovations that would improve the operation of agrifood chains and make it possible to produce good-quality, safe products in the quantities required and at advantageous prices.

With exceptions, LAC invests little in agricultural knowledge

The competitiveness of LAC agriculture has been undermined by the limited incorporation of technological change into the different stages of the agrifood chain, especially compared to the regions it competes against. The fall in the international prices of agricultural export products has also hit the economies of the Latin American countries hard.

Figure 4

Contribution of higher yields and increased acreage to production worldwide, 1961-2000



Source: FAO.

The production of tropical fruits and vegetables for export has grown in the last decade but this growth was achieved by increasing the acreage, with no significant change in average agricultural yields. The limited incorporation of technological innovations into agroindustrial processes in LAC is due, in part, to the small number of suppliers of technology for tropical countries. The Southern Cone countries, on the other hand, adapt and transfer agricultural technology from developed countries. This is one of the reasons why natural resources are used as the main source of competitiveness in the agricultural model employed in most of LAC (see Figure 4).

Although LAC is one of the main regions where transgenic crops are grown, the number of crops and countries is small. Rather than developing products with new biotechnologies, the region imports seeds and then multiplies them. Some countries of the region import seed, adapt the cultivars, validate technologies and then produce the crops commercially. Other countries just multiply seeds as “winter nurseries” and draw them back (technological “maquila”).

Knowledge as a new factor in the competitiveness of agriculture

The revolution in knowledge management sparked by the development of information and

communication technologies has already had an impact on agriculture and the rural environment, and is bound to have an even bigger impact in the future. Knowledge today is one of the most important determinants of the competitiveness of agriculture. This is evidenced by the fact that nearly half the countries in the hemisphere have already developed agricultural information systems based on Internet platforms that are modernizing extension services and improving the decision-making of producers and rural dwellers. Furthermore, there are dozens of information and communication centers in the developing countries that provide access to the Internet and to technical books and documents.

Not enough is being done, however. Although more information is available and access to new communication technologies has increased, the amount of content generated that is useful for rural players limits their use and appropriation of knowledge. They also face difficulties in identifying the information they need, such as information about markets, prices, technology packages, climate, cartography, services and directories.

As a result, there are concerns about the financial sustainability of projects related to rural telecenters, and whether current generations are taking full

advantage of these tools and using resources efficiently (libraries, equipment, infrastructure, etc.).

The environment for agribusiness is improving

Over the last 20 years, agriculture has ceased to be viewed merely in terms of primary production (i.e., the process of cultivating or extracting natural resources). The existence of systems of value chains is acknowledged, geared to meeting consumer demands and preferences and incorporating the practices and procedures of all the activities carried out within and outside the production unit.

This new perception has been shaped by four major forces that affect the development of agribusinesses, which can be summarized as follows:

- A change in the composition of the production and supply chain, with the growing development of networks of contacts and services that transcend the local, and even the national level;
- The greater vertical and horizontal integration of all the segments and stakeholders in the chain. The clearest example of this in recent years has been the hegemony of supermarkets in supplying the end consumer; The existence of better-

informed, more demanding consumers, making it necessary to offer products that are not only nourishing, but that are also safe and possess some other beneficial characteristic (e.g., they help conserve the natural resources of the respective production systems); and,

- The existence of changes in the priorities of public policies and the emergence of standards in the private sector.

In addition to these forces, there are factors of a practical nature that affect the development of agribusinesses. For example, SMEs regard the paperwork and requirements involved as one of the biggest obstacles to their effective integration into international trade.¹⁷ This sector also affirms that a process of administrative simplification is needed to stimulate the creation of new firms and meet the fiscal and labor obligations needed for business development.

Agricultural health and food safety are more important but can limit the growth of trade

As world trade has grown, the incidence of food-borne diseases and/or those transmitted by live animals has created more disruption in international trade, mainly due to agricultural health and food safety disputes. Besides undermining consumer

confidence in trade, this situation has highlighted the fact that national agricultural health and food safety (AHFS) programs in LAC possess only basic technical capabilities and are slow to change. In fact, surveillance, quarantine and diagnosis systems need to be overhauled. The public and private sectors of the importing countries have been imposing more regulations to guarantee their consumers better-quality and safer products, but it is the private sectors of the exporting countries that have had to bear the financial burden of the changes.

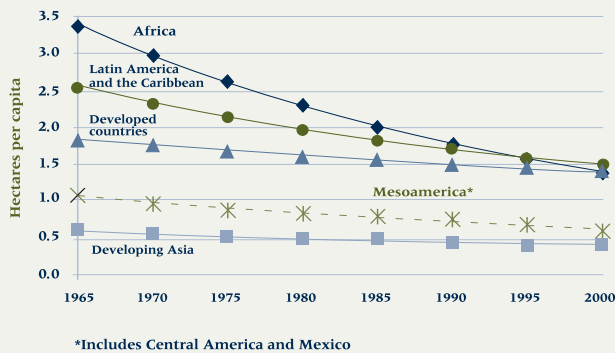
Natural resources and the rural environment: the underpinnings of agricultural production

The tropical countries have similar environmental and agro-ecological conditions, and end up competing against each other in international agricultural markets. The opposite is true of the countries in the extreme north and south of the continent, whose natural resource bases complement each other. Clearly, this will determine the flows of interregional trade and the tropical countries' potential for expanding or diversifying their production.

As already pointed out, not enough technology is available for LAC countries to produce crops with comparative

Figure 5

Agricultural land by inhabitant in Latin America and the Caribbean, compared to other regions



Source: FAOSTAT.

advantages. They have therefore had to resort to agricultural models based primarily on the use of natural resources. Although savings in agricultural land were made by improving the productivity of some crops, especially staples, the demand for acreage for products with comparative advantages in the international market increased. This agricultural development model will not be sustainable in the medium and long term, as natural resources with agricultural potential are now much less plentiful in a substantial number of countries (see Figure 5).

The potential of agricultural and non-agricultural activities within rural territories depends on how natural resources are managed. The degradation of land and desertification are causes for concern. LAC may have the largest reserve of arable land in the world (roughly 30% of the surface area), but it is also the

region where nearly 16% of all degraded soils are to be found.

The situation with regard to water resources is similar: although LAC possesses over 30% of the planet's water resources, they are not distributed uniformly. This leads to shortages in some desert and coastal regions, and to a deterioration in water quality, mainly in the Caribbean countries.

Natural disasters have increased in the region over the years, with floods, earthquakes, avalanches, landslides and storms occurring more frequently. Between 1995 and 2004, natural disasters are estimated to have caused economic damage to the tune of US\$107,761,000, more than the GDP of most LAC countries in 1995.

The number of people affected by natural disasters has also increased. In the Caribbean, for example, 6180 people were killed by natural disasters between January and November 2004, compared to 2147 between 1990 and 2003. The Caribbean countries (especially Grenada, Dominican Republic and Haiti) and Guatemala, El Salvador, Honduras and Ecuador have been the most vulnerable to natural disasters during the last two decades.

This vulnerability makes these countries more likely to suffer human and economic losses as a result of disasters. They are socially and economically fragile, their institutions and infrastructure are weak and they have a limited capacity to cope with disasters and finance the actions required to recover from them.

In nearly all these countries, the people hit hardest by natural disasters are the poor, and most of them live in rural areas. There are several reasons why they are more vulnerable: the infrastructure in the places where they live is in bad condition; they cannot afford expensive land, so are forced to work or live on land prone to landslides, floods, and drought; and they do not possess the financial resources needed to implement preventive measures and, usually, to take action after a disaster occurs.

On a different note, the activities based on the use and conservation of natural resources (e.g., agriculture, forestry plantations and small-scale fishing), the communities and their cultural expressions and nature itself produce rural services or amenities whose benefits are not internalized completely by the market.

Rural tourism and the payment of environmental services are clear examples of such activities. While the former has the potential to drive the production of agricultural and non-agricultural goods and services within rural territories, the latter is an instrument that generates development options that combine environmental, social and economic objectives and encourage farmers to modify production practices which they would not otherwise change.

Poverty and indigence persist and are more serious in the countryside

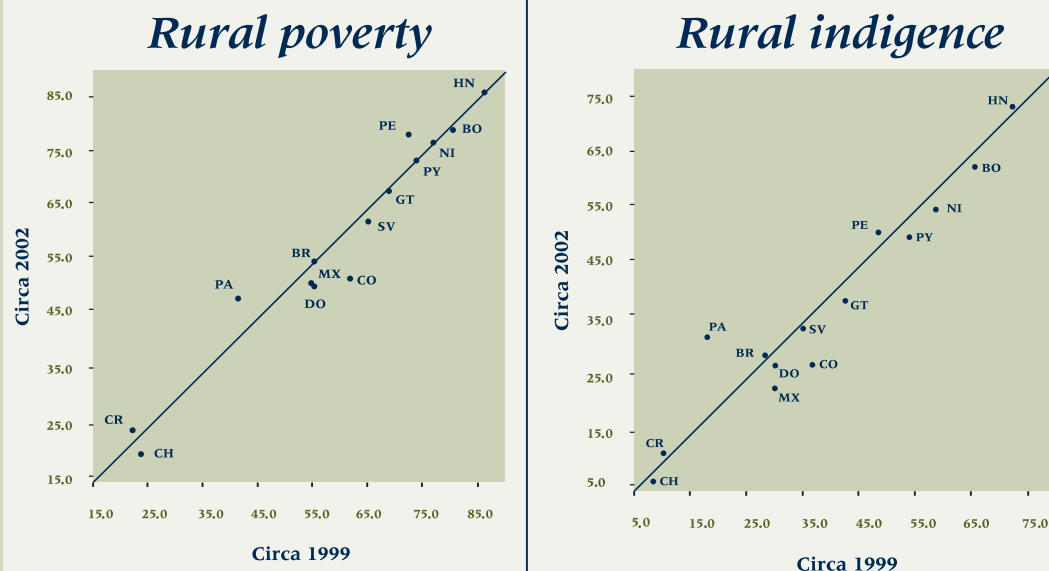
Between 1980 and 2002, the levels of both rural poverty and indigence increased in relative as well as absolute terms. During the 1980s, rural poverty and indigence increased significantly and, although slight improvements occurred in several countries in the 1990s, both rates remain considerably higher in rural areas than in urban areas.

It is estimated that there are at least 222 million poor people, of which 97 million live in extreme poverty in LAC. Up to 62% of the rural population (75 million people) live in poverty and 38% (46 million) in extreme poverty (ECLAC 2003).¹⁸

Out of every 100 rural inhabitants, two more were poor and five more were extremely poor in 2000 than in 1980

Figure 6

Latin America and the Caribbean (14 countries): trend in the incidence of rural poverty and rural indigence between circa 1999 and circa 2002



Source: IICA, based on data from ECLAC (2004).

The highest rates of rural poverty and indigence are to be found in several Central American countries (Guatemala, Honduras and Nicaragua) and Andean nations (Peru, Bolivia), as well as in Haiti and Paraguay. In these countries, over 70% of the rural population was living in poverty and over 50% in extreme poverty around 2002 (see Figure 6).

The rural job market did not improve significantly between the mid-1990s and the beginning of this decade, although women fared better than men.

Notwithstanding the above, in recent years rural poverty has become increasingly feminized in most countries of LAC. In the second half of the 1990s, the difference in the rates of female and male unemployment narrowed in most countries, but the rate of rural open unemployment continues to be significantly higher for women than for men.

In many countries, the low rates of rural open unemployment (less than 4%) contrast with the high rates of rural poverty. This is due

to very high levels of underemployment, especially “invisible” underemployment (e.g., underemployment as a result of being underpaid). This shows that the high incidence of rural poverty in some countries has more to do with the characteristics of integration into the labor market than lack of employment.

In all the countries for which information is available, the rural economically active population (EAP) earns lower wages than the urban EAP, and the lowest of all in the countries where the incidence of rural poverty is highest. The gap between countries has widened over time, since rural wages have fallen in all the countries where they were low and risen in countries where they were high. The chief determinant of low rural wages would seem to be the low productivity of agricultural work.

There are also significant differences in the income levels of urban and rural women, due to the disparities in the opportunities for employment in the rural economy and the low wages that rural women receive.

Because of the low wages being paid in agriculture, between the mid- and late 1990s, many more members of the rural EAP turned to non-agricultural activities. It is estimated that by 1999 the figure in LAC reached an average of 39%. In Panama, Mexico and

Costa Rica, the non-agricultural rural EAP is already larger than the agricultural EAP.

The number of women who now make up the non-agricultural EAP has also increased considerably, rising to an average of 44%, while the agricultural EAP is only 27%. Furthermore, 51% of the total female EAP is involved in non-agricultural activities, compared to 33% of the male EAP.

If we take the analysis further and consider variables such as culture and ethnic groups, the situation is critical, as social exclusion is more serious. Some experts assert that indigenous peoples account for nearly 10% of the total population of LAC, and that their development indicators are much lower than the average for the rest of the population (Hall, G.; Patrinos, H., 2005).¹⁹ ECLAC confirmed this in 2004, when it put the indigenous population in LAC at 50 million, or roughly one third of the rural poor. This would make it the biggest single group among the rural poor.

According to a World Bank report, indigenous peoples suffer from the lowest educational levels, poor nutrition and health and high rates of unemployment and discrimination.²⁰ However, indigenous peoples regard themselves as rich in cultural and spiritual traditions, to which society in general attaches much

In LAC, non-agricultural rural employment is growing more than agricultural employment

less value and which cannot be measured quantitatively. It is important to note that, since the 1990s, indigenous rural movements in LAC have been growing in political strength, mainly in countries like Ecuador, Bolivia and Mexico. Furthermore, the territories occupied by these groups are now viewed differently, due to their environmental importance. Indigenous organizations have established networks at the micro-regional and national levels and have seized the opportunities that the supranational platform has given them.

Rural poverty and inequalities in the countryside

As already mentioned, nowhere in the world is income distribution more skewed than in LAC. For the countries of the region for which information is available, the Gini Coefficient of income distribution is higher than 0.45.

In all the countries except Bolivia income distribution is less skewed in rural areas than nationwide. Rural inequality fell in most LAC countries, but there was no significant change in the countries with the highest levels (Bolivia and Brazil, for example).

People affected by rural poverty and indigence are more likely to engage in agricultural activities than work in other sectors of the

economy. In other words, under the current conditions, a person living in the countryside and working in agriculture in LAC is more likely to be poor. It is for this reason that non-agricultural rural employment is assuming increasing strategic importance as a means of generating rural income and escaping from rural poverty.

In addition to poverty and skewed income distribution, there are inequalities in land distribution in rural territories, as well as disparities in education and access to basic services and financing.

The educational disparities are not limited to the fact that the rural population has less years of schooling than urban dwellers. There are also major differences with regard to the quality of educational programs and academic performance in areas such as literature and mathematics. These conditions are reflected not only in smaller increases in productivity and income levels in rural territories, but also in a more limited capacity to incorporate new technologies.

The disparities with respect to access to public utilities can be seen especially in the provision of drinking water and sanitation in rural areas. Although the coverage of services improved in the 1990s, it continues to be less than in urban areas. There is also a disparity as far as access to financial resources is concerned.

In the 1990s, LAC suffered from a limited supply of financial services in rural areas, in terms of both the state and private banking systems. Although in recent years state banks have endeavored to play a bigger role in rural territories, their failure to offer services for more than a decade, and the structural factors of Latin American financial markets have prevented producers from taking full advantage of formal financial systems. Due to this and the underdevelopment of rural financial markets, credit is reckoned to be one of biggest weaknesses of the region's markets.

Progress has been made with regard to food security, but there are major disparities

Although LAC is, and will continue to be, the only region of the world that is a net exporter of agricultural products, this has not guaranteed food security, nor will it in the future. The fact that the region has been unable to prevent thousands of people from suffering from hunger and malnutrition raises doubts about whether the Millennium Goals can be achieved. It is evident that policies are needed that view the problem of food security as more than simply the "availability of food" or "national self-sufficiency." In a region with major disparities, due more to the limited access to,

and distribution of, food than the supply (production), real per capita income becomes a key variable. Indeed, food insecurity is closely related to poverty. However, since the lion's share of poor people in LAC are to be found in rural areas, the growth of the agricultural sector is essential to achieve food security in the region.

This hypothesis is consistent with the data shown in Table 3. In most of the countries where per capita food production increased, the per capita supply of dietary energy rose too. However, in a sizable number of countries where food production grew, the number of undernourished people also went up. Only in Brazil and Venezuela did the rise in per capita food production result in an increase in the dietary energy available and a fall in the number of undernourished people.

In all the other countries where the food supply and food production fell, except Honduras, the number of undernourished people rose (e.g., Argentina, Guatemala, Jamaica, Panama and Paraguay). This seems to confirm the connection between the reduction in the availability of food and the deterioration in the state of food security in the countries. The information available for each country suggests that, between 1997-1999 and 2000-2002, food

Table 3

Latin America and the Caribbean (23 countries): food production dietary energy supply and undernourishment, 1995-2201

<i>Per capita dietary energy supply (1997-1999 to 2000-2002)</i>	<i>Quantum Indices of Food Production (QIFP) per inhabitant (1999-2002)</i>		
	<i>Increased</i>	<i>No change</i>	<i>Decreased</i>
<i>Increased</i>	Bolivia Brazil Trinidad and Tobago Nicaragua Venezuela Suriname	Mexico	El Salvador Guyana Ecuador Haiti Costa Rica
<i>No change</i>	Peru Dominican Republic	Colombia	
<i>Decreased</i>	Chile Honduras		Uruguay Argentina Jamaica Paraguay Guatemala Panama
<i>Number of undernourished people (1997-1999 to 2000-2002)</i>	<i>Quantum Indices of Food Production (QIFP) per inhabitant (1999-2002)</i>		
	<i>Increased</i>	<i>No change</i>	<i>Decreased</i>
<i>Decreased</i>	Brazil Venezuela		Haiti
<i>No change</i>	Trinidad and Tobago Suriname Nicaragua Chile		El Salvador Ecuador Guyana Uruguay Costa Rica
<i>Increased</i>	Bolivia Peru Honduras Dominican Republic	Colombia Mexico	Argentina Guatemala Jamaica Panama Paraguay

Source: IICA, based on data from ECLAC (2003a) and FAO (2004).

security (the number of undernourished people and the per capita dietary energy supply) improved in Haiti, Venezuela and Brazil.²¹ On the other hand, the situation deteriorated in Jamaica, Guatemala, Honduras, Panama, Paraguay and Argentina. In this last country, however, undernourished people account for less than one per cent of the population.

Furthermore, the data show an important link between the levels of undernourished people and the incidence of rural poverty, especially extreme rural poverty. The most extreme cases are Bolivia, Honduras, Nicaragua and Paraguay, which have high rates of rural poverty and undernourished people. At the other end of the scale, the exceptions are Chile and Costa Rica, which have low rates of both variables.

A significant recent trend in agriculture in LAC has been the change in the structure of production, reflected in the bigger proportion of products traded in the international market and the slow growth of food crops, especially cereals and roots and tubers (Seixas and Ardila, 2003, p. 2).²² Based on data for the end of the last decade, average per capita production of crops such as cassava, potatoes, wheat and rice is declining throughout the region. On the other hand, per capita production of products such as oils (soybean, sunflower

and African palm), corn (especially for industrial use), meat, tropical fruits, vegetables and, to a lesser degree, sugar and milk, is on the rise (Ardila, 1999).²³

Progress has been made in higher education and training, but not enough

In general, the governments of LAC have shown a growing commitment to education and the implementation of educational reforms. The latter have led to great strides being made in access to primary, secondary and tertiary education, in strengthening the capabilities of educational systems, in promoting pedagogical innovations and in the participation of the private sector. The scale of these efforts has been insufficient, however, while the allocation of public resources to finance education has been falling rapidly in the Latin American countries.

As far as agricultural education is concerned, higher educational institutions in the region generally do not have strategic and academic development plans based on formal studies of job opportunities. As a result, academic curricula reflect neither the changes in the sector nor employers' expectations. Furthermore, agrarian university faculties lack the funds to keep their infrastructure in good

The ministries of agriculture have seen their traditional roles modified and are faced with new challenges

condition, there are no minimum education and research standards, ICTs are underused, the student profile has changed and fewer high-school students are interested in agricultural courses. All this has hindered the training of first-rate professionals in areas linked to modern agriculture.²⁴

In response to this situation, agricultural high schools and vocational training institutions are now offering middle-level technical courses to meet the needs of the private business sector and contribute to the development of the rural territories.

The policies and institutions for agriculture are redefined

The legislation and policies of the agricultural sector in LAC have been redefined in terms not only of the governments' liberalization strategies, but also of the multilateral trade rules and the modifications stemming from new trade agreements. However, although all the members of the WTO are committed to reducing policies that distort trade, the OECD countries have not cut the aid to their agricultural sectors. Instead, they have transferred the resources from programs that are not allowed to programs that are ("green box" instruments). In contrast, the LAC countries have been forced to limit their support for the agricultural sector,

due to budget constraints caused by the fiscal crisis, and the national agreements to cut public spending signed with international organizations. In spite of this, the countries are endeavoring to develop policies and support instruments geared to the new conditions of the sector that will make it possible to maintain the competitiveness of their products.

In this context, the ministries of agriculture have seen their traditional roles modified. They are expected to meet the new challenges imposed by economic opening and the deregulation of domestic markets, even though in many cases their functions have been curtailed (e.g., their responsibility for natural resources) or they are assigned new duties but not given the policy instruments they need to carry them out efficiently. Some of these new responsibilities, such as rural development, call for cooperation with other sectors.

At the same time, important issues are emerging over which the ministries of agriculture do not have control. Increasingly, interministerial consensus-building bodies have to be set up, as in the case of the agricultural trade negotiations (with the ministries of trade) or food health and safety (with the ministries of health). The agrifood chains approach also calls for the involvement of various bodies. In addition to

public sector agencies, the players themselves must be taken into account - the private sector and its organizations.

In this regard, the countries of LAC have promoted institutional modernization and the coordination of agribusiness policies, thereby fostering agreements for the organization of agricultural production chains, the creation of ministerial agricultural councils and the establishment of political forums for the negotiation of trade unions.

The Northern Region modified its agricultural policy and institutional framework following the enactment of the Farm Security and Rural Investment Act in the United States and the promotion of the sectorial policy in Mexico.

The Andean Region made its greatest institutional strides by organizing production chains, creating forums for dialogue and consensus building among primary producers, processors, wholesalers and retailers, and public and private support entities, so they can develop short and long-term actions plans. However, for the time being their priority is to solve the immediate problems related to the design of policies for long-term competitiveness. In the Southern Region, a major step was taken in strengthening the regional agribusiness

institutional framework with the creation of the Southern Agricultural Council (CAS), a forum of ministers of agriculture that is used to discuss and focus their efforts aimed at establishing a regional system of sectoral coordination.

In the Central Region, the agricultural sector has figured on the political agenda at the highest level and been a focus of the presidential summits. Two ministerial forums have been set up (the CAC and CORECA). Complementary bodies have also been established to support the preparation of Central American agricultural and rural development projects, and to address issues related to the creation and operation of the Central American Customs Union and the negotiation and implementation of the free trade agreement between Central America and the United States.

Agricultural health and food safety is one of the areas in which the new rules of the game have affected policies and institutions the most.

AHFS policies and institutions have acknowledged that the WTO Agreement on Sanitary and Phytosanitary Measures (SPS) coordinates and formalizes the harmonization, equivalence, regionalization and risk assessment of the policies that the countries are committed to adopting and implementing.

Strengthening Agricultural Health and Food Safety Systems

IICA has promoted two initiatives to enhance the capabilities of agricultural health and food safety systems. The first is designed to develop the countries' capabilities, so they can implement the WTO Agreement on Sanitary and Phytosanitary Measures (SPS) more effectively. Thanks to this initiative, the countries understand better the dynamics of the work of the SPS Committee, the percentage of countries taking part in the meetings rose from 28% to 98% and a network of contacts was created at the regional and international levels.

The second initiative is the joint preparation, by IICA and the World Organization for Animal Health (OIE), of the Performance, Vision and Strategy (PVS) instrument. This has helped the countries assess the performance of their AHFS services, share a vision with the private sector, set priorities and facilitate the strategic planning efforts of the services concerned. This instrument has already been applied in Central America, generating global results for the region and specific results for each country, and in Mexico and Paraguay.

Source: IICA.

From that perspective, the countries with vision have created successful AHFS services that have developed technical capabilities for conducting risk analyses based on scientific principles, stepped up actions to promote the competitiveness of the private sector and facilitate market access, integrated planning and decision-making, and selected and trained competent human resources.

However, only 40% of the countries of the Americas have

managed to implement successful AHFS systems. In the rest of the countries, the national AHFS programs possess only basic technical capabilities and they have been slow to realize the importance of the relationship between the public and private sectors, even after signing the WTO Agreement. To meet international standards and benefit from them, these organizations need to be overhauled and enhance their capabilities in three areas: regulatory mechanisms, technical

expertise and institutional sustainability.

During the last decade, innovation and technology institutions became trapped in a downward spiral of shrinking resources and results, and received little political and social recognition. The institutions found it increasingly difficult to undertake successful modernization processes, their operating capacity was progressively reduced, their human capital (researchers) aged, there was a lack of institutional incentives to encourage the users to participate and no political strategic objective was set that carried sufficient weight.

Furthermore, the NARIs have had to cope with increasingly limited allocations of state resources for innovation and technology. This and growing economic opening and the reduction of subsidies has made much of the technology that these institutes developed for over a decade economically obsolescent - perhaps prematurely.

At present, there is little institutional coordination for the design of new knowledge management and technology development models that could help solve the region's problems. Furthermore, it has not been possible to charge prices commensurate with the cost of the research, due mainly to the organizational structure and the legal framework of the developing

countries. Consequently, the private sector has played only a small role in agricultural research (contributing, at the most, barely 15% of the resources allocated to research).

To decentralize and increase the number of suppliers of agricultural research, the governments have encouraged competition for public funds, involving all the local and foreign professionally qualified competitors of the public and private sectors, including foundations and NGOs. To improve promotion and technological integration efforts, two interesting mechanisms were set up: FORAGRO and FONTAGRO.

Higher education is undergoing a process of transition in the LAC countries. However, in most cases there is no national strategy, fewer public resources are being allocated, no methodologies exist for measuring quality and the private sector has become more heavily involved.

Agricultural higher education is no exception and, as a result, the agricultural authorities have not been involved in defining study programs, their academic content does not match the needs of the productive sector, budget resources have been cut and alternative sources of financing are sought. In view of this, vocational and training institutions are now more

FORAGRO / FONTAGRO

The Regional Forum on Agricultural Research and Technology Development (FORAGRO) and the Regional Agricultural Technology Fund (FONTAGRO) have helped create interinstitutional partnerships by fostering dialogue among the different stakeholders in the public sector, agribusiness representatives and the academic community.

This strategy has been complemented with regional mechanisms that incorporate, adopt or adapt knowledge generated in the region for the benefit of national institutions and local producers. The cooperative agricultural technology research and transfer programs (PROCI), composed of the directors of the research institutes, have incorporated other institutions related to technology research and transfer. The programs currently operating are PROCIANDINO, PROCISUR, PROCITROPICOS, PROCICARIBE and the SICTA (in Central America). PROCINORTE is in the process of being set up.

Source: IICA.

involved in developing the skills required in labor markets.

Policies for sustainable rural development

State reform processes have changed the institutional framework of rural areas throughout the hemisphere, weakening or leading to the demise of the agencies that supported government programs and promoted the agricultural sector. States have also transferred functions to a complex range of

organizations. This delegation of social and financial responsibilities has reduced the responsiveness of the institutions traditionally charged with implementing rural development policy. In fact, civil society has assumed much of the responsibility.

In the different regions of the Americas, bodies and mechanisms have been developed to promote rural development. In the Northern and Caribbean regions, there is a system of "alliances" comprised of

representatives of the governments, private organizations, federal agencies, etc. Their aim is to identify the factors that affect the rural milieu, discuss them and take the appropriate action.

In the Central Region, political mechanisms have been created to discuss and make decisions on rural issues. They permit interaction among regional alliances, national councils, local forums, nongovernmental organizations, etc. Special funds and implementation mechanisms have also been created to ensure flexibility and efficiency. They offer a range of services, from technical assistance and credit to funds for the modernization of production.

In the Andean Region, rural development policies are geared to the development of local economies, microenterprises and production chains. This vision incorporates the territorial approach to rural areas, making it possible to coordinate macro- and sectoral policies and instruments in specific territorial spaces and thereby achieve greater social and territorial cohesion.

The situation in the Southern Region varies considerably. In Argentina, Uruguay and Brazil, the ministries of agriculture or social or agrarian development are responsible for rural development programs. Paraguay and Chile, on the other hand, have no specific

national programs for their rural territories. Although the ministries are not responsible for any programs in Chile, the state policy aimed at making agricultural production chains more competitive has been successful. It has failed to incorporate family agriculture, however.

Agricultural and rural public expenditure (ARPE) is an indicator of a government's intentions and priorities with regard to the development of rural communities. Interestingly, although ARPE grew in real terms between 1991 and 2001 (except in Argentina, Brazil, Jamaica and Venezuela), it rose less than public spending as a whole. In other words, a smaller percentage was allocated to agriculture and the rural milieu in Latin America, reflecting the political importance attached to it. As a proportion of consolidated government spending, ARPE fell in 11 of the 18 LAC countries studied between 1991 and 2001.

There would appear to be a positive correlation between the evolution of the rural population and ARPE, since the countries whose rural populations grew the most also doubled their ARPE. On the other hand, in the three of the 18 countries studied in which ARPE decreased in absolute terms, the growth of the rural population was also negative or, at best, small (less

Public spending on agriculture and rural areas, as a share of total spending, declined in 11 of the 18 LAC countries

In 2015, the world population will be over seven billion. Many people will have higher incomes and the demand for food will increase

than 6%) during the aforementioned period.

The importance of the agricultural sector varies considerably among the LAC countries, both in national accounts and national budgets. In some countries, the agricultural sector is relatively important (it accounts for

more than 12% of GDP) and they allocate a large slice of their public spending to agriculture and rural areas in general. In others, however, the agricultural sector is less important, and they allocate less than eight per cent of their consolidated spending to it.

The outlook for agriculture and rural life

The international scenario through 2015 looks positive

Although the world's population is growing less quickly, by 2015 it will have passed the seven billion mark. Thanks to the successful efforts to combat poverty and other actions related to the Millennium Development Goals, people will have higher incomes and a better quality of life. The world economy will depend increasingly on the performance of the leading industrial economies, which will have recovered from the downturn during the first years of the 21st century. Technological change and innovations in communications will have led to the development of an information society. The ways in which we work, produce and share knowledge will have changed and cultural norms, and even lifestyles, will be

increasingly universal. Progress will have been made in developing a new supranational institutional framework that will minimize the concept of the nation-state and increasingly dictate the way that societies and their economies operate.

The process of globalization and trade liberalization will continue. At the world level, the 2005 ministerial meeting will make it possible to consolidate further the reforms introduced within the multilateral framework of the WTO. At the hemispheric level, the countries will have achieved greater integration and consolidated a free trade area, via either a hemispheric agreement (FTAA) or subregional and multinational agreements. The route chosen will have to accommodate fairer trade practices, with mechanisms being developed to mitigate the negative effects.

The global economy will experience strong growth. The current upturn in the world's leading economies is expected to continue through the end of the decade (four per cent in the OECD countries and seven per cent in China). World trade will also bounce back but will not achieve the growth rates recorded during the 1990s.

Inflation rates will depend on oil prices and the pressure exerted by China in the raw materials market. This will not affect interest rates, which will remain low as the economic reforms advance and the trade liberalization processes are consolidated.

The US dollar will not depreciate further, due to the loss of competitiveness of the OECD countries. The latter's dollar reserves have been losing value and they will be forced to take corrective measures.

Turning to this hemisphere, the US economy is expected to grow by around three per cent annually over the next decade. However, this will depend on the trade deficit and the government deficit, which in turn depends on spending on Iraq and Afghanistan and the privatization of social security. Major changes are expected in domestic support policies for the agricultural sector and export subsidies.

Canada's agricultural production is expected to grow and,

combined with increases in the production of Brazil, Argentina and other countries, will provide competition for US agricultural exports. Although Canadian wheat exports will fall, those of pork, beef, vegetables and fruits will rise and sustain the growth of agrifood exports in general.

The annual rate of growth in the European Union will be around 2.1% for the rest of the decade. The appreciation of the Euro against the dollar, the effects of the new system of payments for producers and the commitment to reducing domestic supports will have a negative impact on agricultural trade. There will also be pressure on unskilled jobs, and further migration from Eastern Europe to the EU's oldest member countries.

In Asia, Japan will continue to be an important source of external investment. The yen's appreciation against the dollar will make Japanese exports less competitive and boost imports from the United States and Latin America. Over the next decade, China's production is expected to continue growing by over seven per cent annually. The country will supplant its competitors in the textile industry, cornering 50% of the United States garment market following the removal of quota restrictions. China's growing consumerism, allied to greater trade liberalization, will oblige it to use up part of its grain production and import larger

The growth of agricultural production will be due more to higher yields than to increased acreage

quantities of soybean, wheat, corn, barley, fruits and meat. This could provide trade opportunities for producers in the Americas. Finally, India will maintain its programs aimed at eradicating poverty and generating income, improving the education system, promoting exports and attracting investment, which will enable it to meet its target of eight-per-cent annual growth. The technology industry will continue to drive its export economy.

Agricultural trade will continue to grow and the developing countries will account for a bigger share of it

If the world economy and production continue to grow, agricultural trade will also continue to expand, becoming more competitive as a result of more open markets and the reforms to the rules governing trade.

However, it is estimated that world production will grow faster than food consumption. Consumption of agricultural products will rise, due not only to population growth but also to the growth of income, driving the demand for processed and wholesome food and ethnic products, in particular, at the expense of commodities. However, regional exports of

the former are faced with technical barriers and tariff scaling, while the real prices of the latter continue to be depressed.

The developing countries will compete more and more strongly in international markets but, if their economies grow as expected, they will also be the most important consumer markets. In fact, it is estimated that the demand for imports in developing countries will grow twice as fast as that of developed countries. Production and consumption are likely to grow faster in the developing countries and the relative importance of the OECD countries within world trade will therefore decrease.

Under normal conditions, agricultural production should increase during the period 2005-2015. The main reason for this growth will be a continuous improvement in productivity, as increased acreage is not a viable option in all the countries. However, major increases in acreage are expected for some products and countries like Brazil and India.

According to the projections, the highest rates of growth in production will be for products such as vegetable oils, oilseeds, powdered milk, etc. Production

of rice, wheat, soybean, cereals and cotton will also increase. Trade in soybean and its byproducts will continue to grow at high rates, surpassing the expansion of trade in its competitors (wheat and staple grains). It is worth noting that Mexico will double its imports of staple grains in a decade (through 2014), while the United States will account for the lion's share of exports (73%). The rice market will continue to be dominated by the exports of the Asian countries, while no changes are expected in the conditions of the sugar market. Trade in dairy products will grow, especially cheese and powdered whole milk.

The most developed countries will dominate the market of dairy and meat products. However, Argentina and China will outshine the OECD countries in the milk market. Meanwhile, the developing countries will play a big role in the meat market, mainly beef and pork products.

The prices of these agricultural commodities will be affected by three complementary factors and the outcome will depend on the balance among them. These factors are: i) higher prices due to the reduction in subsidies and domestic supports required under WTO rules; ii) lower prices as a result of large stocks; and, iii) a

reduction in prices due to falling demand (agricultural production will grow faster than consumption). However, the forecasts suggest that, despite nominal increases, the prices of agricultural products in international trade will continue to fall in real terms.

Agrifood chains will continue to evolve and agribusiness conditions will improve

One of the most significant changes is that the supply of agroindustrial products will be driven entirely by the market, increasingly tailored to the demand and meet all the pertinent safety and quality standards, to win over consumers.

The markets of healthy, organic and processed products and ethnic foods will experience the strongest growth in the years ahead, mainly due to changes in diets, greater concern for health, increased social awareness and the limited time that consumers have to prepare fresh food.

Agrifood chains will become more clearly defined and have greater vertical integration, to raise efficiency and improve quality and reduce consumer prices. Furthermore, there will be growing coordination between the links in the chains, which will transcend national borders.

Although multinational companies are more important as producers and traders, products will be increasingly tailored to the specific preferences of each territory. The large supermarket chains will also exert greater negotiating leverage in their dealings with agroindustrial producers, imposing their own rules of quality, quantity, presentation, etc. Small producers will not be able to meet these requirements, so will opt to differentiate their products and focus on specific niches.

In the future, technology will play a critical role in the competitiveness of agrifood chains, for several reasons. Firstly, pressure on natural resources will increase, as there will be less agricultural land per inhabitant and the effects of climate change on the environment will become more marked. Further trade liberalization will drive the demand for diversified and “clean” products, and the dependency on new fields of knowledge and the technological divide between countries will continue to exist. Given the economic integration and search for specialization, if they are to compete producers will be to have more integrated technologically.

Agricultural health and food safety requirements will also increase, as the rapid growth of global markets will foster more efficient international agricultural

production, thus increasing food processing and improving the operation of global distribution networks. The new international logistics could also speed up the spread of foodborne diseases, toxins and parasites, posing serious health hazards that could interrupt international trade.

As the countries make further efforts to reduce their dependency on the production of commodities and add more value added to their agrifood products, traceability and standards designed to protect agricultural health and food safety will become increasingly important.

However, although there will be widespread recognition of the effects of animal and plant health and food safety on human health, production and international trade, national AHFS programs in LAC will continue to have major difficulties meeting the WTO sanitary and phytosanitary requirements for accessing international markets.

The financial markets for agriculture will also undergo changes. To improve the business environment in the countries and obtain a better return on their investments, the development banks will reorient their services. They will adopt an integrated approach to reduce the risk and grant financing to productive activities, offer technical assistance and training, provide collateral and manage trust funds.

They will also continue to expand the financing of small and medium-scale producers, through specific instruments that promote access to credit and strengthen production chains. However, to eliminate paternalism from the banking system, they will promote innovative financing systems for agriculture, the rural sector and agribusiness, to encourage agricultural entrepreneurs to take part and reduce the costs of transactions. At the same time, new forms of financing will be developed to permit small-scale producers to participate in export markets.

Given the scale of the flow of remittances from developed countries and their potential impact, formal and informal financing mechanisms will be set up to use them to provide healthy financial resources to the population and rural enterprises. These and other modern financing mechanisms will make use of competitive funds, in order to choose their beneficiaries and promote the financing of agricultural and rural activities.

A mixed outlook for the region

All the economies of LAC (except Haiti) are expected to record positive growth of around four percent per year for the next decade. However, this will depend on the performance of the world powers, the oil market, the consolidation of democratic

processes and the performance of the countries' export sectors. With regard to the last factor, an increase in agrifood exports would enable the population, and especially rural dwellers, to consume more and thus improve the region's food security.

In the Andean region, economic growth and the expansion of trade will improve living conditions. However, failure to approve the FTA with the United States could result in the displacement of their exports to third countries that have already signed agreements or are in the process of negotiating them. Furthermore, due to the regional integration efforts intraregional agrifood trade is expected to experience strong growth.

In the Caribbean Region, the projections for Trinidad and Tobago, based on the performance of its energy and tourism sectors, are more promising than the forecasts for Haiti, Guyana, the Dominican Republic and the OECS countries. As the Caribbean agrifood sector is heavily dependent on trade barriers and the preferential treatment it receives in European markets, the outlook for agriculture is quite gloomy and the sector has little chance of success in a global market. The Northern Region is showing signs of recovery, driven by the performance of the United States and Canada already described.

Brazil and Argentina are emerging as agrifood powerhouses at the world level

The outlook for Mexico is also positive, given the upturn in the US economy, the support of international credits, the growth of investment and increased domestic consumption.

In the Central Region, where poverty levels will remain high, economic growth will increase due to the economic reforms implemented, the impact of the FTA with the United States, the gradual rise in coffee prices, the growth of tourism and remittances from emigrants, etc.

In the Southern Region, ECLAC's forecasts for 2005 are less optimistic. Nonetheless, it is hoped that the introduction of reforms and the reduction of domestic supports for the agricultural sectors of the United States, the European Union and Japan will benefit the agroindustries of Argentina and Brazil. The performance of the two South American powerhouses could trigger stronger growth in the Southern Region, boosted by increased regional trade, as MERCOSUR and the construction of the South American Community of Nations forge ahead. The appreciation of the euro against the dollar will also boost European consumption of grains from this region.

Higher productivity and yields resulting from the State's

agricultural research programs will not only make Brazil a world agricultural power, but also a key country in guaranteeing the world's food security in the future. Brazil's share of the soybean, rice, wheat, pork and poultry markets will increase as a result. Argentina will achieve growth of four percent in 2005 and three percent in the following five years, and its agrifood sector is expected to perform well over the next decade. This growth will be spurred by the use of technological innovations for crops grown on a large scale, the expansion of international marketing channels, investments by international agribusiness companies and the opening up of potential markets like China. According to the USDA, Argentine production of corn, soybean and wheat will increase, but will continue to displace sorghum, barley, sunflower and other minor oil-seeds.

The outlook for LAC with regard to the sociocultural and human dimension is mixed. Despite the increased efforts to meet the Millennium Goals, a large slice of the population will continue to go hungry. However, there are expected to be 40% fewer people in this predicament by 2010. The countries have implemented actions and policies to combat poverty and the results have varied from country to country. However, no significant change is

expected in the short term and it will continue to be a major economic and social problem.

Unless the right policies are adopted, the direct and indirect effects of technology will become more marked in the near future, creating gaps between the modernized and small-scale sectors. An analysis of the distribution of its benefits should be incorporated into the design of technology, so that it contributes to poverty alleviation in LAC.

The movements that advance the interests of the most disadvantaged groups in rural areas will increase as they get better organized and begin to see the fruits of the political pressure they bring to bear. This has already been seen in the case of the “los sin tierra” movements in Brazil and the indigenous populations in Bolivia, Ecuador and southern Mexico. As these movements grow stronger, there will be more pressure to place the problems of the increasingly inequitable distribution of income and land in LAC high on the political agenda.

There will also be increasing demands for education and training to be made a priority of policies and resource allocation, because the development of new and better skills is vital, not only to provide a way out of poverty but also to develop and maintain the competitive positions of the products of agriculture and the

rural territories.

It is anticipated that digital educational materials will increasingly be used for training programs for extension workers, producers, agricultural entrepreneurs and educators, replacing or complementing traditional media. This so-called “e-extension” will become one of the most important trends in the development of extension programs in the future.

With respect to the ecological-environmental dimension, it is hoped that governments will translate their political declarations into concrete actions, adopting effective controls and offering incentives to prevent the constant degradation of natural resources. Private enterprise could also do more to internalize the environmental costs. The eradication of the causes of rural poverty would improve the situation greatly, as poverty is one of the biggest threats to the conservation of the natural heritage.

In many countries, agriculture continues to use natural resources in order to be more competitive. Therefore, if the growing trend toward the use of technology continues, the intensification and diversification of agricultural production will put further pressure on natural resources, reduce the amount of agricultural land per inhabitant and heighten the environmental

effects on the rural territories. If climate change continues unchecked, the effects will soon begin to alter the agroecological conditions that contribute to the competitiveness of certain agricultural products in specific territories. Further global warming will not only affect the hydrological conditions and the level of the sea, but also permit territories that hitherto have had a

temperate climate to produce tropical crops.

Furthermore, population growth and related developments (e.g., rapid urbanization and the use of fragile ecosystems for production, especially by the rural poor) will increase the risk of, and vulnerability to, natural disasters such as droughts, floods, landslides

Challenges for agriculture and rural life

and forest fires. The biggest challenges facing agriculture and rural life can be identified by comparing the outlook described above with the recent trends in the main variables studied, taking the objective image proposed in the AGRO 2003-2015 Plan as the reference parameter. These challenges must be addressed by means of the actions set out in the respective hemispheric, regional and national agendas.

The four main challenges identified are: i) producing for the market, ii) riding the wave of the technological revolution, iii) reducing poverty and improving income distribution, and iv) promoting skills development.

Producing for the market

Producing for the market means abandoning the supply-side

approach and adopting a paradigm in which production is demand-driven, taking several important factors into account.

The first is the need to observe the changes taking place in the world order. These suggest that the United States will continue to be a world agricultural power but, unless it adopts production and trade-related measures, the country could go from being a net food exporter to a net food importer. This is because important actors have emerged in the international trade in food that have lower costs, are more competitive and are better able to satisfy the demands of the market.

The vast majority of countries must continue to pay attention to the signals being sent out by China, India, Japan and Russia, for two reasons: so they can take

advantage of those markets to export their products, and/or to implement strategic actions that will ensure they can compete in them in the short and medium terms.

Although this readjustment of trade forces entails risks, it also creates a series of trade opportunities, which will continue to be subject to the ability to produce goods with value added, offer differentiated agricultural products and reduce transaction costs in the processes that link producers to consumers. Agrifood chains geared more to markets and more transparent marketing systems will call for mechanisms for integrating regional markets, creating homogeneous, multipurpose information systems (particularly in fruits and vegetables), setting and accepting common quality standards, and having efficient customs processes and financial systems that support transactions in local currencies.

A second factor that must be considered is the need to prepare for the reforms that could be introduced at the multilateral level, to take advantage of the benefits of the elimination, within the framework of the WTO, of the subsidies granted to all the agricultural products of the developed countries. However, the countries need to implement important structural changes to create a new institutional framework, foster laws that

facilitate trade and investment, carry out reforms regarding land ownership and security, promote investment in infrastructure, create capabilities in the private and social sectors and spur investment in public research.

A third factor that must be taken into account is the need to monitor demand. It is essential that the agribusiness sector monitor changes in consumer incomes, urban populations, consumer perception of food safety and quality, and the degree of awareness of the origin and methods of obtaining food, so it can adjust its products and production or manufacturing practices.

A fourth factor is the need to win over consumers. Agribusinesses must make sure that foods and processed agricultural products are not harmful to consumers. To compete in global markets, current levels of public health must be improved, along with the safety of the food produced and sold. National agricultural health and safety systems must be modernized, improving their technical capabilities, human and financial capital, interaction with the private sector and access to markets. Only in this way can the agrifood sector and rural territories be made more competitive.

A fifth factor that must be considered is the need to modernize ministries of agriculture, so they can meet the

challenges posed by the new environment, and to determine the new responsibilities and ways of working on issues that go beyond the current typical sectoral functions of ministries of agriculture. For example, the traditional organization of agricultural health should be restructured within the ministries, to forge stronger alliances with organizations working in that area and achieve greater integration with the ministries of health, trade and foreign affairs. The private sector must pool efforts with the public sector to define their complementary roles and specific responsibilities in improving plant and animal health and food safety.

Finally, to involve the private sector more effectively, the countries of the Americas must promote public-private cooperative efforts aimed at developing agribusinesses. The State should promote stronger business organizations, to encourage and promote enterprises with a long-term business vision.

Riding the wave of the technological revolution

The second major challenge for agriculture and rural territories concerns the technological revolution. The LAC countries must undertake a series of productive, institutional and

political changes designed to modernize agriculture in a way that is compatible with the conservation of natural resources, enables it to operate efficiently in the markets and integrates it into agrifood chains. To achieve the above, a new paradigm must be developed based on the application of knowledge to the market and centered on technological innovation processes geared to agribusinesses, whatever they may be. The political strategic objective must be to promote research and the transfer and development of technological innovations, bearing in mind the importance of technology for national economic development, poverty reduction and the use of LAC's strategic wealth of natural resources.

The organizations must also make an effort to support the integration of the rural and agricultural sectors into the digital world. This will make it possible to build more competitive agricultural chains, due to the better flow and management of information. The actors in the chains would then understand the risks better and assess them more accurately, and have better-quality information for decision-making, either to take advantage of trade opportunities or to address risks that could affect agriculture. It must be borne in mind that agricultural chains originate in rural territories and project

themselves toward the markets. As they must be compatible with the environment, it will be necessary to strengthen the national institutional framework and design strategies that promote the participation of the private sector in technological and educational programs and in investment in environmental issues.

Finally, the institutional models must be rethought and public national research institutions given bigger budgets. The human resources devoted to research must be recapitalized, to offset the effects of ageing, the brain drain and the small critical mass available in strategic fields of knowledge.

Reducing rural poverty and improving income distribution

The third major challenge is to promote decent jobs in agriculture and the rural milieu and improve incomes and income distribution²⁵.

To meet this challenge, the development model needed to eliminate poverty and inequity in rural territories must strengthen the social fabric; have more open and equitable political and social institutions; increase access to good-quality public services, particularly education and health; promote and renew the leadership in the rural milieu; and ensure that the demands of rural

dwellers are included in national political agendas and in decisions regarding the allocation and implementation of investments.

Rural development must also be regarded as a matter of strategic importance. To create an integrated economy that will address the problem of structural unemployment, and achieve economic growth that improves the quality of life of the poorest inhabitants, the biggest challenge lies in making the development of the rural milieu a strategic issue for the societies and economies of the Americas. This, in turn, calls for a change in the current style of growth, so that stronger growth translates into less poverty, less dependence on external savings and more formal employment.

A new leadership is also required for the agricultural sector. It will only be possible to take advantage of economic integration, democratization processes, economic opening and trade liberalization if we invest in the development of the human capacities (attitudes, knowledge, abilities and skills) of the key actors involved in the sustainable development of agriculture and its rural spaces.

Together, these new actors will have the potential to develop a new generation of local, national and regional leaders - committed visionaries who are ready to build a new institutional framework for the agricultural sector based on

learning organizations. With these rural actors spearheading development processes, it will be possible to overcome the lack of an institutional framework, reduce poverty and restore the environment.

A fairer distribution of the benefits and greater recognition of the actors in the chain, especially primary producers, are also needed. To counterbalance the accumulation of the profits of agribusinesses among the actors in the higher links in the chains, we must raise the incomes of primary producers, despite the increase in transaction costs. This calls for new types of businesses that take into consideration the strategic relationship among the different actors of the system, efforts to find suppliers in the best circumstances (even in non-traditional countries), the use of state-of-the-art technology (including biotechnologies), the incorporation of marketing strategies and the use of models to determine the right time to buy and sell.

The chances of finding a solution to poverty without economic growth are minimal. However, to reduce the number of people who cannot satisfy their basic needs agricultural production chains must generate more than simply economic resources. It is for this reason that the concept of the social responsibility of agricultural production chains must be inculcated. The private sector

must also create decent employment in rural areas.

The biggest challenge for agricultural production chains in the future will be to provide work in agriculture and the environment, promote forms of social collaboration, strengthen families and generate enough income to achieve equity and justice and permit the inhabitants of rural areas to lead a more dignified existence. To bring this about, a coherent blueprint for society is needed that places humankind at the heart of the discussions and actions.

Promoting skills development

As already mentioned, we need to get away from the sectoral approach to agriculture and governments need to understand better the multidimensional and interdependent nature of the various phenomena that affect the performance of agriculture and rural spaces. In addition to this, we must not lose sight of the fact that human beings are the object and subject of agricultural and rural development.

The fourth challenge is basic, but at the same time key to addressing the three challenges already described, as all our efforts will be in vain if we fail to enhance the capabilities of the actors in the chains and the rural population, through access to,

and the use of, information and communication technologies (ICTs).

Perhaps the area in which ICTs will have the biggest impact in the rural milieu is in learning and skills development processes. To augment the effect of ICTs in cognitive processes, we will need to use digital training media to reach out to rural areas, and distance communication methods (videoconferencing, teleconferencing, Internet or email) to construct learning processes. We must create an infrastructure that will afford access to information in real time, so that producers can make timely business decisions. This means looking at how much we are investing in telephony and electrification in the rural areas of the hemisphere.

Linking farmers to the market means converting them into agricultural entrepreneurs. To reposition agriculture, we must stop thinking of it pejoratively as a small-scale activity carried out by peasant farmers and, instead, as a true agricultural business.

For agriculture to be competitive, we must improve knowledge management capabilities, and that will depend on the level of professionalism of companies

and the links in the agrifood chain. To ensure that agriculture is sustainable, efficient capabilities and mechanisms must be created so that producers can understand the demands of the markets, meet the requirements governing commercial transactions and base business decisions on accurate and timely information. Further integration into world markets and meeting the established standards will call for a greater capacity to adapt to the changes in the production-supply structure, and technological innovations and products that meet the standards of sustainability, quality and productivity.

To incorporate family agriculture and small- and medium-scale producers into the production-supply chain, new organizational capabilities will have to be created and programs instituted to strengthen human capital tailored to the needs of the times. Furthermore, to take part in international trade these new actors will have to be equipped to meet all the quality and safety requirements of both institutional and private buyers.

Notes and bibliography

- 1 This is the Executive Summary of a longer document, containing more detailed analyses, that can be consulted at the following address: <http://iica.int/documents/PEMI/SIT05/>
- 2 At the same Ministerial Meeting held in Panama in November 2003, the participants approved the 2003-2005 Hemispheric Agenda, which will be in effect through August 2005, when the ministers of agriculture will be meeting again, in Guayaquil, Ecuador, to evaluate the progress made and agree on a new Hemispheric Agenda for 2006-2007.
- 3 IICA (2004). *More than food on the table: agriculture's true contribution to the economy*. San Jose, Costa Rica. The study covered Argentina, Brazil, Canada, Chile, Colombia, Costa Rica, Mexico, Peru, Uruguay, the United States and Venezuela.
- 4 Does not include the forestry sector.
- 5 The primary sector's contribution is declining but this is offset by the growing linkages with other sectors (agroindustry and food).
- 6 Ferranti et. al. 2005. Eds. *Más allá de la ciudad: el aporte del campo al desarrollo*. World Bank, Washington D.C.
- 7 The ILO (International Labour Organization). 2005. *World Employment Report 2004-2005*. Geneva. See, in particular, chapter 3: "Why agriculture still matters."
- 8 Ministry of Agriculture, Livestock and Food Supply. 2004. *Brazilian Agribusiness*. Ribeirão Preto, São Paulo. April.
- 9 Following the collapse of the USSR, Russia became less important in the market and a major importer of grains from the West. It is now becoming self-sufficient, thus reducing the export opportunities of the wheat-producing countries of the Americas that traditionally supplied the country.

- 10 For specific studies on the possibilities for meeting the Millennium Goals, see ECLAC-IPEA (2002) "Meeting the Millennium Poverty Reduction Targets," Santiago de Chile; and United Nations (2005) "Objetivos de Desarrollo del Milenio: una mirada desde América Latina y el Caribe," UN, Santiago de Chile, June 10, 2005.
- 11 According to the Manager of the Multilateral Investment Fund (MIF), Donald Ferry, speaking at the inauguration of the Inter-American Forum on Microenterprise, Cartagena, Colombia 08/09/2004 (<http://www.iadb.org/NEWS>)
- 12 The US Caribbean Basin Initiative is a case in point.
- 13 Agricultural Value Added (AVA) is regarded as the best indicator of agricultural production, since it includes forestry, hunting and fishing, in addition to crops and livestock.
- 14 The agriculture of the United States (48% of the AVA of the Americas) and Canada is a determining factor in the aggregate production of the Americas in general, and of the Northern Region, in particular.
- 15 According to the USDA, the figures for 2003 and the preliminary data for 2004 show a sharp upturn in agricultural production in the United States (see <http://www.ers.usda.gov/publications/agoutlook>).
- 16 See: IICA. 2004. The State of and Outlook for Agriculture and Rural Life in the Americas 2003. San Jose, Costa Rica. Chapter 3.
- 17 Somewhere between 20 and 27 interested parties are involved in the average international business transaction. Some 40 documents are involved and a lot of data that is repeated in each stage in the process.
- 18 ECLAC. (2003). Social Panorama of Latin America 2002-2003. Santiago, Chile.
- 19 Hall, G.; Patrinos, H. 2005. Indigenous peoples, poverty, and human development in Latin America: 1994-2004. Executive summary. Washington, DC, World Bank, Indigenous Peoples and Sustainable Development Program.

- 20 For example, black and mulatto men earn, on average, 74% and 79% of what white men earn, while the figures for women are 86% and 82%, respectively.
- 21 The improvement in these three countries and Cuba accounts for nearly all the reduction in the aggregate number of undernourished people in LAC.
- 22 Ardila, J. and M. Seixas (2003). *La Agricultura de ALC, sus desafíos y oportunidades desde la óptica del cambio tecnológico*. In E. Alarcon y H. Gonzalez. *Memorias de FORAGRO*. San Jose, Costa Rica, IICA.
- 23 Ardila, J. (1999). *Diagnóstico y perspectivas tecnológicas de la agricultura latinoamericana*. Document presented to the National Congress of Agronomists, San Jose, Costa Rica.
- 24 However, some countries in the region have successful experiences, such as the academic universities that now offer more agricultural courses, including at their regional campuses, while other have created various types of programs (diploma and refresher courses, etc.) to meet the demand for continuing education from agricultural professionals specializing in production-related subjects.
- 25 IICA has prepared a special report on agriculture's contribution to job creation, rural poverty alleviation and the promotion of rural prosperity. It will be presented at the Third Meeting of Ministers of Agriculture, due to be