THE STATE OF AND OUTLOOK FOR AGRICULTURE AND RURAL LIFE IN THE AMERICAS

February 2004

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FOREWORD

The Inter-American Board of Agriculture (IABA), which is the governing body of the Inter-American Institute for Cooperation on Agriculture (IICA), is recognized as *"the primary ministerial forum within the Organization of American States (OAS) for analyzing and building consensus on policies and strategic priorities for the improvement of agriculture and rural life."*[1] Also, the Rules of Procedure of the IABA[2] state that the agenda of its regular meetings shall contain, at least, *"an examination of the current status of agriculture and rural development in Latin America and the Caribbean in light of the reports prepared by the General Directorate to emphasize matters requiring consideration by the Board, or that may be the subject of recommendations to the Members States or to the General Directorate."*

The Director General of IICA presented the report "The State of and Outlook for Agriculture and Rural Life in the Americas" to the Inter-American Board of Agriculture (IABA), at its Twelfth Regular Meeting.

It briefly assesses the contribution of agriculture and rural territories to development; the state of agriculture and rural life; as well as opportunities and threats of the setting in which they unfold. Taking into account these considerations and the policy framework that has emerged from the agreements on agriculture and rural life reached at the Third Summit of the Americas and those contained in the Ministerial Declaration of Bavaro, it outlines the strategic objectives set forth in the Declaration and the principal challenges that lie ahead. Included as well is an appendix of indicators and statistical references, with information classified by country and region, prepared by IICA.

The Economic Commission for Latin America and the Caribbean (ECLAC), the International Food Policy Research Institute (IFPRI), the Tropical Agriculture Research and Higher Education Center (CATIE), the Pan American Health Organization (PAHO) and IICA contributed to the preparation of the report. Inspired by the "working together" approach, they provided working documents, made presentations at different fora involving the ministers of agriculture and their delegates, and participated in meetings in Santiago, Chile; Washington, D.C., and San Jose, Costa Rica.

This overview draws attention to aspects of agriculture, a way of life for millions of rural and urban families in the hemisphere that must be addressed to ensure sustainable development in the sector.

Chelston W.D. Brathwaite
Director General

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[1] Resolution 1728 of the General Assembly of the Organization of American States (OAS), June 5, 2000
[2] Chapter I, Art. 3 and Chapter IV, Art. 23 d

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EXECUTIVE SUMMARY

Beyond the traditional assessment

Agriculture is more than crops and food. It is a way of life, a key component of the economic and social systems of the countries, and essential to the well-being of society in general and the most disadvantaged groups in particular. It is frequently stated that agriculture's importance in the economy has declined, especially as regards its percentage contribution to the gross domestic product (GDP). It is important to note, however, that his does not take into account agriculture's contribution to the economy by means of its economic relations with other production activities.

Estimates by the Inter-American Institute for Cooperation on Agriculture (IICA) indicate that, on average, 74% of agricultural outputs are used for developing other sectors of the economy[3]. Agriculture also consumes a large amount of inputs, meaning that an increase in agricultural output sets in motion numerous production processes in the rest of the economy. For example, in Peru, a one-unit increase in agricultural demand generates a 3.7-unit increase in the need for inputs in other economic sectors. Directly and indirectly, this, in turn, generates an increase of approximately 2.2 units in private income nationwide.

Agricultural development, then, creates many links involving the purchase of goods and services. Along with the sales of its products to other industrial and trade-related activities, this makes agriculture one of the engines driving domestic economies, especially in the rural milieu.

A holistic view of rural life must also consider the importance of non-agricultural rural economic activities, and the linkages between them and agriculture. It also takes into account other contributions agriculture and the rural milieu make to development, which have traditionally been overlooked or undervalued. For example, as a contributor to prosperity, non-agricultural activities account for somewhat less than 40% of the employment in rural areas and about half of the income of rural populations. Moreover, rural territories make valuable contributions of an environmental, social and cultural nature that benefit society as a whole.

Environmental services, including the protection of water sources, the atmosphere, biodiversity and scenic beauty, are options that can generate new economic activities that will contribute to rural prosperity. Much of the countries' cultural heritage is found in rural territories and the holistic development of same will contribute to social peace and democratic governance.

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[3] The estimates are for 11 countries (Argentina, Brazil, Canada, Chile, Colombia, Costa Rica, Mexico, Peru, United States, Uruguay and Venezuela). They do not include forestry production.

Current situation: Greater achievements are needed

A rapid overview of the state of agriculture and rural life shows progress in some areas although the pace and scope of same have not been sufficient to meet the objectives set by the Heads of State and Government of the Americas.

Output and productivity

Total agricultural output in Latin America and the Caribbean (LAC) grew steadily between 1993 and 2001, following a pattern similar to that of the GDP, but at a slower rate. Between 1995 and 2000, the average annual growth rate was 2.3%, dropping slightly from the 2.8% reported for the 1990-1995 period. In the 2000-2001 period, although growth averaged 2.6%, there were appreciable differences among countries: in 18 countries, growth stalled or declined, falling below 2%, and more than 2% growth was reported in only 13 countries.

The highest growth rate for 2000-2001 (3.1%) was reported in the Southern subregion, the only subregion in which growth exceeded the average for LAC. Growth was also positive in the Andean and Caribbean subregions, but below the average for LAC. In the Central subregion, growth fell below 1990 levels. Although it grew at rates similar to the average for agriculture in LAC, agricultural output in the Northern subregion contracted slightly as compared to the previous decade.

In the 2000-2001 period, average worker productivity in LAC was 30% higher than the average for the preceding decade, but it continues to be low in most of the countries. On average, worker productivity for the LAC countries is 14.6 times less than in the United States and 11 times less than in Canada. In LAC, productivity levels vary greatly from the average, ranging from relatively high in Argentina, Barbados, Uruguay, Chile and Costa Rica, to very low in countries such as Honduras, El Salvador, Ecuador and Jamaica**.** During the 1990s, agricultural productivity in the region grew faster than non-agricultural productivity; however, the gap between the two remains significant.

International Trade

Although the volume of agricultural trade in LAC has increased since the mid-1980s, growth has been less dynamic than in other sectors, much like in the rest of the world. As a result, agricultural exports have lost ground in terms of percentage of total exports, dropping from approximately 35% in 1986 to nearly 25% in 2001. In that year, LAC's share in total agri-food exports worldwide was similar to its share in the mid-1980s (around 12%), indicating a recovery after the decline in the first half of the 1990s.

In the past five years, the principal destinations for agricultural exports from LAC have been the United States (21.7%), Japan (13%), and Canada (6.7%). The United States market is very important as a destination for Mexican (80%) and Central American

(42%) exports, but less important for the Southern region (10%). In the 1999-2000 period, the most important crops traded in the Americas were fruits and vegetables (US$38.146 billion); grains and grain preparations (US$30.195 billion); beverages and tobacco (US$25.033 billion); and coffee, cocoa and spices (US$15.005 billion). It is very important to note that the ratio of exports of processed products to exports of fresh products in LAC has not changed significantly, which contrasts with the situation worldwide, where exports of processed products are growing more rapidly. This has important implications for the future of exports from LAC countries, which continue to depend heavily on the sale of commodities.

In the case of agri-food imports, the principal suppliers are the United States and Canada. In the countries of Central America and Caribbean, imports from the United States account for approximately 45% of all imports, while in the Southern and Andean subregions the figure is closer to 30%. In the Northern subregion, the countries of the subregion meet almost 50% each other's agri-food needs, a situation similar to that found in the Southern subregion. By contrast, the countries of the Central, Andean, and Caribbean subregions import far less from neighboring countries in their subregion.

Even though, as a whole, LAC maintains a positive food trade balance, more than half of the countries (18) import more than they export. The country with the most favorable balance is Argentina; at the opposite extreme are Haiti, Bahamas, and Antigua and Barbuda.

An analysis of food trade balances shows a worsening trend in 20 countries. The explanation would appear to be a decline in the relative competitiveness of their food supply. This is illustrated by the fact that the revealed comparative advantages (RCA) in almost two-thirds (65%) of these countries are declining or negative. In 20% of those countries, revealed comparative advantages are both declining and negative.

Agricultural production and trade services

Services related to technology, information, communications, financing, agricultural health and other fields are less available and of lower quality in LAC than in the more developed countries of North America.

The experience in various countries shows that, in order to accelerate innovation in production and marketing –both crucial for competitiveness– investments are needed in information and knowledge. In contrast with the requirements of the present environment and the need to boost agricultural competitiveness, national and regional agricultural research systems in LAC are seriously under funded. It is estimated that some US$2 billion would have to be invested annually for these research systems to reach the average investment levels of other developing countries.

Information and communication technologies infrastructure is also quite limited, especially in rural areas. For example, only 4.9% of the population of LAC uses the

Internet, compared with 50.1% in the United States and 46.7% in Canada (UNDP 2003). In LAC, there is limited access to production inputs such as financing, market information and rural extension services, and opportunities for acquiring the skills needed for upgrading competitiveness are scant.

Efficient management of agricultural health and food safety services is essential to success in agricultural trade. Nevertheless, an IICA study conducted in 31 countries of the region showed that their agricultural health and food safety (AHFS) systems do not satisfactorily meet the standards of the World Trade Organization (WTO) Agreement on Sanitary and Phytosanitary Measures, mainly as pertains regulatory mechanisms, technical capacities, and the ability to move forward and adapt to the new circumstances.

Natural resources

As a region, LAC is rich in natural resources. However, its natural resources have been severed eroded, which is impacting negatively on the quality of life in rural territories and agricultural production. The steady degradation of soil, water and plant resources is reducing the potential for production in poor rural areas, putting the food security of the inhabitants and their quality of life at risk. Other problems include deforestation, loss of biodiversity, water pollution and desertification.

Soil degradation

LAC has the greatest reserves of arable land in the world, equal to some 30% of its entire land mass. However, it is estimated that seriously eroded soils affect some 16% of the total land area of the region. In South America, erosion affects 45% of croplands, 14% of permanent pastures and 13% of forest and woodlands; in Mesoamerica, 74% of croplands, 11% of permanent pastures and 38% of forest areas are affected.

Soil degradation takes the form of desertification in parts of Chile, Peru and Mexico. It is estimated areas affected by desertification in those countries amount to some 13% of the land area of the region. Arid and semi-arid areas are also found in Argentina, Brazil and Bolivia. Combined with those in Chile, Peru and Mexico, this amounts to 97% of the arid and semi-arid lands of LAC, or 23% of the total land area of the region.

Water resources and irrigation

LAC is rich in water resources, with more than 30% of the world's total. Nevertheless, important differences exist in terms of water availability between countries and inside them. Water shortages are increasing, especially in countries with a large proportion of arid lands.

Agriculture and industry are the greatest consumers of water in LAC, and the use of water for irrigation has increased considerably in recent years. The amount of irrigated land rose from 10 million hectares in 1970 to more than 18 million in 1998, although this represents a very small percentage of the total area (FAO). The importance of sustainable water management in agriculture cannot be overstated, because discharged water from agricultural and industrial activity is the principal source of water pollution. Furthermore, excess fertilizer use has contributed to the contamination of lakes, reservoirs, and coastal lagoons, and rising nitrate levels have been observed in rivers and aquifers.

Poverty and environmental degradation

Studies show that pockets of poverty are usually located in areas characterized by steep slopes, arid conditions and degraded soils, where there is little infrastructure and market access is difficult. It is estimated that some 68 million people in LAC reside in fragile ecosystems such as arid, semi-arid, desert and hilly areas. This number represents 88% of the rural population living in poverty at the end of the 1990s (approximately 77 million people)

Urban-rural issues

The rural population continues to constitute a very large part of Latin American societies despite the growing trend toward urbanization. Some 25% of the total population (nearly 126 million people), live and work in the rural sector. It would be simplistic, however, to consider the rest of the population as urban. Data from the year 2000 reveal that nearly 52% of the population lives in cities or towns with fewer than 100,000 inhabitants, and even though the urban population was estimated at 75% of the total population, only 30% resided in cities of more than one million inhabitants.

Poverty and income distribution

A troubling characteristic of rural territories in LAC is the poverty of their inhabitants. The incidence of rural poverty is twice as high as urban poverty, and extreme poverty is three times greater in rural areas. A determining factor in this situation is inequality in income distribution. In some countries of the region, 40% of the poorest population receives less than 10% of total income, while the wealthiest 10% receives almost 40% (ECLAC).

Inequality is also evident in the distribution of production assets such as land and human capital, especially education. Recent estimates indicate that land distribution in LAC is extremely unequal.[4] Also, significant differences continue to exist in access to basic services such as health and education. Rural inhabitants study for fewer years than

[4] It is estimated that the average Gini coefficient of land distribution is 0.8. The Gini coefficient is a measure of inequality that ranges between 0 and 1, where full equality is 0 and total inequality is 1.

urban dwellers and drop out of school at a higher rate. This, without a doubt, helps to perpetuate the cycle of poverty in rural areas.

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Food security

Even though information on food security indicators broken down by rural and urban areas was not available, there is an evident and direct relationship between extreme poverty and food insecurity. Inasmuch as the incidence of extreme poverty is greatest in rural territories, it can be expected that the number undernourished people in these areas will also be greater.

It is estimated that in the 1998-2000 period, 11% of the population of LAC (54.8 million people) was undernourished. This figure varies within the region. In most of the South American countries, the percentage is lower or declining steadily. In some Central American and Caribbean countries, it exceeds 20%.

Even when the United States and Canada are not taken into consideration, there is a wide range in food security vulnerability of the countries of the Americas. An analysis of food security based on four factors (access of the country, individual access, availability, and an average of same) identifies the United States, Argentina, Uruguay, Costa Rica, Canada, Paraguay and Brazil as being least vulnerable in terms of food security. At the other extreme, the most vulnerable are Haiti, the Bahamas, the Dominican Republic, Grenada, and Nicaragua**.**

Emerging social actors

The same diversity observed in LAC agriculture and rural territories can be observed in its social stakeholders. Rural entrepreneurs, indigenous organizations, cooperatives, trade associations, young environmentalists, consortia of family farms, groups of landless farmers are some of the new social actors that have emerged during the last decade.

Given their numbers and what they represent, rural women, youths and indigenous peoples can play a special role in transforming rural life. It is reported that rural women make up some 22.5% of the economically active population and produce nearly 45% of the food consumed at home, despite their unequal access to land, credit and modern production inputs.

In addition, some 55% of the rural population (70 million) is under the age of 24. This group is essential for efforts to eradicate poverty, not only because of their greater life expectancy but also because of their willingness to change (ECLAC-CELADE).

It is estimated that indigenous peoples (belonging to some 400 ethnic groups) account for around 8% of the total population of LAC. This percentage is much higher in countries such as Guatemala, where one out of every three people is classified as

indigenous. In indigenous villages and among peoples of African descent, many cultural traditions survive. Their values form part of the cultural heritage of rural territories and of the LAC nations, and institutional frameworks and policy instruments should be developed to promote their development.

The setting: Opportunities and threats

The changes currently taking place in the region have an extremely important bearing on agriculture and rural life, not only because they offer the countries opportunities for further development but also on account of the threats posed by their negative effects. An international institutional framework has been created (and is still being developed) that has major implications for the countries. This framework has been heavily influenced by the economic reforms promoted by the international financial organizations as a result of the so-called Washington Consensus, the multilateral trade agreements, the increasingly important bilateral trade agreements, the environmental conventions and various political accords on development. The latter include the Millennium Development Goals[5] and the Declaration of Quebec and its Plan of Action.[6]

Economic opening

Trade liberalization has given rise to policies to upgrade competitiveness, with special emphasis on export development. Tariff reduction has been promoted, conditions for attracting investments have been improved, instruments that grant differentiated preferential benefits (e.g., interest rates and special lines of credit) have been reduced or eliminated, and an enabling environment has been created for the establishment of free trade agreements.

In short, the countries are creating an institutional framework to promote the growth of international trade. Agricultural trade issues form part of this process and are a high priority of the negotiations of both the WTO and bilateral and regional agreements. The principles set out in the Doha Declaration are still the benchmark, especially as regards the need to: a) do more to make substantial improvements in market access and reduce export subsidies, and achieve substantial reductions in trade-distorting domestic support; b) ensure that developing countries secure a significant share of the growth in world trade, with balanced rules, technical assistance and capacity-building programs; and, c) eliminate tariff and non-tariff barriers to goods and services. Following the ministerial meeting in Cancun**,** the original timeframe established for achieving the objectives of Doha is likely to be extended.

Meanwhile, the FTAA negotiations continue moving forward, with the agreements set to be implemented in 2005. Other integration processes (e.g., MERCOSUR) are forging ahead in the hemisphere and bilateral and multilateral free trade agreements (e.g.,

[5] Defined by the world's leaders at the U.N.'s Millennium Summit.
[6] Adopted by the Heads of State and Government of the Americas at their Third Summit (2001).

USA-Chile, Canada-Costa Rica, the Central American Free Trade Agreement –CAFTA-) are being negotiated and signed. This negotiating environment presents opportunities but also poses threats, making it even more important for the countries to adopt a creative and constructive approach to agricultural issues, to contribute to the objectives of rural prosperity, food security and the sustainable development of agriculture and rural life.

For example, some possible results of a simulation of the effect of the implementation of the FTAA[7] include an aggregate increase in international prices of about 0.5%, with rice, sugar, fruit and vegetable prices rising the most in the primary sector, and the prices of meat and dairy products growing the most in the agrifood industry. In that scenario, the prices of other agricultural products would fall. Global output and especially agricultural output will increase in 11 of 15 countries and decline in only three of the countries unless there is a change in current subsidies for production. Increased employment can be expected, especially for the unskilled rural labor force, and differences between skilled and unskilled labor will fall, including in terms of rural and urban employment. It was also determined that the FTAA will contribute to reducing poverty in most of the 15 countries.

Market trends

Agrifood markets have undergone major changes. Contributing factors include changes in consumption patterns, the concentration of marketing activities in the hands of a few large companies, the regulatory frameworks of developed countries, increased awareness of environmental considerations, and the growing impact of new information technologies on production and trade processes.

There is a growing demand among consumers for better-quality foods that are safer, easier to prepare, healthier and more nutritional. Price is no longer the primary consideration when making a purchase; other factors are becoming more and more decisive as far as competitiveness is concerned. New market segments are emerging, such as for certified organic products with specific nutritional characteristics. Demand is also growing for activities that are specific to rural areas, such as ecotourism and agro-tourism. All these changes provide an opportunity to rethink policies and strategies for the promoting the sustainable development of agriculture and rural life.

Trends in science and technology

The main global trends in science and technology that have implications for the future of agriculture and rural life fall under two headings: a) the development of a new technological paradigm promoted by the biotechnology revolution; and, b) the use of new information and communication technologies.

[7] Analysis for 15 LAC countries using a general equilibrium model. IFPRI (2003).

Advances in biotechnology are based on highly knowledge-intensive processes that require major investments, promoted mainly by the private sector. Concern continues to be expressed in a number of negotiating forums that access to this knowledge is limited because it is being developed in the private domain. This situation, combined with the cutbacks in public agricultural research budgets, can limit the potential contribution of the new agricultural biotechnologies to solving the problems of hunger and rural poverty.

The breakthroughs in information and communication technologies facilitate better management of production and marketing, as well as improvements in the quality of rural life. This has facilitated a better understanding and estimation of risks, more responsive decision-making for tackling pests and diseases, better management of marketing processes, and more effective access to markets. It has also opened up new possibilities for providing public services to rural communities, including education, health and banking facilities.

Biotechnology and the information and communication technologies offer the countries an opportunity to develop (with appropriate public policies) the enabling environment needed to achieve broad, timely access to the benefits they can provide. If countries fail to pay heed, however, they run the risk of being left behind.

The potential of multilateral environmental accords

Concern with the deterioration of the environment worldwide has galvanized international action through a number of legally binding multilateral environmental agreements, especially: the Framework Convention on Climate Change (FCCC), the Convention on Biological Diversity (CBD) and the Convention to Combat Desertification (CCD). The importance of these conventions lies in their potential as frames of reference for the definition of policies and strategies targeting the development of agriculture and rural life. The CCD was singled out at the Johannesburg Summit as a key tool for meeting the U.N.'s Millennium Development Goals vis-à-vis poverty alleviation and food security.

The framework provided by these international legal instruments offers hitherto untapped opportunities for establishing innovative mechanisms for funding, technical cooperation, public-private sector collaboration and other aspects that can contribute to improving rural prosperity and food security.

Natural resources, population growth and food security

It is estimated that the world's population will rise from 6 billion inhabitants in 2000 to 7.2 billion in 2015. In addition to the growing environmental pressures, this growth will also have effects on the capacity of the world's food production system. The pressure to increase production will require better technological innovation systems for

agriculture, which in turn will require more resources for scientific and technological research.

It is predicted that, by 2015, LAC will be the only region that is a net exporter of agricultural products. However, it is also anticipated that some countries will continue to have major food security problems. The need to meet the Millennium Goals will likely oblige the countries to adopt policies to reduce their vulnerability, ensure adequate food supply, and improve the distribution of the fruits of growth and, thereby, access to food.

IFPRI[8] estimated possible scenarios for the evolution of food security by 2020. In an optimistic scenario, Latin America could practically eliminate malnutrition. To achieve this, it will be necessary to increase productivity and agricultural growth, reduce the population growth rate and increase investments in education and health. In a pessimistic scenario, if the above conditions are not met, the problem of malnutrition will worsen in developing countries, the price to be paid for poor economic and agricultural performance.

National policies and the institutional framework

Governments, ministries (especially those responsible for economic, trade and foreign affairs), parliaments, public and private organizations and other actors, all interact in the national and international environment. They draw up, institute, change and monitor legal and regulatory provisions on economic, financial, agricultural, trade-related, environmental and cultural matters. Together, these comprise the institutional framework that affects, either positively or adversely, rural prosperity, food security and the sustainable development of rural territories and agricultural production and trade chains.

This institutional framework, which includes new organizations and new rules of the game, is being constructed in a variety of forums where both governments and (increasingly) civil society organizations are finding opportunities to discuss and negotiate the various development issues.

The role of the State is being adapted to the new rules of the game, creating confusion in the process and sparking debate about its new responsibilities. Governments have implemented new policy instruments, and those related to trade are some of the most far-reaching in terms of scale and impact. However, these national efforts have not been consolidated at the international level as a set of rules that facilitates the typical economic processes of a market economy. As far as agriculture and rural development are concerned, the institutional gaps and the need to modernize existing organizations are tasks that have yet to be tackled.

[8] IFPRI "VISION 2020".

The strategic objectives

In the Bavaro Declaration,[9] the ministers of agriculture set three closely interrelated strategic objectives: the sustainable development of agriculture and rural life, rural prosperity, and food security.

The sustainable development of agriculture and rural life

For the true importance of agriculture and rural life to be explicitly and effectively recognized, the sector needs to be repositioned in long-term national development strategies. This requires a holistic approach to development that takes into account production and trade-related, ecological and environmental, sociocultural and human, and political and institutional considerations.

Efforts to bring about the sustainable development of agriculture and rural life should aim to achieve greater competitiveness, sustainability, equity and governance.

To achieve competitiveness, agriculture must be able to meet the more stringent demands of consumers and markets in terms of prices and, increasingly, quality and safety. It must also meet environmental and social standards. For agriculture to be more competitive, it must be flexible and innovative and adapt successfully to changing conditions in the environment. It must also incorporate knowledge as a strategic resource for development in order to be able to continually upgrade the production, ecological, environmental, social and institutional processes that form the basis of rural life. Moreover, a more competitive agriculture must not only guarantee adequate rewards for the different actors in the agricultural and trade chains but also stimulate economic growth in rural territories.

To achieve equity and social inclusion, forms of social organization must be developed that more equitably distribute the benefits of production and trade. Investment in human capital is essential for achieving a more prosperous, equitable, inclusive and democratic rural society. The organizing capabilities of producers and their organizations, women, young people and indigenous peoples must be improved and their participation in development processes increased.

To achieve sustainability, social, economic and legal conditions must be created that foster the sustainable use of natural resources, including mechanisms to ensure their conservation and planned use, not only to ensure the continuity of the natural base for agricultural production but also to improve the livelihoods and living conditions of the rural population. The promotion of environmental services markets and the development of business activities that tap the natural wealth of rural territories can generate revenues for rural development.

[9] Ministerial Declaration of Bavaro for the Improvement of Agriculture and Rural Life in the Americas (2001).

To achieve good governance, ways must be found to develop and strengthen the participation of organizations and actors involved in production chains and rural society in decision-making regarding the institutional changes needed to bring about sustainable development.

The objective of rural prosperity

One of the Millennium Development Goals is to halve 1990 poverty and hunger levels by the year 2015. In LAC, this goal has a strong bearing on rural prosperity, as the incidence of extreme poverty in rural areas is considered to be three times higher than in urban areas. Prosperity is also linked to other Millennium Development Goals, such as those for education, health, gender equity, environmental sustainability and cooperation for development.

To attain rural prosperity, further efforts are needed in the following areas: a) adoption of a territorial approach to rural development; b) coordination of public policies that have a positive impact on rural development; c) strengthening of organization, participation and management capabilities; and, d) sustainable management of natural resources.

The natural resource base is of key importance for achieving rural prosperity. Recognition of its importance as an intrinsic element of rural life will make it possible to formulate new and innovative rural development strategies. In addition, the following are increasing being viewed as important elements for such strategies: development and promotion of environmental service markets; promotion of environmentally sustainable management of production; and promotion of synergies between the environmental conventions and rural development initiatives.

The objective of food security

After the commitments assumed at the World Summit (Rome 1996) to halve hunger by 2015, food security was once again placed high on the political agendas of most countries and development agencies.

To improve access to food, consistent and comprehensive policies are required that involve different economic sectors and social actors, especially those affected by rural poverty. Similarly, to achieve food security, it is also necessary to have a comprehensive approach, one that deals with food production, capacity for access, non-trade concerns in negotiations, the situation of net food-importing countries, and food quality and safety.

Another very important dimension of this comprehensive approach is to actively involve small farmers and rural women in the production, distribution and use of food, both for consumption and for generating incomes.

Preparing for the future: The great challenges

As a component of domestic economies, agriculture has developed in accordance with the various economic models in effect over the years. LAC agriculture has had to contend with import-substitution policies and practices, the green revolution, structural adjustment programs and, most recently, market opening and the globalization of production and trade.

Given the national and international settings and the prospects for agriculture and rural life, four major challenges need to be addressed. The first is to strike a balance between the objectives of an export-oriented development model and the objectives of sustainable development, rural prosperity and food security. The second is to construct an institutional framework that enables agricultural development and the improvement of rural life. The third is to improve the public and private management of agriculture and rural development, and the fourth is to improve the capabilities needed to tackle the other three challenges effectively and in timely fashion.

The development model

An objective reading of the results of economic models used in recent decades to develop agriculture and the rural milieu suggests the need for a development model that is inclusive and centered on the well-being and aspirations of rural inhabitants and communities. The promotion of long-term public policies for agriculture and rural life agreed to by all parties is a valuable resource for ensuring the continuity of national development efforts.

It is therefore necessary to devise a development model that facilitates a better balance between rural and urban areas, attracts more investment to rural areas, and helps raise production and productivity, among other things.

Developing an enabling institutional framework

Discussion of the development model creates opportunities for constructing an institutional framework that promotes cooperation and common objectives among the State, private enterprise and civil society. This sort of institutional framework is therefore broader in scope and coverage than those resulting from the reforms of the last two decades, as it proposes new roles for the state and civil society and for relations between the public and private sectors in a market economy.

In addition to rethinking their functions, the ministries of agriculture have an important leadership role to play in constructing a renewed institutional framework, arousing the interest and securing the commitment of other actors involved in the development of agriculture and rural life.

The scope of the new institutional framework stems from the holistic concept of agriculture and rural life and offers areas for action and reflection on strategic matters in rural territories, agricultural production and trade chains, and the national and international environment.

Management of agriculture and rural development

Constructing a new institutional framework will require the participation of new actors to facilitate collaboration among public and private institutions, the coordination of development efforts by national and regional entities, and the development of mechanisms that promote collaboration and shared management and responsibilities.

At the Third Summit, the Heads of State and Government stressed the importance of including as many stakeholders as possible in the affairs of agriculture and rural life, and declared their desire for national dialogue among ministers, lawmakers and organizations involved in rural areas, with a view to undertaking joint action to improve agriculture and rural life.

Dialogue and commitment are important because they can help improve the efficiency of the agricultural and rural public apparatus, the coordination of long-term sectoral policies, the development of markets, the promotion of innovative funding policies, and the adoption of policies tailored to the development level of agriculture and rural territories.

Developing and upgrading capacities

The scope of the challenges ahead and the objectives proposed for developing agriculture and rural life are enormous. The growing involvement of public and private actors in production, trade-related and political processes requires improved technical and business skills and better policies.

New functions in the emerging institutional framework will also require improved capabilities for discussing, negotiating and building consensus on agreements for national and international collaboration among other economic and social actors.

Societies are increasing recognizing that knowledge is one of their most important assets for development, and the community of agriculture and rural life cannot afford to lag behind in this global trend. Accordingly, new collaborative forms of work must be found to strengthen knowledge as a strategic resource for achieving the sustainable development of agriculture and rural life, food security and rural prosperity.

In our hands…

To improve the performance of agriculture and rural life, manage both processes in a changing environment and achieve the objectives of development, four overarching challenges must be tackled: a) reappraise the development model and the role of agriculture and rural territories in same; b) renew the institutional framework; c) improve management mechanisms; and d) strengthen capabilities in the public and private actors.

Two powerful tools that the leaders of the community of agriculture and rural life can use to tackle the challenges, through joint action, are to reappraise the contribution of agriculture and the rural environment to development and to achieve recognition of its importance by political decision makers in the hemisphere.

The countries must strengthen their resolve and improve their capacity to respond with urgent and concrete actions to consolidate agriculture and rural life as solid pillars of the countries' well-being and development.

SECTION I

THE STARTING POINT: A RENEWED FRAMEWORK FOR AGRICULTURE AND RURAL LIFE

This is a historic moment of great importance for agriculture and rural life in the Americas. At the Third Summit of the Americas (Quebec City, 2001), the Heads of State and of Government recognized "… the fundamental importance of agriculture as a way of live for millions of rural families of the Hemisphere, as well as the role it plays in the creation of prosperity as a strategic sector of our socio-economic system and … the importance of developing its potential in a manner compatible with sustainable development that would ensure adequate treatment and attention to the rural sector."

This recognition is a major political achievement, obtained at a time when other development issues filled the hemispheric political agenda and even the global agenda.

Moreover, the Heads of State and of Government took another step in this direction during their meeting in Quebec City, determining, among other aspects, that their Governments would:

- Promote dialogue involving government ministers, parliamentarians and civil society, particularly organizations linked to the rural areas, as well as the scientific and academic communities, with the objective of promoting medium and long-term national strategies towards the sustainable improvement of agriculture and rural life;

- Support national efforts to strengthen rural enterprises, in particular small and medium-sized enterprises and promote, where appropriate, a favorable environment for agribusiness; encourage, in a complementary manner, the training of small and

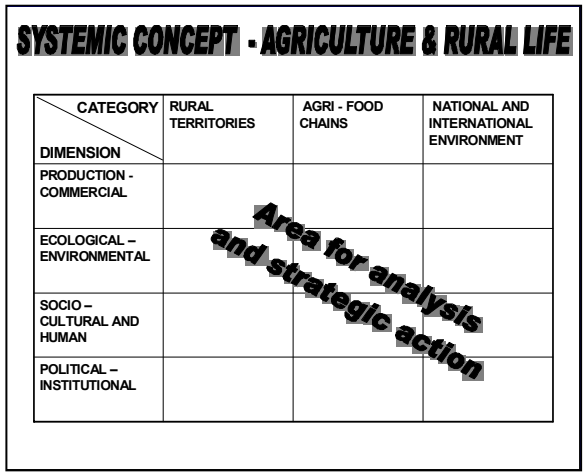
medium-sized rural entrepreneurs as well as the modernization of training institutions in this field;

- Instruct the Ministers of Agriculture to promote, in cooperation with the Inter-American Institute for Cooperation on Agriculture (IICA), joint action by all the actors of the agricultural sector to work towards the improvement of agriculture and rural life and to enable the implementation of the Plans of Action of the Summits of the Americas.

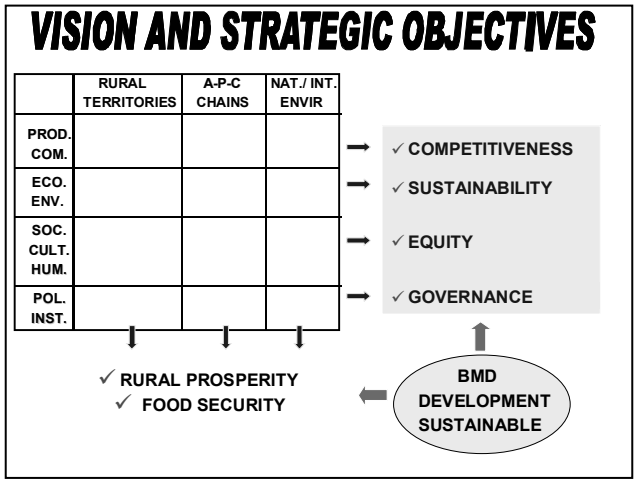
In response to these presidential mandates, the Ministers of Agriculture held their First Ministerial Meeting on Agriculture and Rural Life, within the framework of the Summit of the Americas process, in Bávaro, Dominican Republic, in November of the 2001. Here, the Ministers issued the Ministerial Declaration of Bávaro (MDB) for the Improvement of Agriculture and Rural Life in the Americas, identifying critical issues that should be urgently addressed and expressing their conviction and intention to promote a common agenda to that end in their respective countries. They also emphasized the need to make significant progress in the areas of *food security, reduction of rural poverty and the sustainable development of agriculture and the rural milieu.*

The decisions taken by top political leaders configure a new political framework that implies going beyond the traditional conception of agriculture as the primary productive sector of the economy, and adopting a systemic conception that responds to those strategic guidelines

To that effect, this document adopts the same framework used by the Ministerial Delegates of Agriculture to define the Plan of Action AGRO 2003-2015 for Agriculture and Rural Life of the Americas, in order to implement the mandates of the Third Summit and the agreements of the MDB, in preparation for the Second Ministerial Meeting on Agriculture and Rural Life (Panama, November11 and 12, 2003).



The conceptual-thematic approach to the analysis and definition of the strategic actions that sustain the Plan of Action is defined as the "***agricultural system***" matrix. This identifies two groups of complementary elements that characterize agriculture and rural life: ***three categories*** that include the actors of agriculture and rural life (in terms of rural territories and agricultural production-trade chains) and the national and international environment or context (set of elements that affect the development of the territories and the functioning of the chains); and, ***four dimensions*** of development, defined as: productive-commercial; ecological-environmental; socio-cultural and human; and, political-institutional.



The importance of this systemic conception lies in its direct linkage with the strategic objectives defined in the MDB. The four dimensions (rows of the agricultural system matrix) include variables and indicators identifying the situation and prospects for agriculture and rural life in terms of the four sustainable development objectives agreed in the MDB: ***competitiveness; sustainability*** of natural resources; ***equity;*** and ***democratic governance.*** At the same time, the three categories (columns of the agricultural system matrix) include variables and indicators that in turn make it possible to describe the situation in detail and anticipate the prospects in terms of another way of viewing sustainable development, in terms of the other two objectives defined in the MDB: ***rural prosperity*** and ***food security.***

This renewed frame of reference for agriculture and life rural is a political and conceptual-thematic framework, consistent with the present political moment in the Hemisphere. Its advantage is that it contains strategic guidelines established by the highest political authorities and at the same time incorporates a conceptual-thematic approach to respond to those political determinations, in order to guide the tasks of analysis and definition of the strategic actions required to advance towards the objectives of the MDB. But in addition, it responds to the Millennium Development Goals (MDG).

This document begins with an outline of this framework, since it is utilized further on to characterize the performance of agriculture and the patterns in rural life, to identify the most significant changes taking place in the national and international context of agriculture and rural life, and within these, and to highlight the implications that those changes have for the identified performance and patterns.

However, it is important to mention that the use of the framework in this document also has other implications, since it means contending with the limited information offered by official statistics that respond to other more traditional and restricted conceptual frameworks. Therefore, in this case it was necessary to complement the available information with an analysis of a qualitative nature and descriptions of some cases that were documented to illustrate certain assertions. This becomes evident in the following section describing the performance of agriculture. The use of this framework also suggests the need to review the existing information systems in order to adapt them to the new reality in the Americas.

SECTION II

THE NEW ENVIRONMENT FOR AGRICULTURE AND RURAL LIFE

2.1 Critical Issues of the International Context

Globalization and trade liberalization

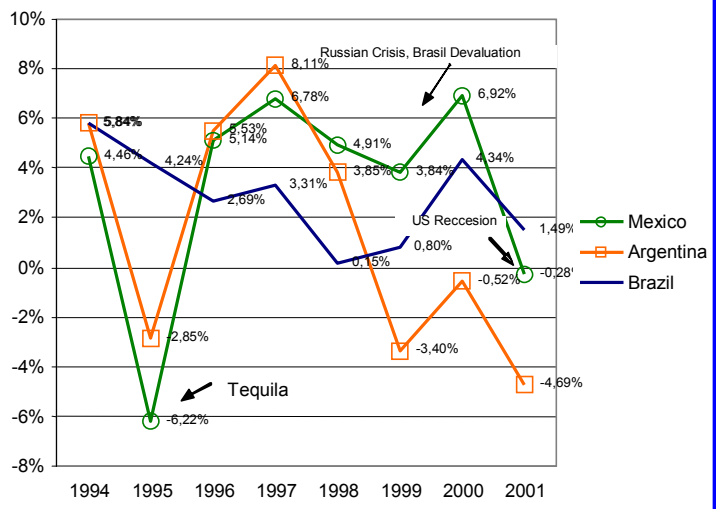
Globalization, defined as the internationalization of economic, social, political and cultural phenomena and the distribution of wealth, and trade liberalization as the core of the development strategy followed by countries to expose their national production to international competition, are two ongoing processes that characterize the new international environment. These processes tend to strengthen each other mutually, determining the actions of countries and shaping the future of their agriculture and rural life.

At the present time, globalization is advancing very rapidly as result of the revolution in informatics and communications; this is evident in the reduced costs of transportation, the growing irrelevance of national borders as physical and political barriers to the movement of goods, services, capital and, to a lesser extent of people, as well as in the national authorities' decreased capacity to control these.

During the last 15 years of the 20th century, the advance of globalization made possible a greater international integration and increased flows of trade and capital, which undoubtedly contributed to an unprecedented economic growth and improved living standards around the planet, though with major differences between countries.

However, globalization has also meant that the impact of changes and crises in the markets spreads more rapidly and with greater intensity among countries, making their

Figure 1: GDP annual rate of growth in LAC Countries and External shocks 1994-2001



Source: CEPAL

macroeconomic balance more vulnerable and unstable. This may be seen in Figure 1, which illustrates the impact of the financial crises of the last decade and the recession in the economy of the United States on selected Latin American countries

Greater macroeconomic vulnerability and instability caused by external events, the concerns over unequal benefits generated by this process among countries (to the detriment of the relatively less developed nations) and within countries among the different social groups (especially the poorest), and environmental concerns, have resulted in criticism and have led to the emergence of anti-globalization movements and calls to re-orient the process.

Some important features of globalization which affect agriculture´s performance and the situation of rural life in the countries are: the division of production processes into sub-processes that are based or located in different countries, in accordance with their competitive advantages which, in turn, gives rise to a growing trade of inputs and components; the growing importance of inter-company trade among the transnational corporations; increased difficulty in determining the origin of products, particularly of basic commodities; and, information and knowledge are becoming critical factors of production.

Trade liberalization, meanwhile, offers great opportunities since it expands the markets for domestic production, reduces anti-export biases, increases consumer options and facilitates commercial alliances.

It also poses challenges: there is pressure to increase efficiency and competitiveness. Because there is greater competition in countries' internal and external spheres, agribusinesses are obliged to offer better services and products, improve their organizational processes and obtain more and better information for decision-making in order to remain in the market.

However, domestic agricultural production and the employment in the rural areas is often exposed to competition from markets with distortions created by the continued application of high subsidy levels, tariff escalation and non-tariff barriers. It is also important to note the trend toward a greater oligopolization (concentration) of the market structures, mergers and strategic partnerships between companies.

Trends in the agrifood markets

In the sphere of international trade, two principal long-term trends have emerged which will possibly remain on the future horizon: the first indicates a steady growth in the flows of agrifood products, though with a decreasing share of overall trade. Indeed, the value of the agrifood trade has multiplied approximately 20 times in the last 40 years, but whereas at the beginning of the 1960s it accounted for nearly 30% of the total world trade in commodities, by the beginning of the 2000 decade, its share had fallen to less than the 9% of the total.

Figure 2 ***Aggregated Index of Relative Commodity***

Source: ECLAC

The main explanation for this decrease is the relatively greater dynamism of the manufactured goods trade, though it is also associated with the fall in the real price of commodities, a trend that has not been reverted as expected, as a result of the application of the Uruguay Round Agreements in the context of the WTO. On the contrary, this trend was accentuated during the second half of the 1990s.

Moreover, as the income levels of the world's population have risen, increasingly large numbers of products with greater levels of processing and added value are traded in the agrifood markets, to the detriment of unprocessed commodities. This is having a significant impact on agricultural production, which must now give consideration to differentiation by quality, presentation and the development of brand products, denominations of origin and product certification. New target markets are also emerging for agricultural production beyond traditional uses as food and textile fibers, creating opportunities for pharmaceutical and chemical production, ecology, tourism and environmental services.

On the demand side, consumer tastes and preferences are increasingly shifting towards safer and better quality food products, that are easier to prepare, healthier and with better nutritional characteristics, giving a renewed importance to "non-price" factors in competitiveness.

Box 1. New target markets for agricultural production and improvements in rural profitability.

The sale of environmental services based on forest conservation for fixing carbon, the use of biodiversity to manufacture pharmaceuticals in Costa Rica, the isolation of a protein in Australia with applications in the cotton and medication industries, which is expected to generate large profits, and the use of farms for tourism activities in Chile, Spain, Costa Rica, and Venezuela, are all examples of new outlets for agricultural production and activities that provide opportunities to increase the profitability of the rural economy.

Specialized or "niche" markets, such as the organic food market, show a tendency to grow faster than the broader, standardized markets (see Box 2). Among these, we observe a growing influence of foods consumed by ethnic populations and specific social groups. At the same time, advertising, the Internet and cable television are having a major influence on the formation of habits and their homogenization around the planet.

Box 2. Growing importance of Organic Products.

The market for organic products, free of toxic substances and residues, has shown very dynamic growth levels in recent years, well above those of conventional agriculture (annual average growth of 25%, but variable according to the product). In the year 2000 retail sales of organic products were estimated to be worth approximately US$ 16,000 million reaching US$ 19,000 million in 2001, with consumers- especially those in more developed countries - willing to pay premium prices for products guaranteed to be prepared without the use of agrochemicals and free of toxic substances and residues.

In response to this growing demand, every day more producers are becoming involved in organic farming and the leading supermarket chains in North America and Europe are increasingly selling these products. Recent studies estimate that 23.7 million hectares in the world, distributed in over 400,000 farms, are planted with organic crops. In North America, Central America, South America and the Caribbean 6.2 million hectares were reported in 2003 and 120,000 farms with certified organic production.

Source: *IFOAM, 2003.*

The world's aging population is also changing eating habits. There is growing demand for non-acid fresh fruits, vegetables, whole grains and fiber-rich foods, as well as white meats such as chicken and alcoholic and soft beverages, while consumption of red meat, animal fats and citrus fruits is declining.

Rapid urbanization in developing countries and the associated lifestyle changes are also having a major impact on food preferences and on the ways in which food is consumed: the growth of fast food establishments, the allocation of a larger proportion of family incomes to "eating out", the development of pre-cooked foods and "express" delivery services, etc., are examples of the response by the agrifood business to the new demands of consumers who have less time to prepare and eat food.

On the supply side, we see the emergence of shopping centers offering a wider variety of products at better prices - for example, the large supermarkets - to the detriment of the small retail trade. The expansion of large supermarket chains in Latin America has occurred due to factors such as: the creation of strategic partnerships, a drastic reduction in regulations on foreign investment, the transnationalization and consolidation of large chains and the reduction of tariffs on many consumer goods, which encourages imports. Other no less important factors that explain this phenomenon include urban expansion, increased incorporation of women into the work force, the growth of real average per capita incomes in the nineties- despite persistent poverty- a greater demand for processed foods, capacity to store perishable foods and the development of transportation facilities. The olicopolic purchasing powers of these shopping centers establish the conditions of price, quality, presentation and terms of payment, which has a significant impact on farmers.

In agribusiness, information is a new production asset and a true strategic resource. Market intelligence is facilitated by the new information technologies. In an era of

knowledge, timely access to information is indispensable to enable producers and countries to be competitive in supplying goods and services to the market. Possessing timely information translates into high-quality products and services, into greater competitiveness, effective decision-making, and consequently, into the development that all countries strive to achieve.

Electronic commodity exchanges, virtual agricultural supply warehouses and direct commercial partnerships between producers and distributors at national and international level via the Internet, have created a new way of selling: electronic trade (e-commerce), which is expanding rapidly in response to the demands of the globalized economy.

The modernization, development, and institutionalization of domestic agricultural markets have been fundamental elements in the creation of solid and secure agricultural commodity exchanges in the majority of countries. Parallel to this process, financial systems linked to agricultural commodities have been implemented to provide credit collateral, making it possible to create capital markets for agricultural production and marketing.

This new modality of wholesale markets, known as agricultural commodity exchanges, which have been created to formalize and underwrite business transactions, develop information sources and promote transparent pricing, have become instruments for market integration at the national and regional levels.

Box 3. Agricultural Commodity Exchange.

In Argentina, IICA is promoting the creation of an agricultural commodity exchange where fruit and vegetable production is negotiated in the market of origin, before being planted or harvested and without the need to move the harvest until it is sold, thereby connecting supply and demand and incorporating small and medium-sized producers. The project is proposed as a solution to the producers' loss of negotiating capacity and to changes in the supply and distribution systems in the large consumer centers. However, it is necessary to rigorously standardize products and establish quality standards in order to constitute a commodity exchange partnership and create the electronic market.

Source: *IICA*

International Trade Negotiations

Multilateral, hemispheric, and bilateral trade negotiations are among the most dynamic mechanisms to promote the liberalization of world trade. At present, negotiations are underway in all three spheres, with agriculture included as an integral part of the agendas. The challenge facing the countries of the Americas will be not only to participate effectively in these processes and achieve a coherent position within these simultaneous events, but also to establish the necessary domestic conditions to take full advantage of new opportunities and meet their new commitments.

The mandate of the Doha Round of 2002, calling for increased and enhanced participation by developing nations and least developed countries in the multilateral trade system, is of particular importance in the context of the agriculture negotiations that are

taking place in the WTO (World Trade Organization), given that the agricultural sector continues to play a crucial role in the economies of many of these countries.

In the context of the international negotiations taking place in the World Trade Organization, agriculture has been one of the main topics of discussion, through progress in the liberalization of agricultural trade has been limited. Negotiations on this subject have not produced the desired consensus, due to differences in the proposals and negotiating groups representing blocs of countries (European Union, the United States, the Cairns Group, ASEAN, G-20, among others) in which the issues and interests vary significantly[1].

Support to agriculture in the countries of the Organization for Economic Cooperation and Development -OECD currently represents, on average, 1.3% of GDP[2]. Although there has been a slight reduction in agricultural subsidies applied by industrialized countries, an individual analysis (by country) shows that domestic support to agriculture in some countries and in some products (rice, sugar, dairy products, grains and meat) has remained at very similar levels to the period 1986-1988 and in some cases, has even increased. Given their nature and the countries that apply them, the subject of subsidies has been transferred to the agriculture negotiations of the WTO, generating debate and hindering progress in hemispheric initiatives such as the FTAA (`Free Trade Area of the Americas) and in bilateral negotiations.

The FTAA, for its part, is holding periodic meetings to discuss three core issues: market access, export subsidies and domestic support. In both the FTAA and the WTO negotiations, the goal remains to initiate trade liberalization in 2005.

The hemispheric negotiations to establish the FTAA have made significant progress on tariff issues, where all offers are already on the table. However, there has been very limited progress in efforts to achieve consensus on trade disciplines related to export subsidies, domestic support, and other measures with an equivalent effect, and it has not been possible to reach an agreement. This suggests that there will only be progress in the measure that understandings are reached in the multilateral negotiations taking place in the WTO.

The negotiations on Sanitary and Phytosanitary Measures in the FTAA may possibly lead to an agreement that goes beyond the provisions established in the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS), mainly with respect to procedures. One of the early achievements of this negotiation has been the

1 The frustrated results of the recent Fifth Ministerial Meeting in Cancun (September 10-14, 2003) made it impossible to advance substantially on the items on the agenda, revealing a confrontation between developed and developing countries, especially with regard to the main topic of the meeting: agriculture. The negotiations will continue in Geneva, and a deadline of December 15, 2003 was set for pressing ahead with the negotiations on the topics addressed, for taking advantage of the progress made in Cancun and in order to attempt to meet the Doha deadlines.

2 During the period 1986-88 total support to agriculture represented 2.3% of GDP of OECD countries (OECD 2002).

implementation of a process of notification and counter-notification of Sanitary and Phytosanitary Measures among the countries of the Americas.

In the regional context, the hemispheric integration process has also advanced through Free Trade Agreements, particularly between countries such as Canada and the United States with the Central American countries and with Chile, and also through the agreements being negotiated by Chile and Mexico with several Latin American countries. It is important to note that these last two countries have each negotiated a trade agreement with the European Union and are initiating one with Asian countries.

The growing use of non-tariff barriers has limited the perception of greater trade liberalization resulting from reduced import tariffs. The application of technical standards is based on legitimate goals such as the protection of human, animal and plant life or health, consumer concerns, environmental protection and national security. Another aspect closely linked to trends in the agrifood markets is the application of new technical standards in the area of agricultural health and food safety and the certification of products according to their attributes and production methods (environment-friendly, organic or transgenic crops, fair trade, etc.). This involves paying attention not only to the end product, but also to the productive processes and marketing.

Box 4. Dynamics of International Negotiations and Integration Agreements.

During the 1990s, a process began to revitalize the integration efforts that had been postponed during the so-called lost decade of the 1980s. Free trade agreements were signed as part of the trade liberalization strategies and as a way of guaranteeing increased access to external markets. Between 1990 and June of 2003, 40 Free Trade Agreements were signed in the Americas and 16 initiatives are currently at different stages of the negotiation process. Among the most important are the continental initiative of the FTAA and the agreements between Central America and the United States and MERCOSUR with the Andean Community. The latter's progress has been affected mainly by the macroeconomic problems that afflict the imperfect Customs Union and is now subject to the political will to reinforce it through further expansion of the Customs Union and especially to strengthen and expand the actions of this integration body in its member countries, and with its two partners (Chile and Bolivia).
Agreements are also being negotiated outside the region, following the example of the agreement signed by Mexico with the European Union. Similarly, during the year 2002, Chile concluded negotiations and initiated agreements with South Korea, the European Union and the United States. It has also begun negotiations with Japan, China and other countries of Europe.
The United States, for its part, signed an initiative similar to the Caribbean Basin Initiative with African countries (African Growth and Opportunity Act. 2002), and has expressed its intention to negotiate agreements with Egypt, New Zealand and some countries of ASEAN.

Source: IICA, based on data from IDB and Tradeobservatory.org

Many of the trade negotiations currently taking place at the hemispheric and subregional levels address the "new issues" of international trade that play a dominant role in the new international context of agriculture. One example is intellectual property rights, particularly aspects related to geographical indications; the review of Art. 27.3 b) concerning acquisitions of plants, animals, and "essentially biological processes" through patents; the relationship between TRIPS and the Convention on Biological Diversity and

the protection of traditional knowledge and folklore. The subject of environment-trade is also included in the multilateral negotiations, which are expected to have special importance for agriculture.

In addition, the growing oligopolization in the marketing of agrifood products has generated a special interest in incorporating the subject of competition policies into the international negotiations.

Environmental and social concerns

The question of how to feed the world's population in the near future perhaps summarizes the main environmental and social concerns that must be addressed by agriculture, the rural territories and food security strategies.

The world population is expected to grow from 6 billion in 2000 to 7.2 billion in 2015; however, the area of available arable land is decreasing, the processes of soil degradation and desertification are accelerating, water for agriculture is becoming more scarce, and a rapid urbanization process is extending construction into areas that are unsuitable for this purpose, resulting in degradation of land, water resources (lack of treatment of waste water and sewage) and increased poverty. These factors challenge the capacity of the world's food production system.

In terms of access to food, while it is true that free trade, privatization and decentralization offer countless incentives for increased agricultural output through a more efficient use of natural resources, facilitated by market mechanisms, these alone will not produce an equitable distribution of incomes, or generate environment-friendly economic and technological systems.

The income distribution structure has become one of the greatest obstacles to the creation of efficient economies and solid processes of human and social development, since it imposes limits on access to production assets (e.g. land) and production support services (e.g. credit, technical assistance, etc.). Concentration of incomes is associated with limitations on the establishment of true democracy and the possibility of achieving an efficient economy.

Poverty continues to increase in Latin America and there are many indications that the region faces problems of competitiveness and that the income differential with the more developed countries continues to grow (IDB, 2001). Within the countries,

Box 5. HIV/AIDS and agriculture

"The disease tends to affect the most productive members of society, with catastrophic consequences for agriculture and other aspects of economic and social development. Both the rich and the poor may succumb, but the latter are more vulnerable to its effects. HIV/AIDS prolongs and accentuates poverty over time, depriving households of their assets and exhausting their human and social capital. These characteristics mean that the disease simultaneously contributes to reduce food production and economic access, dealing a double blow to food security" (*FAO, 2001*).

wealth has become concentrated in some sectors of society that have benefited from the trade liberalization and structural adjustment processes implemented during the first phase of the reforms. A high level of rural poverty, together with inequality in the distribution of incomes, suggest a high degree of food insecurity among rural populations.

Recent data indicate that in the group of countries where the numbers of under-nourished people increased notably, growth rates in agricultural and food production were much lower (FAO, 2001). These trends underscore the importance of the agricultural sector in a national food security strategy; the evidence does not appear to recommend neglecting domestic food production.

The environment, for it part, is the basis that sustains life, agriculture and the activities carried out in rural territories. The global changes that affect the planet are also reflected in agriculture and the rural milieu.

The rapid increase in demand for natural resources is beginning to suggest a scenario of geographically localized scarcity. This is becoming more evident due to the proximity between rural and urban areas and the accelerated urbanization processes. Similarly, production processes that pollute the atmosphere, the earth and the water create environmental and climatic imbalances and cause impacts such as the so-called "greenhouse" effect, with significant consequences for agriculture.

The rural territories of countries contain most of the natural resource systems and provide the rest of the population with food, recreational opportunities and ecosystem services. However, in developing countries, these have been subjected to two extreme processes of degradation: on the one hand, deterioration caused by practices that are ecologically and environmentally unsustainable, the result of extractive models that are not environment-friendly and have been applied by a major part of modern agriculture and large commercial farms; and on the other hand, the presence of a large number of producers lacking the necessary production assets, who are forced to overexploit resources as a strategy to survive.

Deforestation, soil degradation, desertification, water pollution (both potable and for irrigation), air pollution and loss of biodiversity have become widespread problems that affect practically all ecosystems. Many problems associated with water transcend national boundaries, although there are major differences between regions, subregions and countries. The greatest problems identified are: (a) a per capita reduction in the availability of water, due to population growth, urban expansion, deforestation, and climate change; (b) deterioration in the quality of water, due to inadequate treatment of waste water, excessive use of fertilizers and pesticides and industrial pollution; and (c) obsolete institutional and legal frameworks. (UNEP - GEO-3, 2002).

Environmental changes, such as loss of biodiversity or the contamination of crops and groundwater sources, are very closely related to Agricultural Health and Food Safety (AHFS) programs. The World Health Organization (WHO) reports that 10% of all

preventable diseases are due to environmental degradation, and adds that the leading causes of these illnesses include the absence of health measures, the contamination of water sources and unsafe foods.

Technological change applied to agriculture and rural life

Two important processes characterize the main trends associated with technological change applied to agriculture and rural life: a) the development of a new technological paradigm that transfers us from the green revolution to the biotechnological revolution, with the recovery and application of traditional knowledge; and b) the use of information and communications technologies.

Ideas and knowledge materialized in productive processes, goods, and services are an increasingly important part of trade. Most of the value of products resides in the amount of invention and research that led to their creation, and agriculture is no exception.

The technological models traditionally applied to agriculture during the green revolution and the way of generating research and technology are changing significantly. The most outstanding aspect of this change of paradigm is that modern technological developments are generated on the basis of a scientific and technological revolution that is characterized by being knowledge-intensive, both in its agricultural and non-agricultural aspects, and by its impact on the production and productivity of the agrifood sector. Examples of this are agro-biotechnologies, basically developed by private firms in the more developed countries and associated, as never before, with intellectual property rights and, therefore, subject to the application of the exclusion principle on its use: in other words, the products of research cease to be public assets.

Box 6. GMOs and their share of production.

According to a report by the International Service for the Acquisition of Agrobiotechnology Applications (ISAAA), genetically modified organisms (GMO) are gaining ground. In 2001, some 52.6 million hectares were planted with GMOs, a 19% increase over the previous year. Thirteen countries are currently cultivating genetically modified soybeans, corn, wheat, cotton, or canola. The Americas are responsible for two thirds of global production, but China, South Africa and Australia are rapidly increasing their share. Despite prolonged rejection by consumers, especially in Europe, the report predicts a brilliant future for GM crops.
In Argentina, from an authorized test in 1991 on an area of 400m2, commercial plantations of transgenic soybeans accounted for 20 percent of the total area cultivated in the farming year 1997/98, rising to 72 percent (5.5 million hectares) the following year and nearly 90 percent (8.6 million hectares) in 1999/2000. It is estimated that in the last farming year, 95 to 98 percent of the 11.5 million hectares cultivated were planted with GM varieties, mainly RR soybeans, into which a bacterial gene has been introduced, making the crop resistant to the herbicide glyphosate.

Source: The Economist, January 17, 2002: Science E-field 19 Aug.2003.

A strong debate is under way on the merits and potential dangers of genetically modified organisms resulting from the development of agro-biotechnologies. Beneficial

effects have been proven in terms of reduced use of agrochemicals, the control of some of the causes that once destroyed nearly 40% of the world's agricultural production, mainly in developing countries (insects, diseases caused by fungi, viruses or bacteria and competition from weeds). This has made it possible to increase per hectare yields, without significantly increasing the area of arable land. GMOs are also regarded as a way to help resolve problems of hunger and combat rural poverty.

However, there are concerns over their potential effects on the environment, due to their disruption of ecosystems and reduction of biodiversity.

There has also been a rethinking of the role of the State; new institutional actors have emerged and there are calls for greater participation by the private sector, including agricultural producers themselves.

Technology innovation, - defined as the capacity of countries, sectors and companies to avail themselves of knowledge, apply it to the production processes of the agrifood chain and take these to the markets - goes beyond the traditional approach of generating and transferring technology. Promoting innovation implies investment in information and knowledge. Innovation, which shifts between demand and supply and between the external environment and state regulations, should not only occur in technology, but also in institutional, organizational and management aspects.

This not only implies the acquisition and incorporation of biophysical technologies, but also those leading to the development of social capital and to the construction of true knowledge-based societies and networks for the production of national and transnational public assets, derived from multinational technological integration.

In addition, information and telecommunications networks have become basic inputs for activities that lead to the development of nations in general, and of agriculture in particular.

This dynamic process, which has been termed "the information society", heralds a fundamental change in all aspects of our lives, including the dissemination of knowledge, social behavior, economic and business practices, political commitments, the media, education, health, leisure and entertainment.

The social and economic situation of developing countries is considered an obstacle to connectivity and access to information, especially for rural areas.

The spread of information technology allows farmers, for example, to gain a better understanding and accuracy in their risk assessments and in political decisions to tackle diseases and pests. However, while technology provides opportunities, it may also introduce elements that generate uncertainty. Some biotechnology products promise to increase the quality and quantity of the food supply, while reducing the levels of harmful substances or residual chemical products. Although promising, some of the supposed

health and environmental benefits are viewed with concern and there are doubts over their long-term effects.

Despite recognition of their advantages, the new information and communications technologies are not equally accessible to all countries and to rural areas. This contributes to increase the gap between developed and developing nations, between urban and rural areas.

The New International Institutional Architecture

As a corollary of globalization, of the free trade strategies, of the need to tackle the economic, political, social, and environmental problems facing humanity and of the need to overcome the limitations of the so-called Washington Consensus, countries from all over the world have been working to build a new international institutional architecture. This needs to evolve beyond the Bretton Woods trilogy, the United Nations and the organizations that emerged in the context of the cold war, which must be reviewed in order to address the new challenges of the international environment and establish the new game rules for all the public and private actors, including those of agriculture and rural life.

Trade

One of the main achievements of the Uruguay Round of trade negotiations was the creation of the World Trade Organization (WTO) in 1995 and the regulation of several topics that were previously outside the regulatory framework of the General Agreement on Tariffs and Trade (GATT). Among them- and perhaps one of the most difficult to regulate, given its social and political interrelations- is the area of agriculture. In the Agreement on Agriculture, guidelines were established under three broad headings: market access, export subsidies and domestic support.

There are other WTO agreements and ministerial decisions that multilaterally regulate activities related to agricultural trade. These include the Agreement on the Application of Sanitary and Phytosanitary Measures[3], according to which member countries agree to protect animal, plant and human health in their territories, applying regulations that do not inhibit trade; and the Agreements on Intellectual Property Rights and on Technical Barriers, which form part of the institutional framework that regulates agricultural trade and the support policies for agriculture and therefore of rural development.

As a result of the Fourth Ministerial Conference of the WTO, held in November 2001, the Doha Round or Development Round took place at the beginning of 2002 with a commitment to promote economic recovery, growth and development. The Conference set itself the challenge of promoting the increased and enhanced participation of

[3] With the sole exception of the Bahamas, all countries of the Americas are members of the WTO and are bound by the provisions contained in the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS).

developing countries, and particularly of the least developed countries (LDCs) in the multilateral trade system, in order to share in the benefits of international trade.

At the same time, before the end of this first 5-year period of the 21st century, several binding international agreements will have an impact on agricultural and agro-industrial development, particularly on the transfer and access to biotechnologies and their incorporation into the products that are marketed. This is the case of the recently adopted International Treaty on Plant Genetic Resources, of November 2001, and the Cartagena Protocol on Biosafety signed in January 2000, both of which are in the process of being ratified by countries. These will also affect future regulations adopted on the trade of genetically modified organisms.

All these changes are generating - and will continue to generate - a new institutional framework in the area of international agricultural trade.

Environmental aspects

The management of natural resources is, increasingly, subject to international influence. The *Earth Summit* held in Rio de Janeiro in 1992, promoted joint international action on environmental issues and on natural resource management and 178 governments agreed on "Agenda 21", containing policy guidelines on a wide range of issues such as ozone layer depletion, soil degradation, deforestation, biodiversity, threats to the marine environment and freshwater sources, and toxic chemicals and solid and hazardous wastes.

Three Multilateral Environmental Agreements (MEAs) are derived from the Earth Summit process, with great importance for agriculture and rural life: (a) the Convention on Biological Diversity (UNCBD); (b) the United Nations Framework Convention on Climate Change (UNCCC); and (c) the United Nations Convention to Combat Desertification (UNCCD).

The Convention on Biological Diversity is aimed at "promoting the conservation of biodiversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources."

The objective of the Framework Agreement on Climate Change is to support a coordinated effort by countries to "stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference in the climatic system|". The Kyoto Protocol, signed within the framework of this Convention, contains binding commitments that establish measurable targets and schedules for the reduction of greenhouse gas emissions.

Another very important Multilateral Environmental Agreement, given its implications for the issues of poverty reduction and sustainable management of natural resources, is the United Nations Convention to Combat Desertification (UNCCD). Its objective is to

"combat desertification and mitigate the effects of drought on countries affected by serious drought or desertification, particularly in Africa, through the adoption of effective measures at all levels, supported by international cooperation and partnership arrangements, within the framework of an integrated approach which is consistent with *Agenda 21*, with a view to contributing to the achievement of sustainable development in the affected areas."

At the Johannesburg Summit in September 2002, the UNCCD was identified as an essential tool to meet the United Nations Millennium Development Goals related to poverty eradication and food security. This point was reaffirmed during the COP-6 of this Convention, held in Cuba from August 25- September 5, 2003.

Two other MEAs of importance to agriculture and rural life are the Cartagena Protocol on Biosafety and the International Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

CITES is the 'oldest' MEA (1973) and its aim is to protect certain endangered species from overexploitation by the international trade system (import-export). For its part, the Cartagena Protocol on Biosafety seeks to "contribute to guarantee an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms resulting from modern biotechnology that may have adverse effects on conservation and the sustainable use of biodiversity, also taking into account the risks to human health, and specifically focusing on transboundary movements."

Finally, it also is important to mention the international regulations on the international certification of tropical timber that increases the value of wood in some countries, as well as the so-called "green seals" or "ecological labels" that will undoubtedly gain greater importance in the export of food products.

Combating poverty

Poverty remains a prime concern all over the world, and particularly in this Hemisphere. At the global level, during the *Millennium Summit* held in the year 2000, 189 member countries of the United Nations made a commitment to work to achieve a series of development goals set out in the Millennium Declaration. These goals express the international community's expectations in relation to social progress. In the year 2000, world leaders synthesized these

Box 7. Millennium Development Goals.

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development

Millennium Summit
General Assembly of the United Nations September, 2000

commitments into the eight Millennium Development Goals, defining 18 targets and more than 40 indicators.

In the case of poverty reduction, the goal is to halve the proportion of people living in extreme poverty between 1990 and 2015.

Box 8. School desertion: an obstacle to the achievement of the Millennium Development Goals.

Latin America currently has very high levels of primary school desertion. One of the main challenges to advance decisively toward achieving the Millennium Development Goals and the Targets for the year 2015 is to prevent children from leaving school before completing their primary education and to significantly reduce the high school dropout rate. On average, nearly 37% of Latin American adolescents aged between 15 and 19 years drop out of school, and almost half of these leave before completing primary school.

There are pronounced differences in school dropout rates among countries, but in all of them desertion rates are far higher in rural areas, where overall drop-out rates range from nearly 30% to more than 70% of all boys and girls who enroll in school, and who for the most part do not complete primary school.

At the end of the last decade, rural areas had significantly higher school dropout rates compared with urban areas. The data presented in the Social Panorama of Latin America 2001-2002 (ECLAC) for 13 countries indicates that in 10 of them the overall school dropout rates in rural areas was greater by at least 20 percentage points. This difference was smaller only in Brazil and the Dominican Republic, and to a lesser extent in Chile and Paraguay.

Source: Social Panorama of Latin America 2001-2002 (ECLAC, 2002).

The improvement of rural life is closely linked to the eight Millennium Goals and their respective Targets. At the same time, agriculture is particularly closely linked to the reduction of extreme poverty and hunger, the sustainability of the environment and international cooperation.

The Summit process and agriculture

At the hemispheric level, the Heads of State and of Government initiated the Summit of the Americas process in 1994, with the aim of addressing concerns and problems related to development, based on a sustainable vision and with the basic objectives of eradicating poverty and discrimination.

The Third Summit of the Americas should be regarded as a historical landmark for agriculture and the rural milieu, since it recognizes "*...the fundamental importance of agriculture as a way of life for millions of rural families of the Hemisphere, as well as the role it plays in the creation of prosperity as a strategic sector of our socio-economic system...*"

The Third Summit's full recognition of the strategic importance of agriculture and rural life for the comprehensive development of countries and as a way of life for millions of rural families is an achievement of the greatest significance. It offers leaders, organizations and rural communities the possibility of working together, negotiating

resources, constructing an appropriate institutional framework and agreeing upon joint activities for the improvement of agriculture and rural life.

Accordingly, the Ministers of Agriculture signed the Declaration of Bávaro for the Improvement of Agriculture and Rural Life in the Americas (2001), in which they expressed their commitment to the mandates of the *Third Summit of the Americas* (Quebec, 2001) to promote joint action by all the actors of the agricultural sector in order to improve agriculture and rural life, with particular emphasis on the reduction of rural poverty.

The FTAA and regional integration processes

In the context of the Free Trade Area of the Americas (FTAA), the negotiation process remains active, with a defined target date to begin implementation of the agreements in 2005. During this process, some countries have openly favored the creation of a free trade area in the Hemisphere, while others have adopted more cautious positions, showing a preference for the prior consolidation of subregional integration processes. Meanwhile, a Free Trade Agreement is currently being negotiated between the United States and Central America. These negotiations are set to conclude at the end of 2003, and the integration of the Dominican Republic into this process has also been announced.

Advances in the hemispheric integration processes have yielded positive results in the signing of agreements and current negotiations of Free Trade Agreements (FTA) between countries, both on a bilateral basis and between blocs, for example Chile-MERCOSUR, Andean Community -MERCOSUR, Chile-United States, Central America-United States, Brazil-Mexico.

In the case of the Caribbean countries, closer ties have been established with the Continent through the signing of trade agreements between CARICOM and countries such as: Venezuela, Colombia, the Dominican Republic and Costa Rica. The latter is likely to be extended to include the rest of the Central American nations.

The Puebla-Panama Plan is essentially a Mexican initiative, though it only includes the nine states of southern and southeastern Mexico plus the seven Central American countries. It is a project of enormous scope, encompassing infrastructure construction and increased investment to facilitate the exchange of goods. It is being implemented in a geographical area of great diversity, which makes it very attractive to agricultural and pharmaceutical companies. This Plan is in the process of identifying regional projects that respond to the guidelines and criteria established for each initiative.

To implement the Plan, resources will be obtained from various financial sources including the IDB, the World Bank, the European Union, the Andean Development Corporation (ADC), the Central American Bank for Economic Integration (CABEI) and

the development agencies of the Governments of the United States, Japan, Spain, and other countries.

Box 9. The Puebla Panama Plan.

The Plan includes 8 initiatives: Sustainable Development; Human Development; Disaster Prevention and Mitigation; Tourism; Trade Facilitation; Roadway Integration; Electrical Interconnection; and Integration of Telecommunications Services. In October of 2002, a Regional Technical Sub-commission, made up of CABEI, IDB, ECLAC, FAO, IICA and INCAE recommended the incorporation of a new component on Agricultural and Rural Development into the Mesoamerican Initiative for Sustainable Development.
The Plan's agricultural component will place emphasis on projects in the following areas: i) food security and nutrition; ii) strengthening and integration of markets and regional agribusiness; iii) development and regulation of fisheries; iv) innovation and technology development and v) strengthening agricultural health, safety and quality. Other initiatives may include projects that contribute to rural development (tourism, infrastructure; human development, etc.)

Financing Development in the Americas

International financial institutions play an essential role in the development of the rural economy, given that the countries' own resources are insufficient. At present, the financial architecture that supports rural development and agricultural sector projects consists of agencies such as the IDB, the World Bank, IFAD, the Regional Development Banks and other governmental and private organizations.

Market liberalization processes and structural adjustment policies prompted a change in the financial political-institutional scenario, which affected the agricultural sector. The elimination or down-sizing of state development banks and the channeling of credit through private banking institutions made access to financing a critical issue, particularly for small and medium-sized companies or producers. This led a number of non-governmental organizations (NGOs) and non-banking financial institutions to fill the institutional gap and assume the role of credit providers, focusing more on financing small businesses instead of isolated producers.

With respect to the multilateral banks, after the internal evaluations conducted on the application of reform programs in the countries of the Americas, the IDB and the World Bank have redesigned their strategies in order to focus on promoting more efficient ways of combating poverty and developing the rural economies.

In the specific case of the IDB, efforts have focused on programs to increase productivity, improve the efficiency of government programs in this sector and reduce rural poverty. The IDB is also promoting financing strategies to support the use of information and communication technologies. The agricultural sector represented approximately 43% of the total volume of resources allocated by the IDB to the rural area during the period 1992-2002, which reached US$ 7,000 million. Projected financing for the rural area in the period 2003/2004 is estimated at US$ 2,000 million.

For its part, the World Bank has designed a hemispheric financing strategy that focuses on combating poverty and supporting sustainable development programs in the region.

The objective of IFAD in Latin America and the Caribbean is to provide training "enabling the rural poor to overcome poverty". The components of the IFAD strategy are: (i) empowerment of the rural poor; (ii) taking advantage of market opportunities; (iii) engaging in policy dialogue; (iv) partnerships and joint actions; (v) learning across regions and development of new products; (vi) gender issues; (vii) sustainable agricultural production and management of the natural resources. In 2002, IFAD had an effective portfolio of 40 projects in 24 countries of Latin America and the Caribbean, for a total value of US$ 636 in IFAD loans and US$ 510 million financed by other donors, borrower governments and beneficiaries.

The war against terrorism and combating drugs

The September 11 terrorist attacks against the political and financial heart of the United States has not only had an impact on that country's economy, but has also led to a reappraisal of its international relations priorities - for example the coordination of actions in the war against terrorism. More specifically, the US has imposed restrictions on the movement of goods, services, and people. Some Latin American countries have also taken steps in this direction.

For example, as part of their common foreign policy, the member countries of the Andean Community (Bolivia, Colombia, Equator, Peru and Venezuela) have made a commitment to take the necessary measures to tackle the problems of production, trafficking, misuse and distribution of illegal crops and drugs, while respecting the sovereignty and territorial integrity of the States.

To this end, the Andean Community is implementing a surveillance system together with national mechanisms to monitor crop-growing areas, as the basis for developing an international network for the control of illegal drugs and the creation of a database under the management of the United Nations International Drug Control Program (UNDCP).

Furthermore, based on Decision 505 of the Andean Council of Foreign Ministers, the "Andean Cooperation Plan for the Control of Illegal Drugs and Related Offenses" was adopted on 22 June 2001, for the purpose of addressing the problem of illegal drugs and aspects related to their production, trafficking and consumption and related offenses. The Plan also defines implementation mechanisms and an Action Program to reinforce national anti-drug strategies and develop a Community strategy.

As a complement to this Plan, the Andean Community, together with Brazil and Panama, signed the "Commitment to Strengthen Coordination in the Fight against Terrorism and the World Problem of Illegal Drugs and Related Offenses" in the city of Bogota, Colombia, on 12 March 2003 by. The Commitment seeks to coordinate joint initiatives to tackle the challenges posed by terrorism, organized crime, drugs, money laundering, illegal arms trafficking and the illegal movement of nuclear, chemical, biological and other potentially lethal materials.

Central America, for its part, has launched a regional effort to reduce the negative impact of illegal drugs on health and public safety by holding the First Central American Ministerial Summit on Drugs, in August of 2002 in El Salvador, attended by representatives of Belize, Costa Rica, Guatemala, Honduras, Nicaragua, and Panama.

The Summit discussed actions in areas such as anti-drug policies, the strengthening of the National Drug Councils to control drug abuse and the development of a National Anti-Drug System.

Meanwhile, the "Second Regional Conference on Drug Control in the Caribbean" was held in January of 2003 to coordinate prevention and enforcement programs to combat drugs in this region.

In the United States, the Public Health Security and Bioterrorism Preparedness and Response Act (LP107-188), which will be applied from November 2003, responds to the threat of food contamination by bio-weapons, one of many security problems facing the present US Administration. This legislation includes four sets of regulations related to i) Registration of Food Facilities; ii) Maintenance and Inspection of Records for Foods; iii) Prior Notice of Imported Food Shipments and; iv) Administrative Detention. Implementation of this law will require Latin American governments and entrepreneurs to adopt new export regulations.

Box 10. The United States conditions the signing of Free Trade Agreements to support for its foreign policy.

In a speech delivered at the Institute for International Economics (Washington DC, May 8, 2003), the United States Trade Representative, Robert Zoellick, stated that "countries seeking free trade agreements with the United States should meet criteria beyond those of an economic and commercial nature, if they wish to be eligible. At the very least, those countries should cooperate with the United States in its external policy and its national security objectives, as part of 13 criteria that will guide the United States in its selection of potential partners ..."

Source: IATP on www.tradeobservatory.org

In the context of the war against illegal drugs, an institutional framework is also being developed with the aim of coordinating anti-drugs efforts through policing and through the promotion of programs for the substitution of illegal crops in the Andean countries.

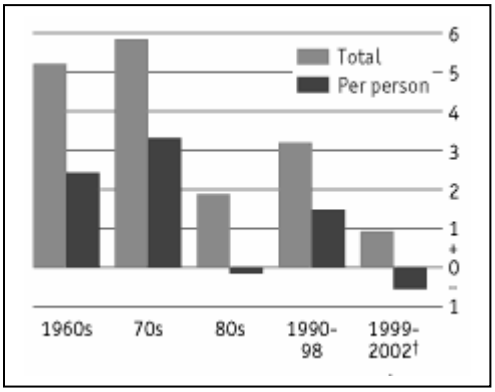
2.2 The Critical matters related to the national context

Reforms in national economic policies and the macroeconomic context

In most countries of the continent, the economic reform processes applied to the development models, following the Washington Consensus, are far from concluded and are continuing with a second phase of reforms. These are aimed at deepening the efforts carried out during the first phase, with an emphasis on certain policies and institutional changes that seek to correct negative effects and address unresolved problems.

It is perhaps at the level of macroeconomic stability–the first generation of reforms– where the greatest achievements are evident, despite the fact that in many countries the situation remains volatile and vulnerable. There is a clear need to maintain the goals of stability, as well as ongoing discussion of the mechanisms, strategies, and costs of such adjustments.

Figure. 3 The problem of growth in LAC
GDP of LAC*, average annual growth (%)



* Includes Caribbean † Estimate
Source: World Bank; ECLAC

The reforms have not allowed the region to recover the high growth rates seen during the 1960s and seventies. On the contrary, the results obtained have been described as "disappointing" (IDB, 2001). Regional growth rates in 2002 fell by 0.5%, the second consecutive year of negative growth of per capita GDP in Latin America and the Caribbean (ECLAC, 2002), where the estimated decline for the period 1999-2002 is greater that that observed during the eighties, as shown in Figure 3.

The impact on the living conditions of Latin Americans is reflected in increased poverty affecting another 7 million people, in a rising unemployment rate - from 8.4% to 9.1% - and in a 1.5% fall in real wages.

The role of the State has adapted to the new rules, but there has been major confusion and debate over its new responsibilities. The consolidation of economic processes that would make it possible to establish some true market rules has been deferred. Institutional reforms, identified as the most critical area of the structural adjustment processes, have lagged behind. The lessons learned in past decades show that we need active public policies and stronger public sectors, not in the sense of how they were the

1960s and 1970s, but rather efficient and with their actions framed by a clear vision of a development project.

In short, the region is undergoing a major process of transition, with a long path of reforms still ahead. A framework exists based on stability, fair market rules and democratic and solid institutions, which establishes minimum objectives upon which to construct a vision of a more harmonious development. But this task remains unfinished and there are controversial areas that must be addressed in order to restore the viability of a model that continues to show great potential, but poor results.

Increase Social Expenditures

Social expenditures in LAC, those allocated by governments to the social sectors (education, health, social security and welfare, housing and basic services) grew during the 1990s, thanks to an increase in the allocation of public resources for these purposes, despite a slowdown in the regional economy which began in 1997. As a matter of fact, the per capita social expenditure rose an average of 58% in the region, from US$342 to US$540 (ECLAC, 2003a)

During the 2000-2001 period, some countries already earmarking a large portion of their GDP to the social sectors increased this amount even further (Panama, Uruguay, Argentina, Brazil, Costa Rica and Bolivia). However, in Argentina and Uruguay, preliminary figures indicate a reduction in per capita social expenditure with the onset of the crisis in 2002. Also, countries such as El Salvador, Guatemala, Honduras and Nicaragua continue to report low levels of per capita social expenditure, on the order of US$100 or less, which are less than one fifth of the regional per capita average. According to ECLAC, it is noteworthy that, in the last five years, social expenditures earmarked for "investment in human capital" (education and health), grew more than those for social security, reversing the trend of the preceding five years; and that, when the expansion of social expenditures slowed, the tendency in several countries was to do more to protect expenditures for education (ECLAC, 2003a). This is evidence of the growing importance many countries in LAC are attaching to education.

Education as a critical issue

The countries of Latin America and the Caribbean have made considerable progress in the area of education during the last two decades. Access to education has improved at all levels; the mean number of years of schooling has also increased rapidly in some countries; and the administrative and research capabilities of educational systems has increased. This new level of capability is reflected in *educational innovations,* which are of great interest to educators in the region.

Despite the progress, there are a number of problems that are limiting the effectiveness of the investment in human capital being made in the region. In the first

place, there is a *gap in terms of educational performance and competitiveness* between the countries of LAC and those of the Organization for Economic Cooperation and Development (OECD), which is widening. In addition to the fact that the level of schooling attained by the active population is relatively low, the countries of LAC have not been able to keep up with the rapid growth during the last two decades in enrollments in secondary education, especially at the university level, in the countries of the OECD.

Another problem is the *inequality* in access to education, preparation for learning, school aid and assimilation of knowledge which still exist in the region. The poor and indigenous rural populations are at an extreme disadvantage vis-à-vis other groups. Education has yet to realize its potential for improving social mobility. Furthermore, the probability that poor children in LAC will complete their basic schooling is less than in some poorer countries of Africa.

The *quality of instruction* and the levels of scholastic performance in the countries of LAC are below those of the countries of Asia and Europe. Also, the *applicability of what students learn,* especially at the secondary level, leaves much to be desired. This affects their ability to enter the labor market, promote the peaceful resolution of conflicts and foster civic participation.

Reforms undertaken in the last decade to decentralize education have seldom reached the classroom. Improvements aimed at decentralizing and enhancing the quality of instruction must be accompanied by more effective *individual and institutional incentives,* for the quality of instruction to improve and for the effective assimilation of knowledge. Also, it is necessary to improve information and management if there is to be accountability for results.

2.3 Critical matters related to the territorial context of agriculture and the rural economy

The rural territories of LAC are heterogeneous in terms of their resources, societies and institutions, where agriculture continues to play a role of strategic importance in their development and prosperity. However, the expansion of non-agricultural business activities in the rural milieu and the increased integration of rural and urban areas - evident both in geographical and economic aspects - has fostered a growing conviction that in order to promote rural prosperity, it is necessary to abandon the concept of equating the rural area with agriculture, and the notion of the urban-rural dichotomy.

The rural territories still suffer from ancestral problems (such as persistent rural poverty, regional/sectoral gaps, exclusion, degradation of natural resources and food insecurity among the rural population). The structural reforms undertaken by the countries during the decades of the eighties and the nineties have not been sufficient to overcome the basic problems of development, or achieve rural prosperity.

Despite the growing trend toward urbanization in LAC, rural territories and the populations that live in them continue to plan an important part in Latin American societies.

The search for new development strategies that will make it possible to overcome poverty and reduce regional imbalances is a strategic priority for national authorities in the countries of LAC. The limited progress made in recent decades is reflected in greater rural-urban migration, an increase in the level of frustration experienced by millions of rural families for whom agriculture is a way of life, and increasing demands on the part of communities to participate in decision-making processes that affect their development.

Recent approaches to addressing agricultural and rural issues have identified territories as the basic unit for analyzing and interpreting economic, social and political processes, and for more easily understanding trends in and characteristics of the rural milieu and formulating new strategies for their sustainable development.

The European agricultural and rural development policies implemented in the 1990s, which shifted from a sectoral emphasis to the recognition of the multifunctional nature of agriculture, and territories as the focus of public policies for promoting rural development, have taken hold in the minds of specialists and policymakers in the Americas.[4] This is so because they underscore the heterogeneity of rural areas and the many roles they play, other than production (such as protection and conservation of the environment, recreation, etc.), their importance for the whole of society and their potential to offer alternatives for diversification of activities based on the particular characteristics of each rural area.

[4] It has also generated detractors who see this approach as a means of disguising and maintaining governmental support measures for agriculture, to circumvent the regulations imposed by the WTO.

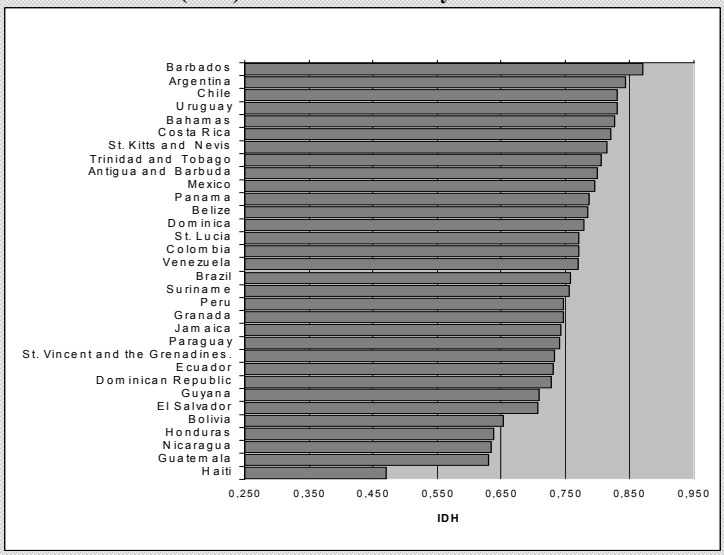
SECTION III

RECENT PERFORMANCE OF AGRICULTURE AND THE RURAL MILIEU

An analysis of the performance of agriculture and the rural milieu in the Americas does not easily yield general conclusions. This difficulty is due to the great diversity and heterogeneity of the agricultural and rural situations in the countries of the hemisphere, in terms of the size of their economies, the diversification of their productive structures and the relative importance of their agriculture and of the rural environment, etc.

One the main characteristics of Latin America and the Caribbean (LAC) is the diversity in the levels of development, of income, of access to production assets and to the benefits of public policies, etc. both between countries and within them. Heterogeneity, in terms of development levels, is reflected in the dispersed classification of countries in the `Human Development Index`, as shown in Figure 4.

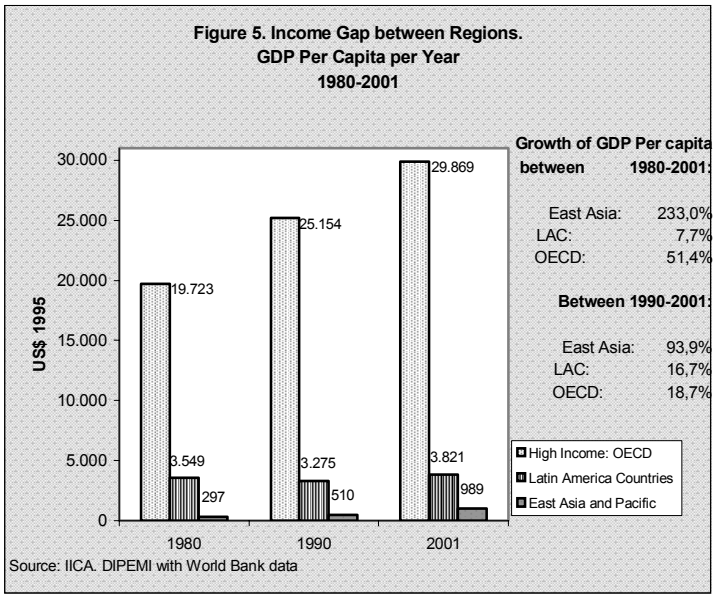
Figure 4. Latin American and Caribbean: Human Development Index (HDI) for 32 countries in year 2000.



Source: UNDP (2002).

In terms of income growth, LAC's overall performance has not been very encouraging since the so-called lost decade of the 1980s and up to 2001, unlike the results achieved by the world's richest countries, and compared with the emerging economies of East Asia and the Pacific.

Indeed, if we consider the data on real growth of GDP per capita, shown in Figure 5, we see that in LAC as a whole this has remained stagnant, while the OECD countries increased their real output 1.5 times, between 1980 and 2001, substantially widening the income gap.



For the purposes of this analysis, the information was organized around a series of indicators, based on information from the countries, making it possible to group them into 5 regions that show important coincidences with the subregional integration systems[14]. However, given the major differences that exist, some analyses are carried out separately for Latin America and the Caribbean (LAC) on the one hand, and for the United States and Canada, on the other[15].

[14] Andean Region (Bolivia, Colombia, Ecuador, Peru and Venezuela); Central Region (Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama); Caribbean (Antigua & Barbuda, the Bahamas, Barbados, Dominica, Grenada, Guyana, Haiti, Jamaica, Dominican Republic, St. Lucia, St. Kitts & Nevis, St. Vincent & the Grenadines, Surinam and Trinidad & Tobago); Northern Region (Canada, United States and Mexico); and Southern Region (Argentina, Brazil. Chile, Paraguay and Uruguay).

[15] The appendix at the end of this section includes summary tables of the main indicators analyzed by surgeons. For information on individual countries see the Annex on Statistics.

3.1 Production-Trade Chains

3.1.1 Agricultural production

LAC's agricultural output grew steadily between 1993 and 2001, after experiencing a fall in 1992. The region's growth has followed similar patterns to the performance of its GDP, though with lower rates. In the last two years of the period analyzed (2000-2001), the region's annual agricultural output experienced an average growth of 2.6%, slightly higher than the rate during the 1990s (2.38% between 1991-1999), but without reaching the levels seen during the second half of the 1980s (3% between 1986 and 1990). However, its aggregate performance during the last two years conceals differences in the performance of specific countries[16], which are important to note:

- Only seven countries experienced annual growth rates above 4%: Belize, Brazil, Chile, Honduras, Nicaragua, the Dominican Republic and Trinidad & Tobago.

- Six countries had annual growth rates of between 2% and 4%: Antigua & Barbuda, Bolivia, Colombia, Peru, Suriname, and Venezuela.

- Four countries experienced slow growth during that same period, with annual rates below 2%, but higher than 1%: Costa Rica, Guatemala Mexico and Panama.

- Fourteen countries (almost half of LAC) showed signs of stagnation or decline in the performance of their agricultural sector: Argentina, Barbados, Dominica, Ecuador, El Salvador, Haiti, Grenada, Guyana, Jamaica, Paraguay, St. Kitts & Nevis, St. Vincent & the Grenadines, St. Lucia, and Uruguay.

In the United States, agricultural output slowed slightly during the last biennium (2000-2001), compared with the growth seen during the 1990s, when the average annual rate was 2.76%. Meanwhile, in Canada, where agricultural output remained relatively sluggish during the 1990s (0.93% average annual growth), output contracted by 0.71% in the first two years of this decade.

Agriculture's contribution to the gross domestic product of LAC, quantified by the aggregate value of regional agriculture, has tended to decrease. The aggregate value of agriculture decreased from 10.8% in 1986 to 7% in 2000. However, in 2001 its contribution increased and, as a result, we observe an upsurge in aggregate value of agriculture (8% as a percentage of GDP). A similar pattern is evident in the United States and Canada, where the contribution of US agriculture to GDP decreased from 2.2% in 1986 to 1.6% in 2000, while in Canada agriculture's share of GDP fell from 3.5% to 2.6%, during the same period.

[16] Based on an assessment of 33 countries of the Americas for which information was available.

If we analyze the overall trends in the Continent's agriculture, by regions, comparing its performance during the last two years with that observed during the previous decade, we note that the Southern Region experienced the highest growth rate during the biennium 2000-2001 (3.1% as the annual average), the only region with a growth higher than the average for LAC, but practically the same as the rate seen during the 1990s (see Figure 6).

The Andean and Caribbean regions show a positive growth trend between periods, but at rates lower than the regional average for 2000-2001. The Central Region is the area showing the most disappointing performance, since its agricultural output not only grew more slowly that the regional average, but also experienced a decline compared with its performance during the 1990s. Although agricultural output in the Northern Region grew at rates similar to the average growth rates for Latin American agriculture during the biennium 2000-2001, a slight contraction was observed with respect to the previous decade.

Within the regions, the performance of individual countries is heterogeneous, as shown in Figure 6. In the Andean Region, Colombia's agriculture, despite the country's internal situation, showed the best performance, not only because its growth levels during 2000-2001 were similar to the Latin American average, but also because it shows a substantial improvement when we analyze its growth between the periods under consideration. For its part, Ecuador shows the least satisfactory performance in the region, given its poor performance between periods and during the last two years in question.

In the Central Region, Belize, Nicaragua and, to a lesser extent, Honduras, are the countries with the best agricultural performance, not only during the biennium 2000-2001, but also with the highest growth compared with the 1990s. The rest of the countries in this region do not show promising results in their performance, neither in recent years, nor in relation to the growth experienced during the previous decade.

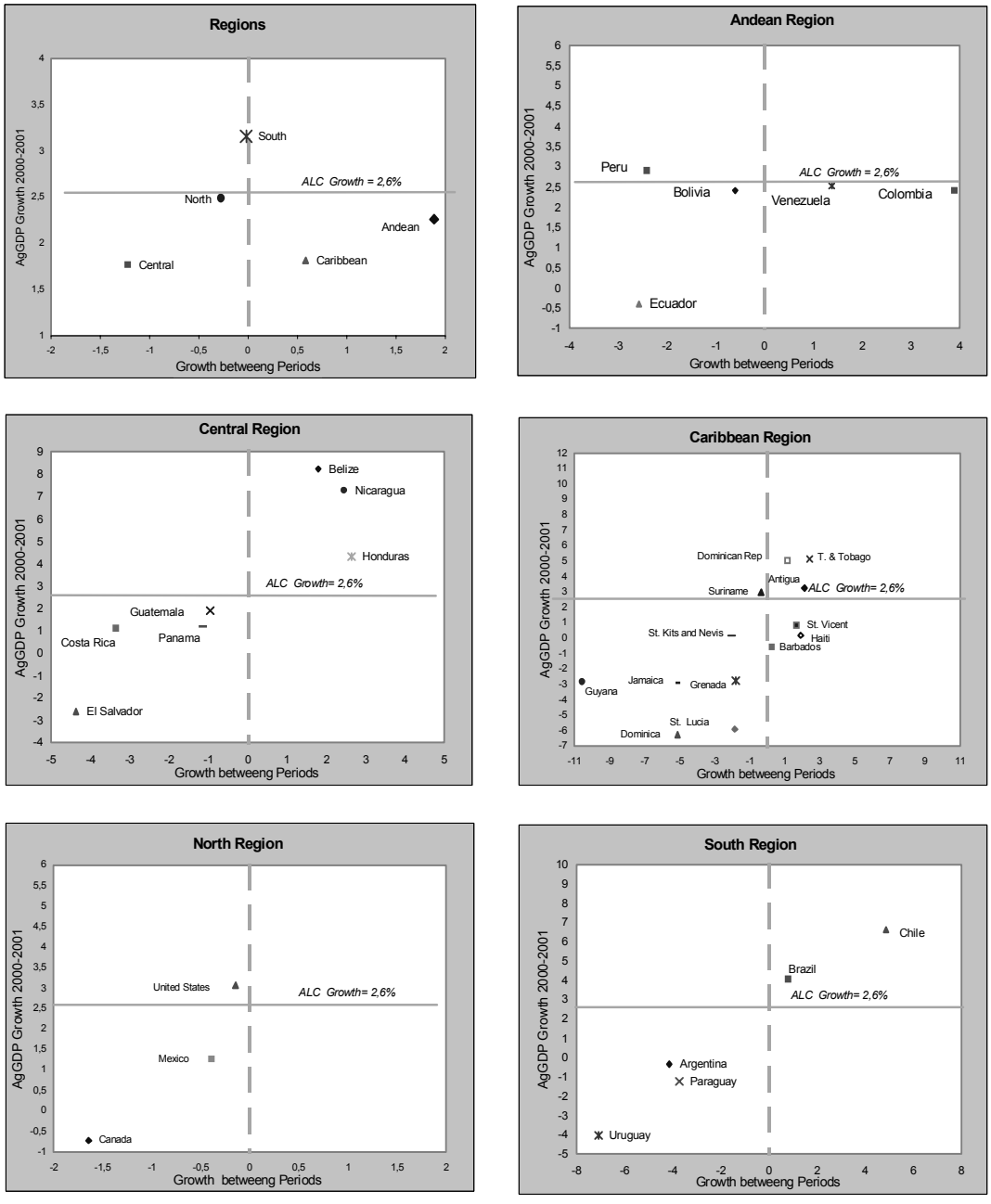
The performance of the Caribbean Region is not very encouraging. Only three of the 13 countries analyzed (Trinidad & Tobago, Antigua and the Dominican Republic), showed positive growth between periods, and higher growth than the regional average for the years 2000-2001. Of the rest of the countries in the region, Dominica, St. Lucia, Grenada, Jamaica and Guyana are noteworthy for the poor performance of their agriculture.

In the Northern Region, only the United States' agriculture has performed well in terms of growth of agricultural output during the period 2000-2001, similar to the average achieved during the previous decade. Mexico experienced positive growth in recent years, though lower than the average for LAC and lower than the average achieved during the 90s. Meanwhile, Canada's agricultural output has shown a deficient performance, both in recent years, and in relation to its growth between periods.

Chile in particular, and to a lesser extent Brazil, are the countries with the best agricultural performance in the Southern Region. Uruguay, however, shows a negative

performance of - 4.4% during 2000-2001, reversing the positive trend observed during the 1990s, when its average growth rate was 3%.

Figure 6. Evolution of Agricultural Production (AgGDP) by Region and for each Region by Country (1991-1999 / 2000-2001)



Source: IICA. DIPEMI with World Bank Database.
Notes: Growth betweeng periods: diference among 2000-2001 AgGDPGrowth and 1991-1999 AgGDPGrowth.
Caribbean Region excludes Bahamas.
Canada AgGDP data only for 2000

The growth of agricultural output in LAC may be explained by factors such as increased output per worker, a greater use of inputs (basically fertilizers, since the number of workers with tractors decreased in relation to the period 1986-1990) and, to a lesser extent, by the increase in the area of land used for agriculture, especially arable land. In the year 2000, average use of fertilizers in the region was approximately 26.3% higher than average use in the 1990s. However, fertilizer use decreased in Bolivia, Dominica, Guyana, Jamaica, Nicaragua, Panama, the Dominican Republic, St. Lucia, Trinidad & Tobago, and Venezuela.

It is interesting to note that although the Dominican Republic and Venezuela decreased their use of fertilizers, this did not translate into lower growth levels. Instead, average growth levels increased by more than 4% and 2.5% respectively.

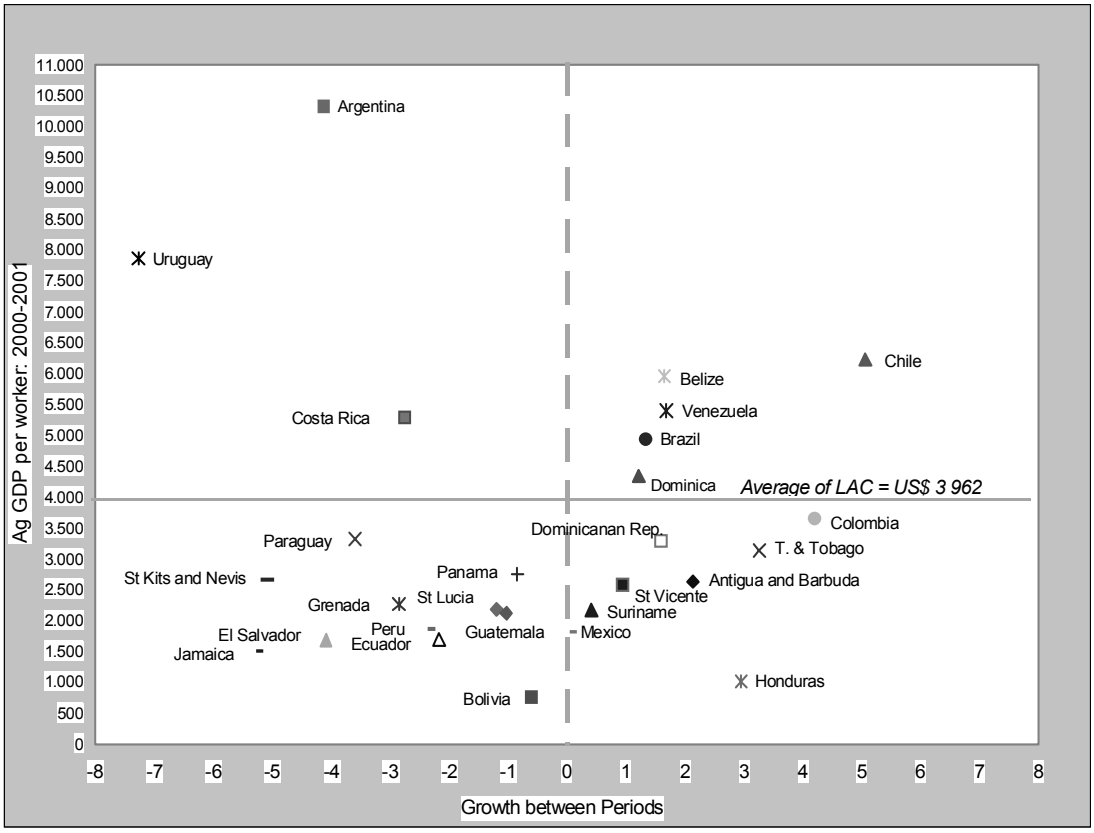
Although the regional average of real output per worker has been growing in real terms in LAC (30% in the period 2000-2001 in relation to the average for the previous decade), it is still very much lower than the levels observed in the most developed countries of the hemisphere. Indeed, the average for LAC in the years 2000-2001 is US$ 3,962 (at 1995 prices). This is 14.6 and 11 times lower, respectively, than per worker output in the United States (US$ 58,063) and Canada (US$ 43,768), clearly indicating a gap that needs to be bridged in an aspect that is so important for the competitiveness of regional agricultural production.

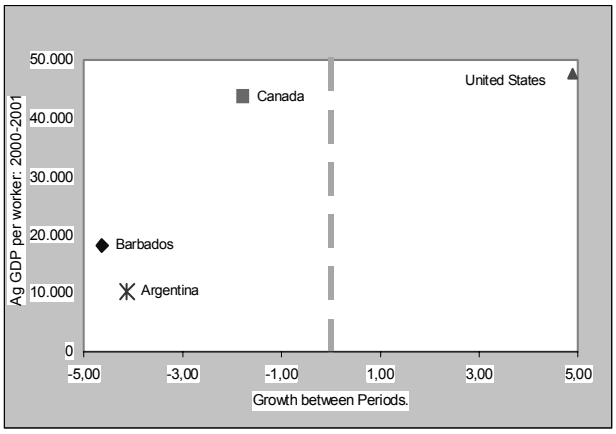
Figure 7 shows the trends in real output per agricultural worker in 30 countries (the United States, Canada and 28 countries of Latin America and the Caribbean), from which the following conclusions may be drawn:

- In LAC, the level of real output per agricultural worker was higher in 9 countries than the regional average of LAC: only in 5 of them (Chile, Belize, Venezuela, Brazil and Dominica), did the average level of output per agricultural worker increase in relation to the average for the 1990s (1991-1999) and in 4 of them (Argentina, Uruguay, Barbados and Costa Rica) the level declined. However, among these last countries, Argentina, Uruguay, and Barbados showed a level of real output per agricultural worker that is more than double that of the regional average.
- In 19 countries the level of real output per agricultural worker was below the regional average for LAC. Of these, seven showed an improvement in their situation in relation to the 1990s, one remained static and 11 experienced deterioration in their situation. The cases of Bolivia and Honduras are noteworthy, since their output per agricultural worker is nearly 5 and 4 timers lower, respectively, than the LAC average.
- Agricultural output grew faster than non-agricultural output during the nineties. However, agricultural output levels were 27.7% and 30.8% lower than non-agricultural output levels during the extreme years of this period (ECLAC, 2003).

- A widening gap is also evident between countries with greater agricultural and non-agricultural output, and those with lower levels of agricultural and non-agricultural output (ECLAC, 2003).

Figure 7. Evolution of Productivity per Agricultural Worker in LAC.
(1991-1999/2000-2001 in US$ of 1995)
Ag GDP per worker





Sources: IICA. DIPEMI with World Bank data.

Notes: Values on the axis y correspond to average Ag GDP per worker during 2000-2001.
No information available on Bahamas.
For Nicaragua and Haiti, no information as of 1999.
For Canada, United States and Latin America, no information for 2001.
Guyana presents a wide difference.

3.1.2 Agricultural trade

In general terms, the volume of LAC's agricultural trade increased during the period 1986-2001. However, its growth was less dynamic than that of other sectors, and for this reason we observe a decrease in agrifood exports' share of total exports of goods, since the former have been gradually decreasing, representing just over one-third of total exports of goods in 1986, and declining to practically one-quarter in 2001. A similar pattern is evident in agrifood exports worldwide, though at this level the decline in their share of global trade is much more dramatic, decreasing from 28.4% of total goods in 1986 to less than 5% in 2001.

Meanwhile, LAC's agrifood imports have also reduced their share in relation to total imports of goods (from around 12% to 9% that same period).

If we analyze the target markets for LAC's agrifood exports during the five-year period 1997-2001, which totaled US$ 183,515 million, we note that the main individual target market is the United States (21.7%), followed by Japan (13.%), Canada (6.7%), Mexico and the Netherlands (4.7 and 3.5% respectively). However, if we conduct an analysis by region, although the United States market remains the principal target market, its relative importance varies. Mexico and the Central American countries are most dependent on the US market to sell their agricultural products (80% and 42%, respectively), whereas only 10% of the Southern Region's total agrifood exports go to the US market.

With regard to the Caribbean Region, it is important to note that despite its geographical proximity to the United States market - the target market of 26% of its agricultural products - the European countries assume greater importance as export markets (just three countries, the United Kingdom, the Netherlands and Norway represent 32%). In the case of the Southern Region, the regional market itself acquires importance, as well as countries such as Japan, the Netherlands and Germany (representing 26%).

In relation to LAC's agrifood imports, which reached US$ 121,705 million between 1997 and 2001, the United States is also the main supplier, sharing importance with Canada (20%). However, other markets within the region are also important, including Mexico (5%), Brazil and Argentina (both with 4%).

In the case of agrifood imports, the relative importance of the supply markets also varies according to the particular subregion analyzed. In the Central and Caribbean subregions, approximately 45% of the agrifood supply comes from the United States, whereas in the Andean and Southern regions the figure is nearly 30%. In the case of the Northern Region, almost 50% of agrifood products are supplied by imports from neighbors within the same region. The situation is similar in the Southern Region. By contrast, in the Central, Andean, and Caribbean regions, the supply of imports from regional neighbors is significantly smaller.

LAC as a whole continues to be a net food exporting region, though some countries are net food importers. However, after witnessing the gradual decrease in the positive balance of LAC's agrifood trade between 1986 and 1996, a period during which it was reduced by almost 60%, it began to appear more stable from 1997, when for every US$ 1.6 exported it imported US$1.

The situation in relation to external trade in processed foods and agricultural commodities appears positive and stable in terms of the balance of trade (US$1.6 exported per every US$1 imported).

Meanwhile, an insignificant growth is evident in the ratio between exports of processed products and agricultural commodities. This contrasts with the situation at the global level, where the growth of processed food exports has been more dynamic that that of agricultural commodity exports.

The above is attributed to growing demand for natural and fresh products from the region and to the protection given to food processing industries in many of the target markets, reflected in tariff escalation practices, which limits the expansion of exports of processed products.

Table 1 shows the performance of the agrifood balance of trade in 34 countries of the Americas, during 2001 and the trends over time (period 1991-2001):

- Of the 34 countries of the Americas analyzed for the year 2001, 16 are net food exporters and 18 are net food importers. Argentina is the country with the largest agrifood trade surplus (exporting $ 8.54 worth of agrifood products for every dollar imported) and at the other extreme we find Haiti, the Bahamas and Antigua-Barbuda, as the countries that are most dependent on food imports. Colombia, which was a net food exporter prior to 2001, is now showing a slight deficit in this respect.

- Only six countries (Belize, Brazil, Guyana, Canada, St. Kitts-Nevis and Nicaragua) have a positive/improving balance of trade in agrifood products (Bloc I).

- Ten countries show a positive balance of trade, but with a tendency to decline (positive/declining), among them Argentina, Costa Rica, Uruguay, Chile, the United States and Ecuador (Bloc II).

- Eight countries show a negative/improving balance of trade in agrifood products: Bolivia, Mexico, Peru, Barbados, Trinidad & Tobago, Grenada, Haiti, and the Bahamas (Bloc III).

- The 11 remaining countries show a negative/deteriorating balance of trade (Bloc IV).

Table 1. America: Balance of trade for the total of agrifood products in 2001 and trends during the period 1991-2001.

Balance	GROWING (improving)	DECLINING (deteriorating)
POSITIVE	*Belize (6.40)* *Guyana (4.56)* *Brazil (4.23)* *Canada (1.62)* *Nicaragua (1.04)* **US$318.40 thousand** **23.7%**	*Argentina (8.54)* *Paraguay (4.66)* *Ecuador (3.58)* *Uruguay (3.26)* *Costa Rica (3.04)* *Chile (2.99)* *San Vincent & The Grenadines (2.10)* *United States (1.41)* *Guatemala (1.29)* *Honduras (1.01)* **US$832.05 thousand** **61.9%**
NEGATIVE	*Bolivia (0.93)* *San Kitts & Nevis (0.61)* *Mexico (0.60)* *Peru (0.49)* *Barbados (0.40)* *Trinidad & Tobago (0.27)* *Granada (0.26)* *Haiti (0.05)* *Bahamas (0.03)* **US$133.44 thousand** **9.9%**	*Colombia (0.98)* *Dominica (0.87)* *Dominican Republic (0.85)* *Panama (0.79)* *Jamaica (0,74)* *Suriname (0.57)* *El Salvador (0.46)* *St. Lucia (0.39)* *Venezuela (0.12)* *Antigua & Barbuda (0.03)* **US$61.32 thousand** **4.6%**

Source: IICA. With data from FAO.
Note: Balance of trade = Value of exports/value of imports. For 2001, this indicator is in parentheses. The placement of countries in the categories of "improving" and "deteriorating" was defined based on the annual average growth rate for the period 1991-2001. At the end of each quadrant the value of the agrifood trade (exp. + imp.) of the group of countries is shown for the period 1991-2001 (according to FAO data), together with the percentage it represents of the agrifood trade of the Americas.

- Most of the countries with a balance of trade deficit (Blocs III and IV)- 18 in total- show a deficit that is not troubling, given that in the majority the export-import ratio is between 0.5 and 1, which means that the burden of imports is not too great for these countries. However, there are some exceptions to this, including Trinidad &Tobago, Granada, Haiti, the Bahamas, Venezuela and Antigua & Barbuda.

- However, among the previous group, only Haiti's situation is complicated, since the rest of the countries obtain sufficient resources from other sectors of the economy (basically oil or tourism) and are therefore able to cover the costs of their agricultural imports.

3.1.3 Competitiveness in the international agrifood trade

The Index of revealed comparative advantages (RCA) indicates the level of competitiveness in the international agrifood trade, based on a country's trade flows. Table 2 classifies 34 countries of the Americas in different quadrants indicating whether their RCA was positive or negative for the year 2001, and showing how they have performed within each of these categories (declining or growing trend), taking the period 1991-2000 as reference.

Table 2. America: Revealed competitiveness of trade for the total of agrifood products for 2000 and trends for the period 1991-2000.

	GROWING (improving)	**DECLINING (deteriorating)**
POSITIVE **Revealed Comparative Advantage**	*Guyana (4.46)* *Belize (3.87)* *St. Vincent & The Grenadines (3.07)* *Paraguay (3.02)* *San Kitts & Nevis (2.46)* *Dominican Republic (2.21)* *Brazil (1.75)* *Ecuador (1.65)* *Nicaragua (1.57)* *Barbados (0.67)* *Canada (0.43)* *Bolivia (0.33)* **US$352.90 thousand** **26.2%**	*Argentina (2.27)* *Uruguay (2.02)* *Guatemala (1.44)* *Costa Rica (1.30)* *Chile (1.24)* *Panama (1.23)* *Honduras (1.08)* *St. Lucia (1.05)* *Dominica (0.96)* *United States (0.88)* *Jamaica (0.54)* *Colombia (0.02)* **US$844.43 thousand** **62.8%**
NEGATIVE **Revealed Comparative Disadvantage**	*Peru (-0.53)* *Trinidad & Tobago (-1.39)* *Haiti (-1.76)* **US$19.60 thousand** **1.5%**	*Grenada (-0.18)* *Mexico (-0.19)* *Suriname (-0.38)* *El Salvador (-0.62)* *Venezuela (-2.43)* *Antigua & Barbuda (-3.03)* *Bahamas (-4.16)* **US$128.28 thousand** **9.5%**

Source: IICA. With data from FAO.
Notes: The RCA Index compares the efficiency of countries, revealed by the trade flows of goods, where the most efficient country is the one with the lowest opportunity costs of resources. The countries are classified in the categories of Positive or Negative, depending on whether their RCA is greater or less than zero for the year 2000. The classification of countries in the categories of "improving" and "deteriorating" was based on the average annual growth rate of RCA during the period 1991-2000. At the end of each quadrant, the value of the agrifood trade (exp. + imp.) is shown for those countries, for the year 2000.

The following conclusions may be drawn from the analysis:

- Only 12 of the 34 countries are classified in the most promising category of "positive and growing" revealed comparative advantages, representing around 26% of the annual average agrifood trade of the Americas during the period 1991-2001.

- An equal number of countries, representing 63% of the Americas' agrifood trade, are included in the category of "positive but declining" revealed comparative advantages. In this group, the United States is the country with the greatest relative weight.

- The countries with the greatest revealed comparative disadvantages, that increasingly depend on the international market to supply domestic demand and that together represent 12% of the agrifood trade of the Americas are: Haiti, Peru, Trinidad & Tobago, which showed an improvement in 2001, in relation to the trend observed in the last 10 years; and Antigua & Barbuda, the Bahamas, El Salvador, Mexico, Venezuela, Grenada and Suriname, whose position has deteriorated during the last decade.

- For some countries, 1998 was a turning point in their longer-term trends. This is true of Bolivia, Barbados, and Trinidad & Tobago, whose revealed comparative advantage declined during the period 1998-2001. By contrast, Honduras and Antigua-Barbuda experienced a change of trend, with an improvement in their RCA.

If we analyze agrifood products by groups, we see that the most dynamic commodities, in terms of world demand, for the period 1990-2000 were, in descending order, animal and plant oils; beverages and tobacco, and coffee, cacao, tea, and spices, with more than 2.8% growth, (global growth rate for these groups) and as a result, they gained market share (see Table 3). It is interesting to note that the contraction of world imports in the main categories begins in 1998, with the exception of grains, which experienced a major growth, followed by meats and meat products.

Considering the total of LAC's agrifood trade (exports+ imports), it is clear from the final column that meats and meat products were the most dynamic category of commodities during the period 1999-2000, followed by beverages and tobacco and by the group of dairy products and eggs. It is also important to note the major contraction of the trade in oils, sugar, and honey and in the group consisting of coffee, cacao, tea and spices, a pattern similar to the global trend.

In terms of the value of agricultural trade in the Americas, the most important groups during the period 1999-2000 are fruits and vegetables (US$38.146 million), grains and grain products (US$30.195 million), beverages and tobacco (US$25.033 million) and coffee, cacao and spices ($15,005 million). The first three groups showed moderate growth, while the last showed a significant contraction (-8.3%).

Table 3. Growth of world imports and trade in the Americas by selected groups.

Groups of products	Imports World		Trade Americas[3]
	Annual Growth [1] 1990-2000	Annual growth[2] 1999-2000	Annual growth[2] 1999-2000
Animal and plant oils	6.4%	-16.7%	-25.3%
Beverages and tobacco	4.6%	-2.2%	3.9%
Coffee, cacao, tea, and spices	4.5%	-7.3%	-8.3%
Fruits and vegetables	2.6%	-5.1%	1.4%
Grains and grain products	2.2%	14.0%	1.5%
Dairy products and eggs	2.0%	-3.3%	2.8%
Meat and meat products	1.6%	3.5%	14.1%
Sugar and Money	0.3%	-8.2%	-10.9%
Total agrifood products	2.8%	-1.7%	n.d.

[1] By minimums², based on an exponential function.

[2] Simple average

[3] &Exports +Imports

Source: FAO.

As indicated in Table 4, only a relatively small portion of the trade in all commodity groups falls within the category of "positive and growing" revealed comparative advantages. Even the group of meats and meat products does not have figures in this quadrant. In the category of fruits and vegetables and in the coffee-cacao-tea-spices group, we see better levels of competitiveness (19.2% and 23.8%, respectively), concentrated in 12 countries of tropical America.

More significant are the commodities showing "positive but declining" comparative advantages, particularly in the categories of grains and grain products (74.8%), concentrated in 6 countries (Argentina, Canada, Suriname, Uruguay, the United States and St. Vincent) and meats and preparations (83.0%), concentrated in 10 countries (the Dominican Republic, Nicaragua, Paraguay, Guyana, Suriname, the United States, Uruguay, Brazil, Costa Rica and Canada.

It should be noted that few LAC countries show positive revealed comparative advantages (growing or declining) in the categories of dairy products and eggs, oils and beverages and tobacco.

Table 4. AMERICAN COUNTRIES: SYNOPSIS OF THE REVEALED COMPARATIVE TRADE ADVANTAGE (RCA), BY GROUPS OF PRODUCTS; 1991 2000

FRUIT AND VEGETABLES			SUGAR AND HONEY		
ADVANTAGE	**GROWING (improving)**	**DECLINING (worsening)**	**ADVANTAGE**	**GROWING (improving)**	**DECLINING (worsening)**
POSITIVE	*Belize* *Colombia* *Costa Rica* *Dominica* *Dominican Republic* *Guatemala* *Honduras* *Haiti* *St Lucia* *Mexico* *Panama* *Peru* ***US$7 358 millions*** ***19.3%***	*Bahamas* *Bolivia* *Chile* *Ecuador* *Jamaica* *Suriname* *St Vincent* ***US$2 877 millions*** ***7.5%***	**POSITIVE**	*Belize* *Dominican Republic* *Guatemala* *Jamaica* *St Lucia* *Mexico* *Nicaragua* *Panama* *El Salvador* *Trinidad yandTobago* *St Vincent* ***US$1 128 millions*** ***16.2%***	*Antigua and Barbuda* *Brazil* *Barbados* *Colombia* *Guyana* *Honduras* *St Kitts and Nevis* *Suriname* ***US$1 866 millions*** ***26.8%***
NEGATIVE	*Antigua and Barbuda* *Brazil* *Grenada* *Guyana* *St Kitts and Nevis* *Nicaragua* *El Salvador* *Trinidad and Tobago* *Venezuela* ***US$2 614 millions*** ***6.9%***	*Argentina* *Barbados* *Canada* *Paraguay* *Uruguay* *United States* ***US$25 297 millions*** ***66.3%***	**NEGATIVE**	*Argentina* *Bolivia* *Canada* *Peru* *Uruguay* ***US$1 257 millions*** ***18.0%***	*Bahamas* *Chile* *Costa Rica* *Dominica* *Ecuador* *Grenada* *Haiti* *Paraguay* *United States* *Venezuela* ***US$2 719 millions*** ***39.0%***
COFFEE, CACAO, TEA AND SPICES			**ANIMAL AND VEGETABLE OILS**		
ADVANTAGE	**GROWING (improving)**	**DECLINING (worsening)**	**ADVANTAGE**	**GROWING (improving)**	**DECLINING (worsening)**
POSITIVE	*Antigua and Barbuda* *Brazil* *Costa Rica* *Ecuador* *Haiti* *St Kitts and Nevis* *Nicaragua* *Panama* *Peru* *El Salvador* *Trinidad and Tobago* *Venezuela* ***US$3 565 millions*** ***23.8%***	*Colombia* *Dominican Republic* *Grenada* *Guatemala* *Honduras* *Jamaica* *Mexico* ***US$3 205 millions*** ***21.4%***	**POSITIVE**	*Bolivia* *Canada* *Grenada* *Honduras* *Suriname* ***US$814 millions*** ***10.7%***	*Argentina* *Antigua and Barbuda* *Guyana* *St Kitts and Nevis* *Paraguay* ***US$1 733 millions*** ***22.8%***
NEGATIVE	*Argentina* *Bahamas* *Belize* *Bolivia* *Canada* *Chile* *Guyana* *Suriname* *Uruguay* *United States* ***US$8 220 millions*** ***54.8%***	*Barbados* *Dominica* *St Lucia* *Paraguay* *St Vincent* ***US$15 millions*** ***0.1%***	**NEGATIVE**	*Belize* *Brazil* *Barbados* *Colombia* *Costa Rica* *Dominica* *Dominican Republic* *Guatemala* *Jamaica* *Mexico* *Nicaragua* *St Vincent* ***US$1 641 millions*** ***21.6%***	*Bahamas* *Chile* *Ecuador* *Haiti* *St Lucia* *Panama* *Peru* *El Salvador* *Trinidad and Tobago* *Uruguay* *United States* *Venezuela* ***US$3 401 millions*** ***44.8%***

Source: IICA. Data from World Bank

Notes: Index of Revealed Comparative Trade Advantage (RCA) compares the efficiency of countries, as revealed by the trade flows of goods, whereby the most efficient countries are those with the lowest opportunity costs of resources. The RCA is calculated on the basis of international trade figures. The figure in US$ at the bottom of each quadrant is the value of agrifood trade (exports+imports) for 2000 for that group of countries, and the porcentaje it represents of agrifood trade in the Americas.

Table 4. AMERICAN COUNTRIES: SYNOPSIS OF THE REVEALED COMPARATIVE TRADE ADVANTAGE (RCA), BY GROUPS OF PRODUCTS; 1991-2000

DAIRY PRODUCTS AND EGGS			GRAINS AND PREPARATIONS		
ADVANTAGE	**GROWING (improving)**	**DECLINING (worsening)**	**ADVANTAGE**	**GROWING (improving)**	**DECLINING (worsening)**
POSITIVE	*Dominican Republic* *Argentina* ***US$397 millions*** ***8.3%***	*Antigua and Barbuda* *St Kitts and Nevis* *Suriname* *St Vincent* *Uruguay* ***US$144 millions*** ***3.0%***	**POSITIVE**	*Guyana* ***US$65 millions*** ***0.2%***	*Argentina* *Canada* *Suriname* *Uruguay* *United States* *St Vincent* ***US$22 594 millions*** ***74.8%***
NEGATIVE	*Costa Rica* *St Lucia* *El Salvador* *Venezuela* *Bahamas* *Belize* *Brazil* *Barbados* *Canada* *Chile* *Colombia* *Ecuador* *Grenada* *Guatemala* *Guyana* *Nicaragua* *Panama* *Peru* *Paraguay* ***US$1 694 millions*** ***35.3%***	*Bolivia* *Dominica* *Honduras* *Haiti* *Mexico* *United States* *Jamaica* *Trinidad and Tobago* ***US$2 569 millions*** ***53.5%***	**NEGATIVE**	*Antigua and Barbuda* *Bahamas* *Belize* *Bolivia* *Barbados* *Colombia* *Costa Rica* *Dominica* *Dominican Republic* *Ecuador* *Grenada* *Guatemala* *Honduras* *St Lucia* *Nicaragua* *Panama* *Peru* *Paraguay* *El Salvador* *Venezuela* ***US$2 832 millions*** ***9.4%***	*Brazil* *Chile* *Haiti* *Jamaica* *St Kitts and Nevis* *Mexico* *Trinidad and Tobago* ***US$4 704 millions*** ***15.6%***
MEAT AND PREPARATIONS			**BEVERAGES AND TOBACCO**		
ADVANTAGE	**GROWING (improving)**	**DECLINING (worsening)**	**ADVANTAGE**	**GROWING (improving)**	**DECLINING (worsening)**
POSITICE	***US$0 millions*** ***0.0%***	*Dominican Republic* *Nicaragua* *Paraguay* *Guyana* *Suriname* *United States* *Uruguay* *Brazil* *Costa Rica* *Canada* ***US$17 904 millions*** ***83.0%***	**POSITICE**	*Antigua and Barbuda* *Barbados* *Dominican Republic* *Jamaica* *Mexico* *Trinidad and Tobago* *Venezuela* ***US$2 698 millions*** ***10.9%***	*Bahamas* *Brazil* *Chile* *St Lucia* *Panama* ***US$1 899 millions*** ***7.7%***
NEGATIVE	*Trinidad and Tobago* *Jamaica* *Belize* *Honduras* *St Kitts and Nevis* *Bahamas* *Antigua and Barbuda* ***US$216 millions*** ***1.0%***	*Dominica* *Barbados* *Colombia* *Grenada* *Haiti* *Panama* *Argentina* *Bolivia* *Chile* *Ecuador* *Guatemala* *Mexico* *Peru* *El Salvador* *St Vincent* *Venezuela* *St Lucia* ***US$3 450 millions*** ***16.0%***	**NEGATIVE**	*Argentina* *Belize* *Bolivia* *Canada* *Costa Rica* *Ecuador* *Guyana* *Honduras* *Nicaragua* *Peru* *Paraguay* *El Salvador* *Suriname* *St Vincent* ***US$3 283 millions*** ***13.2%***	*Colombia* *Dominica* *Grenada* *Guatemala* *Haiti* *St Kitts and Nevis* *Uruguay* *United States* ***US$16 923 millions*** ***68.2%***

Source: IICA. Data from World Bank

Notes: Index of Revealed Comparative Trade Advantage (RCA) compares the efficiency of countries, as revealed by the trade flows of goods, whereby the most efficient countries are those with the lowest opportunity costs of resources. The RCA is calculated on the basis of international trade figures. The figure in US$ at the bottom of each quadrant is the value of agrifood trade (exports+imports) for 2000 for that group of countries, and the porcentaje it represents of agrifood trade in the Americas.

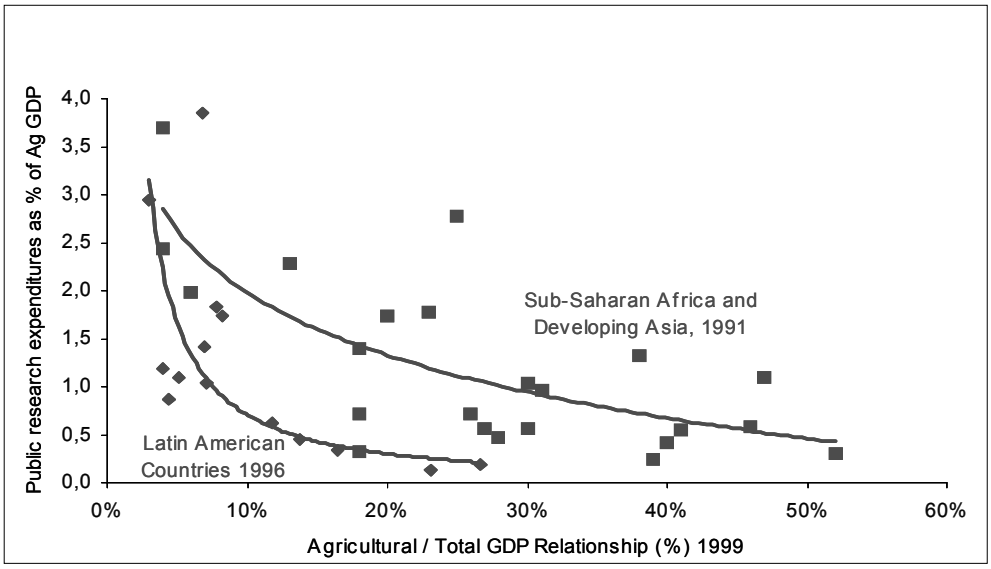
3.1.4 Knowledge, Information, and Technology

Although Latin America and the Caribbean are well endowed in terms of their national and regional institutional frameworks for agricultural research, compared with other regions of the world, this fact contrasts with the low levels of investment in R&D. In other words, the region's institutional wealth is incomplete, since the countries' own financial limitations, together with policy measures that have affected agriculture - and therefore the sector's scientific and technological development – have imposed major financial constraints, even though R&D is considered to be a priority development objective.

We can affirm that alarming levels of under-investment in R&D are evident, not only at the national level, but to an even greater extent in the regional research system. This is paradoxical at a time when cooperation and integration, both economic and technological, are being promoted between countries.

Taking as an indicator the percentage of research spending in relation to the value of agricultural GDP, it is clear that LAC needs to at least double its investment in public sector research, in order to reach the average level of other developing nations. (See Figure 8).

Figure 8: Public Agricultural Research Expenditures
(LAC versus other developing countries)



Source: data from ASTI and World Bank; analysis by IICA.

This would mean increasing investment from the present figure of approximately US$ 1,000 million to a total investment of nearly US$ 2,000 million per year. If we consider the situation in terms of some individual countries, the increases would vary. An

estimate shows that these increases could be nearly 2 million dollars per year for some countries, and between 90 and 250 million approximately for others.

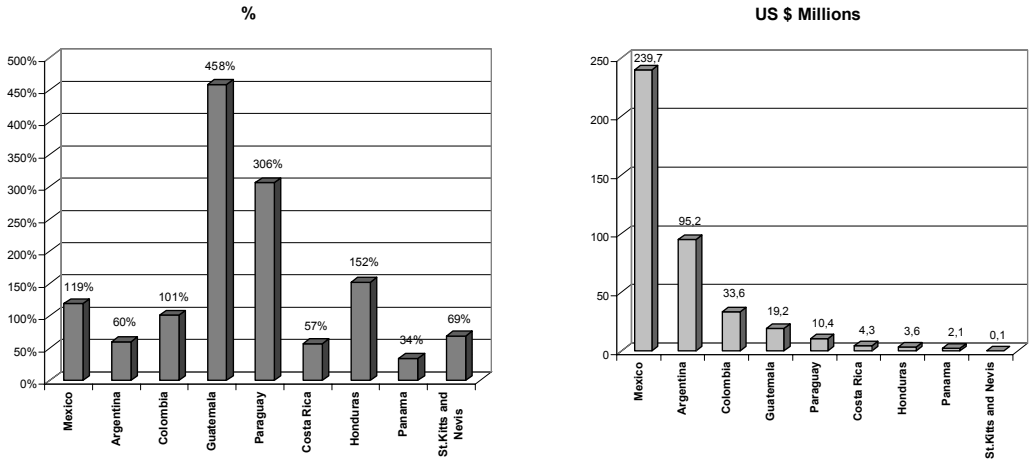
As far as information and communications are concerned, it is estimated that between one-quarter and one-third of the world's population still lives in communities without access to communications, information and Internet services. In the Americas there are 32 fixed telephone lines for every 100 inhabitants and 16.4% of the population uses the Internet (America Telecommunications Indicators 2000, ITU)

The Internet is at the very center of the revolution that is transforming the way in which the world is interconnected, and Latin America and the Caribbean have fully embraced this process. Internet domains in the region doubled in 1997 and 1998, and increased by 136% in 1999, compared with a growth of 74% in North America, 60% in Asia, 30% in Europe, and 18% in Africa.

Information and communication technologies infrastructure is also quite limited, especially in rural areas. For example, only 4.9% of the population of LAC uses the Internet, compared with 50.1% in the United States and 46.7% in Canada (UNDP 2003).

In general, the LAC countries have made important advances in the area of information on agriculture and rural life, both in terms of data collection, organization, supply and use. The information and communications technologies (ICTs) have also contributed to efforts to disseminate and democratize access to knowledge and the generation of knowledge.

Figure 9: Necessary increases in agricultural research expenditures to reach the average curve, according to the Ag GDP/GDP ratio (1996 data).



Source: data from ASTI and World Bank; analysis by IICA

One of the most important signs of progress are the Telecenters or "Public Booths"[17], which have appeared in recent years in many developing countries as a means of providing shared access to communications and information services, especially in municipalities and rural areas (see Box 11). In practice, these demonstrate how timely access to relevant information for productive and social activities can reduce transaction costs, improve competitiveness, strengthen communications with the outside world and improve levels of education and well-being in local communities.

Despite these advances, there is still a long and costly road to travel to bring knowledge and information of practical value to the rural territories. It should also be noted that a substantial portion of the information and knowledge available is highly specialized, usable only by small and exclusive groups within society. Furthermore, information is usually generated and disseminated through isolated initiatives that operate by means of numerous and sometimes uncoordinated information units. This lack of coordination among public and private information sources and/or systems at the national level, means that technical information for the agricultural sector is scattered, fragmented and sometimes remains unused.

Box 11. Telecenters in Latin America and the Caribbean.

In Guatemala, the "Nutzij" Women's Association has set up a telecenter that provides training, education, crafts, etc., using the tools of information and communications technologies such as the Internet and video. The telecenter has become a space for free expression for local women and the first point of access to the information and communications technologies for the rural territory of Sololá.
In El Salvador the so-called info-centers have been established to promote access to information technologies in order to reduce the information and knowledge divide. This initiative resulted from the project "Connecting Ourselves to the Future", supported by the World Bank.
In Colombia there are two information centers supported by the GTZ Project in the Cauca region (Bota Caucana). These rural telecenters are located in the south west of the country.
In Brazil the objectives of a project coordinated by sampa.org are to make the poorest sectors of the population technologically literate, opening up opportunities for access to education and culture.
HONDUTEL (Honduran Telecommunications Company) within its rural telecommunications program has installed community telecenters in areas remote from the cities. CONATEL (the National Telecommunications Commission) as the regulator of telecommunications has decreed that cellular telephone companies will provide the State with a number of wireless terminals to be used in rural territories.
The mission of FITEL in Peru is to develop Internet use in the country's poor rural territories and to finance six rural tele-centers to learn ways of introducing Internet use in Peru.

Source: Website *Somos Telecentros* www.tele-centros.org

A similar situation is evident in agricultural information sources at the regional and hemispheric levels. At the same time, the units that organize and offer information tend to be "de-institutionalized", that is to say, they are not recognized as essential and strategic

[17] Telecenters are local connectivity centers that provide access to information services, different types of communications, education and distance training, etc. The most common services offered by telecenters are: telephone, fax, e-mail and Internet access and photocopying. Some telecenters may also offer training, meeting facilities, videoconferencing and production of information products for sale.

for the development of agriculture. As a result, the budget allocated to these information units is usually paltry and does not meet their needs, thereby undermining their sustainability.

In addition to the disarticulation and limited sustainability of the information sources, there is an evident lack of an information culture in the rural territories, expressed among other ways, in ignorance of existing information and its sources, and of its strategic role in the well-being of agriculture and rural life. One of the leading causes of this problem is the lack of education, both at elementary and secondary school level, on the importance, role and use of information.

Technology is also an essential tool for improving education. In the past, the use of technology in the formal educational system was perceived as an important but peripheral activity. Now, with the ever-growing availability of information and communications technologies (ICTs), an increased interest among LAC countries in using computers for formal and informal education by the year 2000 (for example, in Chile, Costa Rica and Jamaica) and advances in knowledge and experience of various learning-teaching methods, it will be imperative for the countries of the region to integrate and institutionalize such technologies within a rational regulatory framework so that these can be strategically implemented in the classroom. This is particularly important to avoid the possibility of expensive errors in purchasing educational technology that is not appropriate to address the particular educational problems of a given country.

The impact of technology on teaching methods and the administration of schools is potentially profound. However, the region's education and training systems, into which these information and communications technologies are being introduced, will require vocational training in order to combine the new technology with more appropriate teaching methodologies. Although technology is not a panacea that will resolve the systemic problems of educational systems, there is growing demand by the labor markets for a competent use of technology and calls to establish digital distance learning programs. The benefits of educational technology may not reach the marginal groups unless careful strategies are implemented to disseminate the use of technology in the different educational and geographical contexts throughout the Region.

3.1.5 Agricultural Health and Food Safety

Agricultural Health and Food Safety (AHFS) are crucial factors in the performance of agricultural output and in the national and international trade of agricultural commodities, and their importance has been widely recognized. However, traditional AHFS programs - which began at national borders and focused on what happened within a given country, and whose main mission was to protect domestic agriculture - are now inadequate to deal with the present challenges. Bovine spongiform encephalopathy (BSE), dioxin, and foot-and-mouth disease, which have recently caused serious economic and social losses in Europe, can be traced and related to the introduction of adulterated food, but their consequences are felt in subsequent links of the agrifood chain.

Box 12. Agricultural health and trade

In the Southern Cone, substantial quantities of grains containing mycotoxins were imported for poultry production.

Source: WHO (2001).

Agricultural trade and AHFS are highly interdependent and the liberalization of trade affects agricultural health. A country's exports may find themselves subject to rejection, testing and/or to additional treatments. In the Americas, in 1999, US$ 116,000 million in agricultural exports and US$ 79,000 million in agricultural imports were facilitated by AHFS regulations and standards or by actions such as inspections and risk assessments (IICA, 1999). At the three meetings of the WTO-SPS Committee in 2001, 73% of the specific trade-related concerns discussed involved countries of the Americas (IICA, 2001).

In the field of production, there have been major successes, including the elimination of foot-and-mouth disease and the eradication of screwworm in Central America and North America. However, the challenges to protect and strengthen agricultural production continue. For example, the Hibiscus (Pink) Mealy Bug infestation, detected in the Caribbean in 1986, has already spread through North, Central and South America. If it is not controlled, it could cause potential losses of US$ 84,000 million in those countries that are currently free of this pest, equivalent to 30% of all their exports (IICA, 1998).

In the area of food safety, food-borne diseases have increased. Diarrhea continues to be one of the leading causes of infant mortality. Diseases transmitted by food constitute an important public health problem in the Americas because of their scale, their social and economic impact and the emergence of new pathogens. Despite limitations in the coverage and quality of existing epidemiological surveillance systems in the countries, and taking into account geographical differences, the Regional Information System for Food-borne Disease Surveillance – SIRVETA, has filed 6,332 reports of outbreaks of food-borne diseases (FBD), in the last 9 years.

Box 13 Eradication of Foot and Mouth Disease in the countries of the Americas.

The eradication of foot-and-mouth disease is essential to the economies of the South American countries; there were no reports of the clinical presence of foot-and-mouth disease in 41 % of bovine herds and in 60 % of the geographic area in 1999, and until mid-2000, the region made up of Argentina, Chile, Paraguay, Uruguay remained disease-free, along with all the livestock producing states of southern, central-western (except for Dorado de Mato Grosso do Sul") and eastern Brazil. This epidemiological situation was due to strategic vaccination programs against foot-and-mouth disease in the region. However, the situation changed in the second semester of 2000, with the appearance of outbreaks in Argentina, Brazil and Uruguay, which were rapidly eradicated. However, at the beginning of 2001, the region suffered a serious setback when Argentina and Uruguay –recognized as being free of foot-and-mouth disease, with vaccination– were affected by the reintroduction of the disease, with the consequent loss of their favorable epidemiological status. With the collaboration of the Pan-American Center for Foot-and-Mouth disease (PANAFTOSA) and based on the experience acquired, the affected countries reacted promptly and the situation was brought under control. In 2002, an outbreak of foot-and-mouth disease detected in Paraguay resulted in this country losing its disease-free status, with the ensuing economic and social consequences.
The countries of Central and North America and the Caribbean maintain their status as disease-free countries.

Source: PAHO/WTO (23 September 2003)

These outbreaks were reported by 22 countries of the Americas (6% in the Andean Region, 63% in the Caribbean, 4% in Central America, 10% in North America and 17% in the Southern Cone). The economic losses due to contamination and rejection of commodities for domestic consumption or export imply additional costs, which are not fully quantified by countries.

IICA conducted an analysis for 31 countries of the Americas to assess the level of development of their AHFS institutions.

Figure 10. Degree of development (in percentages) of AHFS institutions in 31 developing countries of Latin America and the Caribbean.

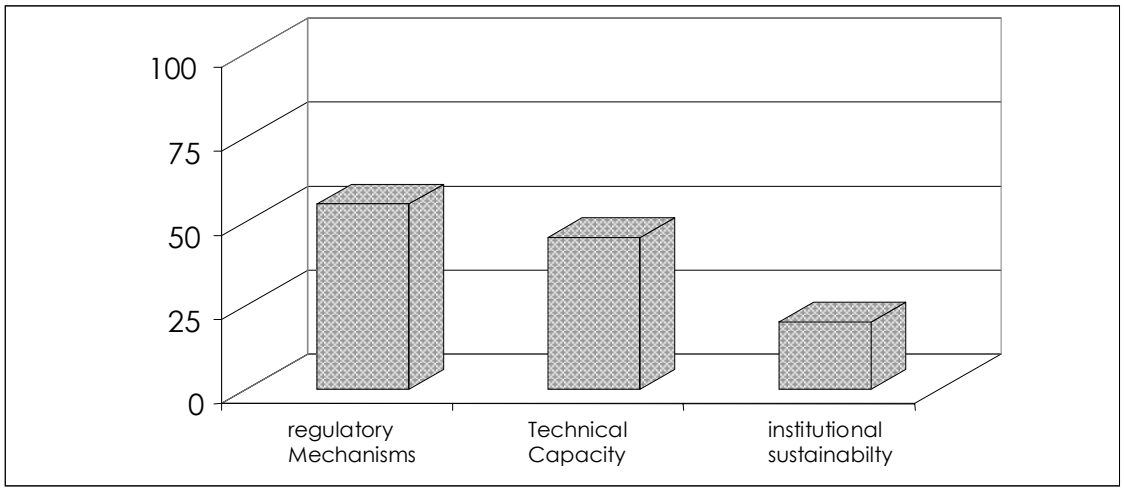


Figure 10 summarizes the results of this analysis, in which the overall national capacity was divided into three components: regulatory mechanisms, technical capacity and institutional sustainability. The first component consists of the legal framework of codes, laws, regulations and standards, as well as the capacity to comply with these and to assist the national AHFS institutions in consistently operating according to international regulations and standards. Technical capacity refers to the level of development and operative capacity required to carry out key tasks such as monitoring, quarantine, diagnoses and response to emergencies.

3.1.6 Conditions in agribusiness

Some of the new conditions under which producers and industrialists of the agrifood sector must currently carry out their production activities are:

- ***Restricted Access to Production Inputs.*** Producers find that their performance in a market that requires improvements in output and in the quality standards of products, is limited by the difficulties they encounter in gaining access to production inputs.

The deactivation of the public market information system, of research and rural extension, or of the governmental rural credit system has not found a counterpart in the private sector, as expected. The demands imposed by companies greatly exceed the possibilities of most farmers, making assets that are essential to the working of the agricultural market into the exclusive right of a very small group of producers..

- ***External Competition.*** Trade liberalization, both of imports and investments, forces the business sector to develop specific skills to meet the challenges of external competition. For example, the accelerated integration of many Mexican states into the United States market has brought entrepreneurs into contact with the visions and ways of doing business of their new associates. The same is true in the case of Brazil. At the same time, it should be noted that deficient management of the market liberalization process has led to unfair trade practices that seriously affect the interests of agricultural entrepreneurs. In Brazil, for example, the milk sector has been dealt a severe blow by the massive entry of subsidized milk from the European Union, through Uruguay, due to a lack of effective control mechanisms. Furthermore, many Brazilian exporters, such as the soybean producers and citrus growers, have encountered serious problems in placing their products in other markets.

- ***Exclusion in the Production Chain***. Structural market reforms have accentuated the trend towards a concentration of power in the agroindustrial sector, particularly in the agri-trade segment of the agribusiness chain. As a result, entrepreneurs of the agricultural sector find that their ability to exert influence in the operation of Agriculture and agrifood is even more restricted and their interests are sidelined *vis à vis* the other links of the chain.

  Supermarkets are now the dominant protagonists of the food market in Latin America. They have spread from the larger, richer countries towards the smaller, poorer ones, from the capital cities to other large cities and from there to medium-sized and small towns. This process brings challenges and opportunities for farmers, since the supermarket chains demand consistency, safety and low costs, and establish contracts with wholesale dealers and producers, collect fees for the use of shelf-space, rent cashier services and utilize long-term payment systems. In general, the supermarkets work with suppliers who are able to fulfill the requirements of their procurement systems, and have a tendency to exclude small farmers. They offer opportunities for market innovation, diversification, and expansion, although generally only large producers can respond rapidly.

- ***Regulatory Gap.*** The new conditions in which agriculture is operating requires a more advanced legal framework to permit the regulation of the heterogeneous and complex commercial links that now exist between the economic agents of the sectoral markets. However, the development of a new regulatory framework is still very incipient, which generates high levels of uncertainty among entrepreneurs and other agents - for example, the lack of mandated quality standards for the majority of products.

Box 14. Rapid Expansion of Supermarkets in Latin America.

Towards 2001, supermarkets had an average 60% share of the retail food sector, ranging from 45% to 75% in the larger countries and/or those with larger incomes: Argentina, Brazil, Chile, Colombia, Costa Rica and Mexico. In the rest of the countries this share was approximately between 20% and 40% with greater variations (73% in El Salvador, between 15% and 20% in Nicaragua). In Chile, 53% of supermarket sales are made outside Santiago, while in Costa Rica around 40% of towns with a population of approximately 25,000 inhabitants - basically small rural towns - have one or two supermarkets.

The market share of the five leading supermarket chains in 10 countries is 65%. Furthermore, data for 10 countries show that the multinationals' average share of the supermarket sector (3 with worldwide coverage Wal-Mart, Ahold, Carrefour) is 56%.

In this sector, an accelerated process of concentration is also evident. For example, Wal-Mart purchased Mexico's domestic chain CIFRA and controls 60% of that market; in Argentina, the 9 existing chains that controlled 50% of sales in 1992 (7 of which were national), were reduced to 4 by the end of the 1990´s, and of these only one was national; the Dutch group Ahold acquired the Barbosa chain in Brazil, allied itself with Disco in Argentina and purchased the Chilean supermarket chain, Santa Isabel, which then began operations in Peru and set up a joint venture in Central America with the two leading chains existing (CSU of Costa Rica and Grupo Paíz of Guatemala.)

The tendency by supermarket chains to exclude small farmers is believed to have caused the bankruptcy of thousands of small dairy producers in Chile, Brazil and Argentina, and citrus growers in Chile, in the 1990s. However, some producers have been successful in establishing supply contracts, for example, cooperatives in Chile and Guatemala that produce vegetables and tomatoes respectively.

Source: Berdegue, Julio and Reardon, Thomas (2001).

- ***Structure of land distribution***. The concentration of land ownership in the region remains one of the main obstacles preventing access to this crucial production asset. Concentration indexes continue to show an inefficient distribution of land that affects its availability for productive purposes, incompatibility in terms of its use and suitability, high environmental costs, pressures to expand the agricultural frontier, social, ethnic and political conflicts and irrational patterns in the spatial distribution of the population. At the same time, in many countries of the region, serious problems persist in the determination of property rights. This restricts strategies for supporting, financing, and promoting the sector, and at the same time limits the possibility of developing leasing markets, among other options to expand access to land. This structure implies enormous social costs and economic distortions that act as perverse incentives, restricting land markets, leasing and the optimization of productive income.

- ***Financing and capitalization of agriculture and agribusiness.*** There has been an evident expansion of the coverage of credit facilities and financing in the region. However, these changes failed to provide coverage to small farmers, mainly because of the poor development of financing technology and the prevalence of financial products that are not adapted to their credit requirements, together with high intermediation costs and high lending rates. This becomes a significant drawback that affects the competitiveness of agricultural output. Moreover, the drastic reduction of promotional schemes and interest rate subsidies has not been accompanied by an expanded coverage of the institutional financing system, or by the presence of money markets to underwrite the risk agricultural activity. Modern financial products, such

as investment funds, venture capital, guarantee systems, micro-credits, mortgages and long-term financing, farm insurance, marketable securities on production developments and agricultural commodity transactions through commodity exchanges, are still incipient and their coverage is not sufficient to support investment needs and, even less, strategies of agricultural transformation and modernization.

3.2 The Rural Territories

3.2.1 Agriculture and the rural economy

The rural territories include an important and growing non-agricultural economy that now absorbs around half the rural labor force and from which local inhabitants derive more than half their income. This is reflected in the fact that agricultural jobs in LAC, as percentage of total employment, declined in the 1990s in relation to the end of the eighties, representing 18.5% of jobs during the period 1991-1999, compared with 19.7% in the period 1986-1989. However, the decline does not apply to all countries in the region, since in some (Bolivia, Brazil, Ecuador, El Salvador, Honduras, Nicaragua, Paraguay, Peru, Suriname, Uruguay)[18], agricultural jobs as a percentage of total employment increased. According to information gathered from household surveys, between 1990 and 1999 agricultural sector employment increased by 6.9%, compared with an increase of 25.5% in non-agricultural sectors.

Agriculture remains an important activity in the continent's rural economies and, in some of them, it is undoubtedly the principal activity. However, among non-agricultural activities, there is a strong emergence and development of activities that are also based on the use of natural resources, such as tourism (eco-tourism, agricultural tourism, beach tourism, etc., as well as recreational activities based on the use of landscape and natural resources), the environmental services market, handicrafts and other activities that create important interrelationships in a given territory, where often, the separation between rural and urban aspects becomes somewhat fictitious[19].

During the past decade, primary agriculture, with its undisputed place in the rural territories, has encountered growing problems of relative profitability (particularly in traditional products). This is evident in the 6.9% growth in employment in this sector between 1990 and 1999, compared with a 25.5% increase in the non-agricultural sectors (Dirven, 2003), and the shedding of agricultural jobs that has occurred is likely to continue in the near future, in a slow but sustained manner (Tejo, 2003) [20].

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[18] Based on 22 countries of LAC, for which employment figures are available for the years 1986-1999. Data is also presented for Mexico, Panama, Canada and the United States for the years 2000-2001 and in all four cases a decrease is evident.

[19] At the University of Campinas, in Brazil, the term "*rururbanas"* ("*rururban"*) was coined to denote areas that are clearly urban in terms of their space, but that are located at a great distance from urban centers and have sufficient road infrastructure to permit a significant flow of people to commute daily to their work or to access goods and services (Dirven, 2003).

[20] Although the productivity of the agricultural work force LAC grew at slightly higher rates than the productivity of the non- agricultural work force between 1990 and 1999, the first did not reach one-third of the second, though it represented one-fifth in 1970 (Dirven, 2003).

Another factor that has contributed to the above situation is the changing pattern of productive specialization. There has been a sluggish growth in grain production, with the area under cultivation decreasing by 28 million hectares between the mid-seventies and the end of the nineties. Grains have been replaced with oilseed crops, which have experienced a very dynamic growth, with an additional 75 million hectares under cultivation during the same period (Tejo, 2003). This phenomenon is particularly evident in the Southern Cone countries, especially in Argentina and Brazil. Also the traditional crops of the tropics (coffee, sugarcane, bananas), which require a large rural work force, have encountered problems in the international markets, and this has had an adverse impact on agricultural jobs. Similarly, livestock production, a predominantly extensive activity (high demand for land and low demand for labor), has shown a significant growth, representing 43% of the region's agricultural output in the year 2000.

Associated with the shedding of the labor force employed in agriculture and not absorbed by the growth of employment in non-agricultural activities, are the phenomena of rural-urban migration and external migration.

Table 5. Flows of remittances in 2002.

	Millions of Dollars	Percentage of GDP	Monthly Average (US $)
Guatemala	1579	7.9	269
El Salvador	1935	15.1	287
Honduras	730	11.5	257
Nicaragua	680	29.4	146
Costa Rica	200	1.3	350
Total	5104		1309

Source: Cáceres: Luis René (2003)

This last phenomenon is an important aspect of rural development in Central America and Mexico, resulting in large flows of remittances that have an impact on the rural economies of those countries. These remittances could be used to bring higher levels of investment to rural areas and partly help resolve the present problems of rural financing.

Indeed, it is essential to find productive uses for these remittances so that they may have a lasting effect on production and employment and contribute to structure the economies in such a way that they can subsist, once the remittances decline. One of the ways in which remittances have traditionally been used is in the purchase of lots for house building. A new modality could consist of the sale of small parcels on farms to migrants and to their family members who receive the remittances. Such a purchase could be accompanied by participation in a public sector agricultural extension program for training in soil conservation, marketing, the provision of working capital and credit for new agroindustrial investment, support for production of new crops, e-commerce, etc.

Lopez and Seligson (1990)[21] found that between one-quarter and one-third of the small businesses had been started on the basis of the received remittances. Similarly, Waller Meyers (2000)[22] presents the results of a survey in Mexico showing that 61% of a sample of small businesses had been started with money earned in the United States. The above confirms the feasibility of creating mechanisms to establish companies associated with new crops, new agricultural commodity exports and small agroindustrial businesses, financed with remittances.

Box 15. Remittances and Rural Development.

A company may prepare a portfolio of project profiles to submit to the consideration of emigrants at "road shows" held in cities in the USA, and offer the potential investors marketing skills, credit, financial management services, etc. In order to place a projects portfolio with emigrants, the Internet may be used, with a site showing the different projects, describing their expected benefits and providing information on the required financing. The site is also used to issue periodic reports to the emigrants on how the projects are progressing, and the corresponding audit reports. Initiatives of this type may be seen at: sanmartinjalisco.com, tulcingo.net, globalgiving.com and netaid.org.
The state of Guanajuato developed a program in which the state contributes two dollars for every dollar contributed by emigrants. These resources are utilized to finance investments in the towns of interest to emigrants. As of 2000, at total of 10 assembly plants had been financed, generating 800 jobs (Orozco, 2000).
A similar program is being developed by MIF, of the IDB, in Mexico, con un component for the preparation of 60 business plans that are submitted to the consideration of Emigrants Clubs in the main US cities, to encourage them to invest in these. Similarly, private investors are identified to encourage them to co-invest with emigrants.
The Social Investment Fund for Local Development, of El Salvador, through its program *Unidos por la Solidaridad*, seeks funds to finance projects submitted by NGOs, local governments and organizations of Salvadorians abroad, individually or in association. To date, as part of this program, the FISDL has financed 16 projects submitted by 12 organizations of Salvadorians resident in Los Angeles, Washington DC. Houston and San Francisco. The total sum invested has been 3.9 million dollars, of which 541,000 dollars have been contributed by migrants.

Source: Cáceres, Luis René. Remesas y Desarrollo Rural en Centroamérica. June, 2003.

3.2.2 Human development, quality of life and rural prosperity

Despite the growing trend toward urbanization in LAC, the rural population continues to have a very strong weight in the Latin American societies. According to each country's definition of the term "rural", the rural areas are home to 25% of the region's total population, that is, nearly 126 million inhabitants[23]. However, it would be simplistic to consider the rest of the population as urban. Figures for the year 2000 indicate that nearly 52% of the population lives in towns with fewer than 100,000 inhabitants, and although the percentage of urban dwellers is estimated at 75%, only 30% live in cities with more than one million inhabitants.

21 Cited in Cáceres, Luis René. Remesas y Desarrollo Rural en Centroamérica. June, 2003.
22 Idem
23 The rural population went from representing on average 30.1% of the total regional population at the end of the eighties decade to an average of 24.4% in the years 2000 and 2001.

The same diversity observed in LAC agriculture and rural territories can be observed in its social stakeholders. Rural entrepreneurs, indigenous organizations, cooperatives, trade associations, young environmentalists, consortia of family farms, groups of landless farmers are some of the new social actors that have emerged during the last decade.

Given their numbers and what they represent, rural women, youths and indigenous peoples can play a special role in transforming rural life. In LAC, rural women number approximately 60 million, representing 48% of the region's total rural population. Of these, nearly 13 million, or 22.5%, form part of the economically active population, in contrast with 57% of the male rural population. Latin American women currently produce nearly 45% of the food that is consumed in households, despite having unequal access to land, credit, and to the modern inputs of production.

Young people also constitute a very significant part of the rural population. There are some 70 million people under the age of 24, representing approximately 55% of the region's total rural population. The economically active rural population aged 15 to 29 years represents 41.5% of the total. It is estimated that indigenous peoples (belonging to some 400 ethnic groups) account for around 8% of the total population of LAC. This percentage is much higher in countries such as Guatemala, where one out of every three people is classified as indigenous. In indigenous villages and among peoples of African descent, many cultural traditions survive. Their values form part of the cultural heritage of rural territories and of the LAC nations, and institutional frameworks and policy instruments should be developed to promote their development.

The important demographic presence and productive contribution of young people means that this human group is currently of the utmost importance, especially because of the tendency toward the inversion of the population pyramid in the region, which shows a clear trend towards the aging of the population in most countries.

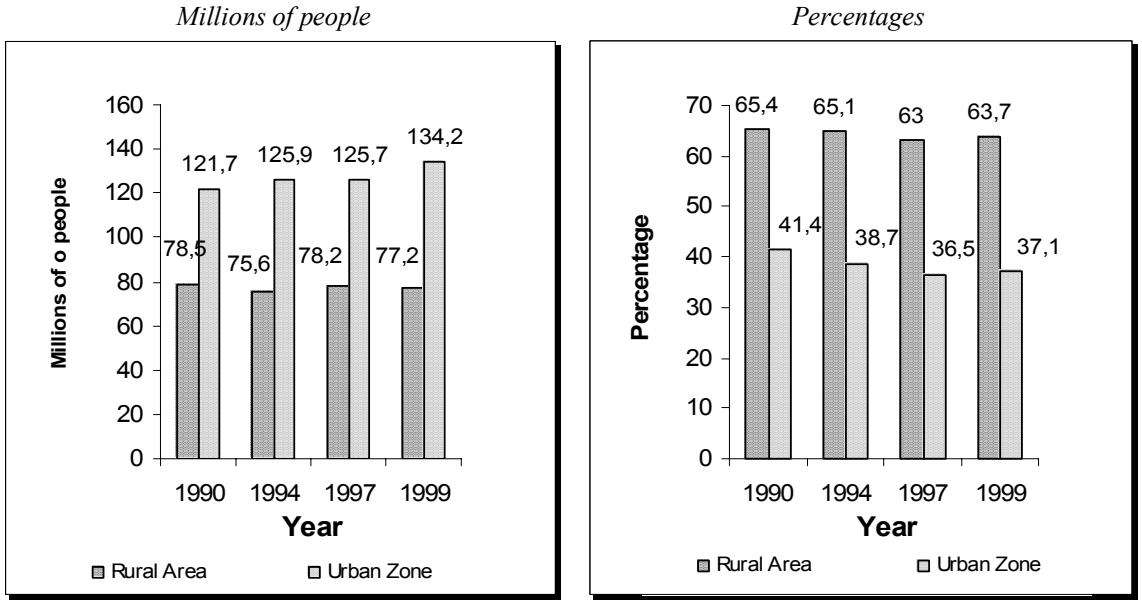
The aging of the rural population is a trend observed in the population structure of all the countries. The activity rate among older people in rural areas is much higher than for equivalent age groups in the urban areas, reaching 83.1% among rural men aged 60 to 65 years old and 43.9% for men aged 75 to 79 years of age. (CELADE (1999), Demographic Bulletin No 64).

The rural context of LAC is characterized by situations of poverty and indigence that pose an enormous socio-political challenge to the countries of the region. As mentioned above, rural poverty increased during the second half of the 1990s, reaching levels of more than 60%. Extreme poverty in rural areas affects one in every three inhabitants.

The situation of poverty is far more serious in rural areas that in urban zones, with twice the levels of poverty and three times the levels of extreme poverty.

Urban poverty is in large measure the result of the intensive migration by rural populations to urban areas. Thus, the growing and rapid urbanization seen in LAC is driven by rural poverty, through migrations from the countryside to the cities.

Figure 11. Latin America and the Caribbean: population below the poverty line in urban zones and rural areas, 1990-1999, absolute and relative figures.



Source: Own preparation based on data of ECLAC (ECLAC, several years).

One of the targets established in the Millennium Goals is to reduce by half the population living in extreme poverty, defined as those whose per capita income is less than US$1 per day, at 1990 prices.

This amount, which according to ECLAC's calculations would have been equivalent to US$ 1.24 per day or US$ 37.2 monthly in 1999, is considered by that organization to be inapplicable to the reality of LAC, because does not distinguish between the income received by urban and rural households, as do the poverty lines calculated by ECLAC and by many countries of the region. [24]

Nevertheless, according to the calculations made by ECLAC/IPEA/UNDP (2002), among the total of poor people living on less than US$ 37.2 monthly, a high percentage belonged to rural households. Similarly, the proportion of rural poor among the total number of poor is consistently higher than the proportion of the rural population in the total population. Meanwhile, the incidence of extreme and total rural poverty is greater in all the countries, without exception (to see ECLAC, 2002, Social Panorama, table 15).

ECLAC also estimates that average incomes in all the countries of LAC, (in terms of multiples of the respective poverty line) are lower in rural areas than in urban areas, though with major variations between countries. Table 6 below shows that average incomes in rural areas range from a minimum of 3.1 times the per capita poverty line, in case of Bolivia (where 71.3% of the inhabitants have a per capita income lower than the

[24] ECLAC considers that rural poverty and extreme poverty lines are equivalent to 75% of the value of urban poverty lines.

average and 52.9% have an income lower than 50% of the average income), to a maximum of 10.9 times in Costa Rica (where 64.8% of the population are below the average income level and 33% have a lower income than 50% of the average income). This gives us an idea of the concentration of incomes in rural areas.

Table 6. Latin America (15 countries), 1999: Average income and indicators of income concentration in rural areas.

	Monthly average household income in multiple of the per capita poverty line	% of people with a per capita income		% total income	
		Less than average	Less than 50% of the average	Poorest 40%	Richest 10%
Bolivia	3.1	71.3	52.9	6.9	38.3
Brazil	6.7	73.8	47.4	14.0	40.2
Chile (2000)	10.6	74.5	38.7	16.9	36.1
Colombia	5.6	72.1	39.5	13.9	35.5
Costa Rica	10.9	66.8	33.0	15.8	28.2
El Salvador	4.9	64.8	34.0	15.6	25.9
Guatemala (1998)	6.2	74.1	43.7	15.2	37.9
Honduras	3.3	69.8	39.8	13.9	33.0
Mexico (2000)	7.4	75.3	46.1	15.6	38.7
Nicaragua (1998)	4.5	68.2	42.4	10.8	37.3
Panama	8.3	74.0	44.5	16.2	37.8
Paraguay	5.0	74.1	47.1	15.1	39.4
Peru	4.4	65.8	31.1	17.4	40.9
Rep. Dominican (1997)	7.7	69.8	36.2	16.5	32.6
Venezuela (1990)	7.7	67.0	31.3	19.8	23.8

Source: ECLAC (2002): Social Panorama 2001-2002, Table 23, p. 226 and Table 26, p. 230.

To provide a clearer picture of the poor distribution of incomes in rural areas, the last two columns of Table 6 show the proportion of the total income received by the poorest 40% and the richest 10% of the population, respectively. Indeed, of the countries analyzed by ECLAC, we can see that Bolivia has the worst distribution of income in rural areas, where the poorest 40% receive only 6.9% of the total income (unlike Venezuela where they receive 19.8%), while the richest 10% obtain 38.3% of the total income.

The asymmetry in terms of opportunities, situation of poverty, concentration of income and the difficulties in gaining access to production assets, is also reflected when different groups are analyzed. Rural women are the most numerous group among those who encounter the greatest difficulties, but they not necessarily the poorest. Indeed, according to ECLAC, empirical evidence of the feminization of poverty in Latin America indicates that the poverty index– measured by the poverty line calculated by ECLAC for each country - is slightly higher in 12 out of 17 countries in the region, being more pronounced in the rural areas. However, with regard to households headed by women, no significant differences are observed in per capita income according to the gender of the household head, in the majority of Latin American countries. (Godoy, 2003).

Although fewer in number, young people who work in family agriculture are submerged in a deeper level of poverty. This group is affected by additional constraints imposed by traditional processes of succession and late generational replacement and by restrictions to the development of new output units (farms) due to limits on the expansion of the agricultural frontier.

Finally, among the most excluded sectors - the poorest of the poor - although less numerous that the previous categories, are the indigenous groups and, to a certain extent, the populations of African descent. These populations face the additional challenges of self-determination, the differentiation of culture and values, the lack of a legal tradition that establishes respect for cultural differences and other forms of exclusion (ECLAC, 2003).

Land tenure is characterized by inequitable distribution that helps to perpetuate conditions of poverty in the countryside. Attempts to correct the unjust distribution of land in LAC through the agrarian reform processes that began at the end of the 1950s, did not fully achieve their objectives, and today the situation of land distribution is even worse than the distribution of incomes, in a region that is regarded as the worst in the world.[25]

Indeed, the Gini coefficient for land distribution in LAC is 0.80 (from 0.93 in Paraguay to 0.66 in Honduras), regardless of the type of access (ownership, sharecropping, leasing or occupation). Also, regardless of the type of access, women are producers/in charge of the farm in only 10-15% of the cases, usually of the smaller properties, despite the fact that inheritance laws generally consider them to have equal rights with men. In fact, for the good of the family and especially of the children, recent laws in various countries have given women preference in matters of access to land in cases where couples separate. The average age of producers in charge of farms is between 50 to 55 years, with a clear tendency to progress toward larger properties and possession as person advances in age (Dirven, 2003).

New forms of access to land in the 1990s (from agrarian reform to assisted purchase, with or without price or interest rate subsidies) have not fundamentally changed the problems of inequitable access. Evaluations made as a result of the agrarian reforms introduced in the 1960s-1980s, together with analyses of more recent experiences in the redistribution and/or titling of lands, show that these efforts have not been accompanied by greater production, higher productivity, or less poverty (Dirven, 2003).

With regard to health and education services, Latin America has been making steady progress. This is reflected in the improvement of indicators such as life expectancy at birth, the reduction of infant mortality rates, increases in adult literacy rates and access to drinking water, where LAC has achieved better averages than other regions, such as East Asia (see Table 7), despite the more dynamic progress seen in the latter region in the past four decades.

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[25] ECLAC estimates the Gini coefficient of income distribution in LAC to be around 0.60

Notwithstanding the above, access to basic services is far more limited in Latin American rural areas. For example, when the adjusted average for infant mortality is analyzed, it is higher rural areas, with a rate of up to 57.2/1000 births, in some countries.

Table 7. Health and Education: Social Indicators.

Country	Year	Life expectancy at birth (years)	Infant mortality to 5 years old per every 1000 births	Adult literacy rate (%)	Access to drinking water
Argentina	1960	65.2	72	91.0	51
	1980	69.6	38	94.4	58
	2001	74.1	19	96.9	94
Brazil	1960	54.9	177	61.0	32
	1980	62.7	80	74.5	56
	2001	68.3	36	87.3	87
Mexico	1960	57.3	134	65.0	38
	1980	66.8	74	82.2	50
	2001	73.4	29	91.4	88
Latin America	1960	56.5	154	74.0	35
	1980	64.7	79	79.9	53
	2001	70.6	34	89.2	86
East Asia	1960	39.2	198	nd	nd
	1980	60.0	82	68.8	nd
	2001	69.2	44	86.8	76

Source: Kuczynski & Williamson. World Bank.

There are enormous differences in access education assets between the urban and rural populations. As may easily be seen in Table 8 and Figure 12, on average, the rural inhabitants of all the countries, and during all the periods analyzed, received fewer years of schooling than urban dwellers (the urban-rural gap is greater than zero in all cases). For the most part, women's access to education is rather more difficult because of the predominantly patriarchal systems in LAC.

The largest gap between the rural-urban populations aged 15 to 24 years occurs in 1998 in Guatemala, with urban dwellers receiving on average 3.9 years more education than their fellow countrymen in rural areas. Meanwhile, the smallest gap is seen in 2000, in Costa Rica, where the urban population aged 15 to 24 years receives 1.6 years more education than the rural population

The situation is even more critical among the population aged 25 to 59 years, where the gaps are wider. The greatest differences in terms of years of education between urban and rural populations are seen in Bolivia and Guatemala in 1998 (3.8 and 3.9 years respectively), while the smallest gaps are found in Costa Rica and Chile in 2000 (1.6 and 1.7 years respectively).Nowadays, education yields are low for the first years of schooling and are clearly lower in rural areas than in urban zones. Within rural areas, education yields are lower in backward and remote areas than in dynamic areas that are located in - or near- markets.

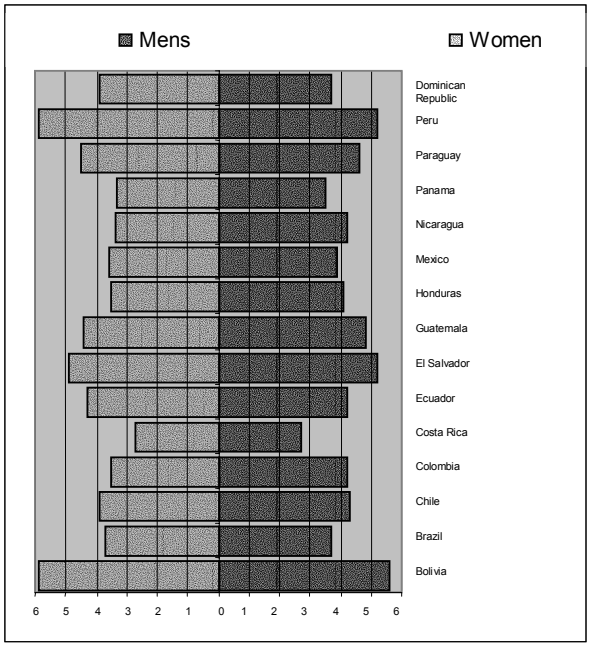
Table 8. Latin American Urban-Rural Gaps: Average in years of education of the Population between aging 15-59 years (end of 90´s).

Countries	Year	Urban-Rural population aging 15 to 24	Urban-Rural population aging 25 to 29
Bolivia	2000	3.8	3.8
Brazil	1999	2.6	2.6
Chile	2000	1.7	1.7
Colombia	1999	2.7	2.7
Costa Rica	2000	1.6	1.6
Ecuador	2000	2.8	2.8
El Salvador	2000	3.4	3.4
Guatemala	1998	3.9	3.9
Honduras	1999	2.7	2.7
Mexico	2000	2.2	2.2
Nicaragua	1998	3.3	3.3
Panama	1999	2.0	2.0
Paraguay	1999	2.9	2.9
Peru	1999	3.0	3.0
Dominican. R.	2000	3.8	2.7

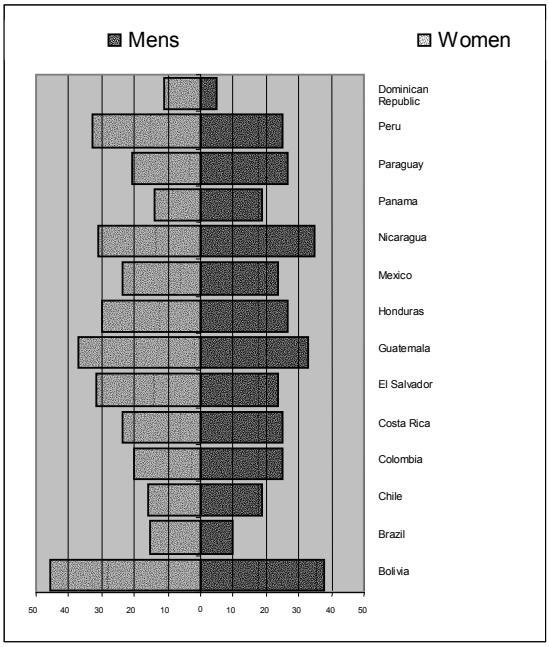
Source: ECLAC

Figure 12. Latin America and the Caribbean: urban-rural educational gaps in 14 countries, by gender

Average of years of schooling among the population aged 15 to 24 years[1].



Global rate of desertion among the population aged 15 to 19 years[2].



1. Average of additional years of education in urban areas;
2. Percentage points in which the rural desertion surpasses the urban desertion.

Source: Own compilation based on data of ECLAC (ECLAC, several years).

3.2.3 Natural Resources and the Rural Environment

The rural territories are the areas that contain most of the natural resource systems, providing food, recreation, and ecosystem services. However, these resources have been subjected to processes of extreme degradation, which have had a negative impact on the quality of life in these territories and on their capacity to contribute effectively to rural prosperity.

Soil degradation

Latin America and the Caribbean cover an area of 20.18 million Km^2, containing the world's largest reserves of arable land, representing nearly 30% of its territory and corresponding to 17% of the global agricultural surface. However, it is estimated that 25% of this area consists of arid, semi-arid and tropical drylands. Of this total, 75% - some 300 million hectares – shows serious problems of degradation[26].

The phenomenon of degradation affects croplands - for example, in South America it affects 45% of cultivated land, 14% of permanent pasturelands and 13% of forests and woodlands; in Mesoamerica (Mexico and Central America) 74% of cultivated lands, 11% of permanent pasturelands and 38% of forest areas are affected (UNEP, 2000).

In South America an estimated 68% of the total area of degraded soils is affected by erosion and 28% by chemical degradation; in Mesoamerica these estimates are 82% and 11% respectively. In South America erosion is caused mainly by deforestation, whereas in Mesoamerica poor management of farmlands is considered to be the main cause of soil degradation.

Furthermore, in Central America the combination of steep slopes, heavy rains and inappropriate farming practices is the leading cause of the loss of agricultural potential.

In areas of Chile, Peru, and Mexico, soil degradation has reached the level of desertification. It is estimated that the desert areas of these countries cover 13% of the regional territory. Arid and semi-arid areas also extend through Argentina, Brazil, and Bolivia, which, together with Chile, Peru, and Mexico, account for 97% of the arid and semi-arid lands of the region, equivalent to 23% of the regional territory.

Water resources and irrigation

Latin America and the Caribbean are rich in water resources, with more than 30% of the world total. However, there are differences in the supply of this resource, both

[26] The United Nations Environment Program (UNEP, 2002) estimates that more than 70% of LAC's drylands are suffering from moderate to extreme degradation. The region also includes around 16% of the world's degraded soils, ranking third behind Asia and the Pacific and Africa.

between the Americas, within them and between countries: in South America, there are considerable differences in the water supply among countries, ranging from low availability in Argentina, average in Uruguay and Paraguay, to high availability in the rest of the countries; the Caribbean is the most vulnerable area.

The region's arid or semi-arid areas are concentrated in northern and central Mexico, the northeast of Brazil, Argentina, Chile, Bolivia, and Peru, these last three countries with a high per capita water supply. In the island states of the Caribbean, the per capita supply of water resources is well below that of other island groups in the world. The Caribbean island of Barbados is among the 10 most arid countries in the world. There are also major micro-regional differences within countries with a high average per capita water supply. For example, in Central America, median annual rainfall varies from 400 to 7500 millimeters, with semi-arid to tropical regimens (PNUMA, 2000).

Water shortages are increasing, particularly in countries with a high proportion of arid lands (PNUMA, 2000).

Problems of water quality, both of surface waters and ground waters, have increased significantly during the last three decades. It is interesting to note that some of the main contributors to this deterioration include agriculture and the release of untreated urban sewage and industrial wastes into the environment. Furthermore, agriculture along with industry, are the largest consumers of water in LAC, while irrigation has been one of the main growth areas for water use in recent years. The amount of irrigated land rose from 10 million hectares in 1970 to more than 18 million in 1998, At the end of the 1980's the area under irrigation, as a percentage of the area under cultivation, was 12.8% on average, whereas during the period 2000-2001 it increased to 13.9%, although this represents a very small percentage of the total area (FAO).

Box 16 Fertilizers and environmental degradation.

Farmers in the United States use 600,000 million kilograms of pesticides per year, at an annual cost of 40,000 million dollars. They use 123- 450 kg. of fertilizers per hectare, causing 25% of the contamination of ground water sources with nitrates. In one Latin American country, 35% of all pesticides used are applied in the banana plantations that cover 5% of the arable land. Although it is known that this crop requires large amounts of pesticides, their average use on arable land is 44 kilograms per hectare per year (Kg/ha/year) compared with 2.7 Kg/ha/year in developed countries. Furthermore, the inappropriate disposal of pesticide containers (90 Kg/ha/year) and of the plastic used to protect banana bunches (55 Kg/ha/year) has permanently contaminated the soil with copper and polypropylene. It is not surprising, then, that the rate of worker intoxication is at least six times higher in areas planted with bananas than in those planted with other crops.

Source: (Wesseling, C. 1997).

Conventional farming practices require an excessive use of agrochemicals, causing environmental degradation and the contamination of water resources. Worldwide trends and demand for food have led to an increased use of chemical pesticides.

Forest resources

The region of Latin America and the Caribbean is one of the world's most important forest areas, with nearly one quarter of the planet's forest cover. The region's forests (average for the years 1991-1999) are estimated to represent approximately 49% of the Earth's total forest area, given the importance of the Amazon Basin, the world's most extensive tropical rainforest reserve and its richest ecosystem in terms of biodiversity. Furthermore, the region's forests contain approximately one-third of the world's timber resources (UNEP, 2002, 107).

The northern Amazon Basin and the Guyana Shield contain the largest area of intact forest on the planet. Moreover, six of the eight countries of the world that maintain 70% or more of their original forest cover are in South America, in the Amazon Basin (Brazil, Colombia, French Guiana, Guyana, Suriname and Venezuela). Suriname and Belize retain 40.8% and 40.6%, respectively, of their forest cover as a percentage of their total area.

Deforestation and degradation, including the fragmentation and loss of biodiversity, have been identified as the principal problems facing the region's forest resources. The deforestation figures speak for themselves: between 1980 and 1990, Latin America lost around 645,000 Km^2 of forests, the highest forest losses in the world during those years. The region's deforestation rate is among the highest in the world, with an annual average of 0.5% during the 1990s. However, there are substantial differences between the subregions, with a particularly high deforestation rate in the Mesoamerican region (1.2%), an increase in forest cover in the Caribbean (0.3%) and a close to average rate (0.4%) in South America.

According to the GEO-3 Report of the United Nations Environment Program (UNEP, 2002) the leading causes of deforestation and the degradation of forest resources include: the conversion of forest areas to other uses and unsustainable forest use; the expansion of the agricultural frontier, land tenure regulations and economic policies designed to increase economic growth.

Poverty and environment

The link between poverty and the environment is widely acknowledged. The environment is important for poor people because, to a large degree, it determines their well-being in terms of health, production capacity, food security, energy supply and living conditions.

Poor people depend heavily for their survival on a wide range of environmental goods associated with natural resources (land, water, fisheries, forest products, etc.) and they suffer disproportionately when environmental conditions worsen or access to same is restricted (for example, as a result of economic and social exclusion processes that push poor people toward marginal, degraded lands that are low in productivity and very

frequently susceptible to the effect of natural disasters). The poor depend on the capacity of ecosystems to provide essential services so they can produce food and engage in other production activities. The poor also suffer disproportionately from the effects of pollution –and not only in urban areas– and from the lack of suitable basic drainage and potable water services. Moreover, the poor are highly vulnerable to natural disasters such as droughts, floods and hurricanes, the impact of which can be augmented by deteriorated environmental conditions (DFI-EC-UNDP-World Bank, 2002, ix).

Box 17. Poverty, the breakdown of social and family structures and economic instability, as a consequence of desertification.

From the social point of view, both drought and desertification promote poverty by breaking down social and family structures and by generating economic instability. One of the most serious consequences of desertification is that every year millions of people are forced to migrate to cities in search of new opportunities, leaving the women and children exposed to an even greater degree of vulnerability. A vicious circle is created, whereby farmers in the affected areas react by intensifying their exploitation of the already overexploited natural resources available to them, thereby causing greater desertification of the ecosystem. In these conditions, a part of the affected population moves to other regions, causing ruptures in the social structure, at community and family level.

With regard to the links between desertification, degradation of resources and poverty, several studies have been carried out in an attempt to explore those connections. Much of this work has focused on the situation of African countries affected by these processes, and very little on Latin America and the Caribbean. Among the efforts to advance our knowledge of this phenomenon and to quantify its impact, is the **ECLAC/GTZ Project, Indicators of the Socioeconomic Impact of the Desertification and Degradation of Lands**. The purpose of this project is to construct a set of impact indicators that will provides a useful tool for decision-making by the economic authorities in three countries, Argentina, Brazil, and Chile, with the idea of obtaining experiences that can subsequently be replicated in other countries of the region.

To date, progress has been achieved in the design of a theoretical framework to explain the process, in the formal adoption of an econometric model, in the agreed definition of a set of 12 indicators, and in the identification of appropriate information sources to obtain these. In this way, the databases of agricultural and population censuses and household surveys have been adapted to the REDATAM system, a software developed at ECLAC to manage large databases, and to a software to calculate poverty indices in areas of desertification, as well as the impact of the allocation of resources to reduce poverty. To the above, another software is added for the calculation of other indicators associated with this process.

It is hoped that by the end of this year, the databases in the REDATAM system, the software to run them and to calculate the indicators, as well as trained staff, will be installed in the countries where this project is being implemented.

Source: *ECLAC*

There are no breakdowns by region of information on poverty, which makes it impossible to provide concrete evidence of the relationship between the level of poverty and degraded areas. This notwithstanding, the so-called pockets of poverty are generally located in areas characterized by steep slopes, arid conditions and soil degradation, for example: northern Argentina, the La Puna region, the Brazilian northeast, southern Mexico, southern Honduras, and northern Nicaragua. It is estimated that 13% of the population of the region (World Bank, 2002), or approximately 68 million people, live in fragile areas (i.e., steep slopes and arid climate). This represents 88% of the region's rural population that was living in poverty in the late 1990s (77.2 million people).

Biodiversity

The region of Latin America and the Caribbean contains a great variety of ecosystems. According to data in the GEO-3 Report, moist tropical rainforests and broadleaf forests cover 43% of the territory; savannahs and pasturelands cover 11%; deserts and mountain lowlands under 11%; temperate forests and tropical and subtropical conifer forests 5% and mangroves 0.5%. The Caribbean contains 7% of the world's coral reefs, with a great variety of marine biodiversity (UNEP, 2002, 137).

The GEO-3 Report highlights habitat loss and degradation, the overexploitation of resources and illegal trade as the main problems facing the region's biodiversity resources.

As evidence of habitat loss and degradation, GEO-3 points out that 31 of the region's 178 ecosystems are in a critical state of conservation, 51 are endangered and 55 are vulnerable. The most endangered ecosystems are located in the northern and central sections of the Andes, in Central America, in the Southern portion of the Amazon Basin and in the Caribbean. The Amazon Basin contains the world's largest tropical rainforest; however, it is estimated that one-third of the basin is affected by forest fragmentation and frontier effects (expansion of the agricultural frontier), resulting from the increased deforestation rate during the nineties.

The unsustainable use and illegal trade in plants and animals is another of the threats facing biodiversity in countries such as Brazil, Colombia, Mexico and Peru. Although it is difficult to measure the scale and impact of this illegal trade, GEO-3 offers information that suggests that 10% of the illegal trade worldwide occurs in Brazil, and is worth approximately US$ 10,000 million per year.

Emissions and climate change

The growth of industry, agriculture and transportation over the past 30 years has been paralleled by increased CO_2 emissions, estimated at 65% between 1980 and 1998 (UNEP 2001b). Between 1991-1992, it is estimated that the region was responsible for 11% of global anthropogenic emissions of CO_2 , 4.5% of global industrial emissions, and 48.5% of emissions caused by changes in land use (UNDP, UNEP, World Bank, WRI 1996). Deforestation is the principal cause of emissions in the region, especially in the Amazon basin (UNEP 1999).

Deforestation and animal feed also cause large amounts of methane emissions, causing about 9.3% of world methane emissions (UNFCCC-SBI 2000). Other sources of air pollution have local and sub-regional impact, including the use of agricultural pesticides and suspended particles resulting from soil erosion and the burning of biomass (UNEP 2002).

Forest fires are another important source of pollution, the consequences of which can be felt at great distances (CCAD, IUCN 1996; Nepstad, et al 1997).

In Latin America and the Caribbean, about 20% of the population uses biomass as fuel. This produces domestic pollution, which has the greatest impact on women, children and the elderly. In Colombia and Mexico, for example, women who cook with firewood are 75 times more likely to get lung diseases than the average (UNDP, UNEP, World Bank, WRI 1998). Finally, air pollution in the region is responsible for 2.3 million cases annually of chronic respiratory diseases in children and 100,000 cases of chronic bronchitis in adults (ECLAC 2000).

3.3 Situation of Food Security

In a world where trade is expanding, food prices are decreasing and grain stocks are increasing, 840 million people are suffering from chronic hunger, according to the most recent FAO estimates. Of these, nearly 55 million live in LAC, despite the fact that it is the world's only net food exporting region, with a trade surplus of US$ 61,810 million dollars in the period 1997-2001.

Both the levels and the patterns of undernourishment vary considerably among the countries of the region. In most South American countries, the levels are already low or are declining at steady rate. Nevertheless, in some Central American countries (Nicaragua and Guatemala) more than 20% of the population is undernourished. The most dismal case is Haiti, where 56% of the population is undernourished.

Hunger itself is a scourge that affects LAC, despite the region's potential as a food producer. But it also has effects on other factors that prevent human beings from overcoming conditions of extreme poverty. This suggests the need to comprehensively address the problems of poverty and hunger in the region, as shown in Table 9.

Table 9. Nutrition indicators for the subregions of LAC, 1998-2000.

Region, subregion	Percentage of the population undernourished 1998-2000 (%)	Number of people undernourished 1998-2000 (millions)	Per capita dietary energy supply 1998-2000 (kcal/day)
LATIN AMERICA AND THE CARIBBEAN	**11.0**	**54.8**	**2830**
NORTH AMERICA	5	5.2	3150
CENTRAL AMERICA	20	7.1	2380
CARIBBEAN	25	7.9	2320
SOUTH AMERICA	10	34.6	2820

Source: FAO (2002), *The State of Food Insecurity in the World 2002.*

The asymmetries observed in the area of the Americas are profound, both at the regional and the country levels. While average food consumption in the Northern Region was 979.13 kg/capita, and that of the Southern Region was 720.84/kg/inhabitant for the period 2000-2001, and has been growing since 1986, in the Andean, Caribbean and Central regions food consumption did not even reach 500kg/inhabitant for 2000-2001. These levels are lower than the averages seen during the nineties decade.

At the country level, the asymmetry is even more alarming: while average food consumption in countries such as the United States, Canada and Dominica is approximately 1,000 kg/inhabitant, in countries such as Haiti, Guatemala and Nicaragua it is less than 400 kg/inhabitant.

The above is evidence that access and distribution, more than production, are essential to ensure the food security of populations and that there is a direct proportional relationship between countries with very low consumption levels and low levels of real per capita income.

Box 18. Effects of hunger on other Millennium Development Goals

Objetive	Some selected indicators	Effects of hunger
Achieve universal primary education	• Net enrollment rate • Literacy rate	• Reduces school attendance • Decreases cognitive capacity
Promote gender equality	• Girl-boy ratio in primary education	• May reduce school attendance more in the case of the girls
Reduce child mortality	• Mortality rate in children under five years	• Related to 60 percent of child deaths
Improve maternal health	• Maternal mortality rate	• Normally increases the risk of maternal death
Combat HIV/AIDS, malaria and other diseases	• Prevalence of HIV among pregnant women associated with malaria • Proportion of deaths associated with malaria	• Promotes migration of the labor force, which contributes to the spread of HIV • Multiplies infant mortality rates by 2
Ensure environmental sustainability	• Proportion of the land surface covered by forests	• Gives rise to an unsustainable use of land and forest resources

Source: FAO (2002), *The State of Food Insecurity in the World*

There are some countries in the hemisphere that are *net* food *importers* (the Bahamas, Barbados and Grenada they are the more important), while at the other end of the scale we find Argentina, Belize and Canada as the leading *net food exporting* countries.

Conducting an analysis of food security based around four categories (country access, individual access, availability and the average of all these factors[27]), we may conclude that, to determine a country's level of food security, the fact of whether or not it is a net food importer is not relevant. Indeed, there is little correlation between net food imports per capita and a country's food security situation. Even today, a significant proportion of the rural population relies on its own food production to satisfy basic dietary needs. This is reflected in the critical situation affecting some regions and countries of LAC, which have lost harvests due to natural disasters, such as droughts and floods.

According to the indicator of country access, the United States is the country in the Americas with the least difficulty in financing its food imports, while Bolivia, Ecuador, Grenada, Guatemala, Guyana, Haiti, Honduras, and Peru are among the countries with the greatest difficulties in financing food imports. These countries require more than 15% of their exports to finance food imports, and in some cases–such as Grenada and Haiti– the total of their exports are not sufficient to finance food imports. It is important to note that only seven net food importing countries improved their relative position in relation to the period of comparison: the Bahamas, Barbados, El Salvador, Mexico, Nicaragua, Suriname, and Trinidad & Tobago.

The results in relation to individual access place ten countries in a situation of high vulnerability, with very low levels of consumption and the capacity to pay as the main constraint. In order of vulnerability, these countries are: Haiti, Nicaragua, Honduras, Bolivia, the Dominican Republic, Guyana, Peru, Guatemala, Ecuador, and El Salvador. By way of an example, and taking into account only consumption and per capita income, countries such as Haiti, Nicaragua and Honduras consume less than 500 kg of food per inhabitant and per capita income levels do not exceed US$700 annually. It is interesting to note that the relative position of these countries in relation to these variables did not change throughout the decade of the nineties, with the sole exception of Antigua & Barbuda, whose situation deteriorated during the period 1992-1995.

In terms of the supply of food products, it is more difficult to establish the division between countries. However, the Bahamas is the country with the greatest relative disadvantage, simply because the availability of agricultural land is barely 0.03 has/capita, and more than 60% of the domestic food supply comes from imports. Other countries in similar conditions include Trinidad & Tobago, Antigua & Barbuda, Barbados, Grenada, Haiti and Nicaragua. The situation of this last country is particularly remarkable, since it has an adequate level of agricultural area per inhabitant (more than one hectare), but does not produce enough to feed its population. The countries with the

[27] For more details and the definition of the categories, see IICA (2003) Evolution of Agriculture and Food Security in the Americas: statistical references and selected indicators 1986-1990/1991-1999/2000-2001.

greatest relative advantage in food production are the United States, Canada, Colombia, Bolivia, and Mexico.

Based on the average of all the variables included, the United States, Argentina, Uruguay, Costa Rica, Canada, Paraguay, and Brazil rank as the least vulnerable countries and, therefore, are the least likely to face food security problems. At the other extreme, the countries facing the greatest difficulties in supplying food to their populations are Haiti, the Bahamas, the Dominican Republic, Grenada, and Nicaragua.

3.4 Changes in Policies and Institutions

The Declaration of Bávaro (Nov. 2001) establishes a series of commitments by the Ministers of Agriculture, which should be reflected in policies for the modernization of agriculture and the improvement of rural life applied by the countries of the region. These commitments should also provide a frame of reference for implementing adjustments in the institutional framework for agriculture and rural development.

This section aims to analyze the main changes observed in policies and institutions related to agriculture and rural development that facilitate the fulfillment of the commitments of the Declaration of Bávaro, but that also enable the region's agriculture to meet the challenges of the present context (section II), the situation affecting agriculture and the rural milieu and to try to fulfill the agricultural sector's responsibility to achieve the Millennium Goals.

3.4.1 Changes in policies and agricultural and rural institutions[28]

Production-trade aspects

With trade liberalization, there have been significant policy changes and institutional modernization efforts, prompted by the international trade negotiations, by the challenge of positioning products competitively in the international markets and implementing actions to support national production in the face of competition in the domestic markets.

New policy instruments are being introduced to develop exports, institutions are being created to promote exports and attract investment and, in the face of the prolonged crisis affecting international agricultural commodity prices, initiatives are being sought to promote the development of new products.

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[28] Based on a survey of Ministerial Delegates of Agriculture conducted by IICA, concerning the 5-10 policies, programs, projects or actions that are innovative and with a probable major impact on development of agricultural production of particular regions and or products, or in terms of the development of chains, clusters or productive alliances.
The following countries participated in the survey: Argentina, Brazil, Paraguay and Uruguay of the Southern Region. Bolivia, Colombia, Ecuador, Venezuela of the Andean Region. With respect to the Central Region, the information on the policies, programs and projects of a national character was processed by IICA, considering the corresponding sectoral policies.

There have been increased efforts to utilize the agrifood chain approach to address policies related to production and trade, with different emphases, mainly in the context of competitiveness programs and in programs to facilitate the development of support services for production and the agrifood trade. In this line, some of the most important actions include the Bolivian System of Productivity and Competitiveness SBPC, which establishes objectives for the design of policies, the promotion of strategies, the establishment of alliances between public-private-academic sectors and the implementation of policies. In Colombia, the Agricultural Supply Program PROAGRO, based on a consensus between the public-private sectors involved in production chains, creates institutional frameworks to increase levels of agricultural output and improve the competitiveness of agroindustrial chains, with their enormous potential for expansion toward the domestic and/or external markets, and significant impact on the sector's performance[29]. Also *Paraguay in the competitive map of the world,* an initiative that includes the development of agendas to improve the competitiveness of Paraguay's agrarian and agroindustrial sectors.

Other approaches combine efforts to integrate stakeholders into production chains, through the transformation and modernization of small and medium-sized production units (farms), such as Argentina's Social Agricultural Program, the *Alianzas Productivas* (Productive Partnerships) Project in Colombia and Costa Rica's agricultural modernization program.

In Honduras, a consensus-building process has been implemented to design a State policy for agriculture, inspired by a previous experience in Chile, based on stakeholders grouped into 19 categories and focusing on agricultural chains. In Mexico, a National Agreement on the Countryside was signed in the context of consensus-building efforts. This initiative will reassign new resources for investment in infrastructure, productive development and economic diversification, including supports, subsidies and compensation mechanisms to create basic conditions of competitiveness in the production systems.

The development of knowledge, information and technology are essential to achieve the modernization of agriculture and rural development. Changes in the global and regional context, the advent of a new scientific and technological revolution and current and new International Agreements, such as those mentioned in section 2.1., are crucial factors shaping the design and implementation of new technology policies with a national and regional impact. The design of such policies is now beginning to focus not only on the needs of rural producers, but also on those of different stakeholders throughout the production-trade chains, especially consumers and agribusiness activities in general.

The characteristic diversity of the Americas means that countries and regions adopt different approaches to addressing the demands of the present context, and therefore to the design of technology policies, particularly in the more innovative fields.

[29] Sectoral Competitiveness Agreements are a component of this program.

At the same time, several countries have adopted institutional policies aimed at establishing comprehensive national technology research and development programs, evolving toward implicit or explicit national research systems, as in the case of Costa Rica and the PITAS. There are also policies to develop "technology linkage and evaluation" mechanisms for joint public-private sector ventures and for marketing technologies. Similarly, there are policies aimed at improving funding levels for strategic and applied research and even for the incorporation of technologies into production systems, including new forms of extension and/or technology transfer, as in the case of PRONATTA in Colombia.

These policies are not only associated with the capacity to generate and/or incorporate biophysical technologies into the agrifood chains, but also with the management of scientific and technological information, market intelligence, food quality and safety, organization and management of social capital and on the links between "knowledge and society", among others. The situation is encouraging from the point of view of the increased awareness of the need for such policies, but at the same time it is troubling because of the serious lack of institutional capacity to implement these.

In relation to the subject of information, support systems are being developed to facilitate production-trade efforts, using the technological advances of the Internet and geographic information systems (GIS). An example of the former is Colombia's Agri-chains Observatory, an innovative system to respond to the information and analysis needs of public and private agents committed to the goals of competitiveness, through a Portal on the Internet. An example of the second initiative is the use of geographic information systems for crop planning in Ecuador.

Box 19. SIDALC, a successful experience at the hemispheric level

The Agricultural Information and Documentation System for the Americas (SIDALC) provides the scientific community, students and development institutions, as well as rural communities, with access to documentary information produced in the Americas. It operates through a hemispheric network of national agricultural information units and systems. It facilitates access to the Agricultural Mega-database **AGRI2000**, with more than 1.5 million entries and 155 databases contributed by different institutions from the Americas.

The operation of this hemispheric network is based on agricultural information resources and the installed capacity of IICA, the Orton Memorial Library and of agricultural libraries and document centers in Latin America and the Caribbean (LAC).

The target groups of this system are individuals and institutions of the public and private sectors involved in agriculture and related areas (decision-makers, teachers, researchers, students, agricultural extension workers, farmers, agricultural producers, documentary information units, governmental institutions and the private sector).

With the financial support of the W.K. Kellogg Foundation, equipment and training have been provided to 31 countries of Latin America and the Caribbean, members of the SIDALC Hemispheric Network. The project has the support of four technical and administrative staff, plus the national information networks in each country.

Source: IICA

The Inter-American Development Bank (IDB) has promoted various development alternatives to encourage the use of information and communications technologies. Aware of the importance of ICTs, the Bank has announced financing strategies to support the use of information and communications technologies to improve the efficiency and expand the coverage of public social services; and to provide low-income citizens with greater access to the benefits and advances of information and communications technologies, so that these instruments may contribute to the achievement of the social objectives of each of the IDB's member countries.

As a result of a growing recognition that trade opportunities are increasingly conditioned to technical aspects of quality and food-safety and standards of plant and animal health of agricultural products, some countries have established policies in this area. In El Salvador, for example, agricultural health and food-safety measures form part of the national agricultural policy and agrarian management plan defined for the period 1999-2003. However, in most countries, the efforts in these areas consist of specific actions or programs (e.g. combating outbreaks of foot-and-mouth disease in Uruguay and Brazil) and the dissemination of information on measures adopted by other countries that affect agricultural trade (such as the Bio-terrorism Law of the United States). Meanwhile, the public-private institutional framework has not been sufficiently developed and strengthened to face the increasingly tough challenges, as discussed earlier (in section 3.1.5).

In relation to rural development policies, and in the context of rural territories, the Ministers of Agriculture made a commitment to "*promote processes aimed at the transformation and modernization of agriculture… with special emphasis on the creation and revitalization of small and medium-scale production units and the integration of the agrifood chains" (*point 10 of the Declaration of Bávaro). In this regard, the most significant progress has been in the area of technical assistance programs directed at small producers, such as the Social Agricultural *Program* of Argentina; the APSA-DANIDA initiative, *Programmatic Support for the Agricultural Sector* of Bolivia; the Program to Support the Development of Small Cotton Farms-PRODESAL in Paraguay; the PRONADEGA program in Uruguay to validate effective strategies to improve business management and competitiveness (includes voluntary grouping and technical assistance) among small and medium-sized producers. In Uruguay, the Farm Modernization and Development Program PREDEG also provides technical cooperation for small and medium-sized farm enterprises.

Among the more innovative efforts we can mention the Integral Support Program for Rural Producers (a component of the Modernization Plan for the Rural Economy in Colombia), directed at small farmers. This initiative provides knowledge and capacity-building to achieve agricultural modernization, with access to policy instruments (financing), technology development and modern marketing systems. In Argentina, the project for the Development of Small Agricultural Producers (PROINDER), aims to strengthen institutional capacity at the national, provincial and local levels for the design, implementation and monitoring of development policies, but in addition it provides technical support to farmers whose basic needs have not been met.

In Mexico, the above-mentioned National Countryside Agreement aims to complement the Support Program for the Commercialization and Development of Regional Markets, contemplated in the Sectoral Program for Agriculture, Livestock, Rural Development, Fisheries and Food 2001-2006.

Box 20. Technology to promote rural prosperity in Brazil.

PRODETAB is a Brazilian Government project in the area of research, development and technology transfer in the fields of agricultural, forestry and agroindustrial technology. It is financed by the World Bank and administered by EMBRAPA, with total resources equivalent to US$ 120 million over a five-year period. The project's target populations are rural farmers who need technology to promote rural prosperity. The main objectives of the project are to improve the efficiency and competitiveness of the sectors involved, overcome technological backwardness, promote regional and social equity among rural producers, promote the sustainability of natural resources and the recovery of degraded areas, improve income distribution and increase the efficiency and sustainability of the National Agricultural Research System (SNPA).

In the area of technology related to the development of the rural territories, institutions in several countries are designing and implementing new technology policies in various fields, including the following:

- Biotechnology and Biosafety
- Management and access to plant genetic resources
- Intellectual property rights with an emphasis on Plant Breeders' Rights (PBR) and patents
- National and regional financing of R&D
- Technological linkages
- Technology marketing
- Technology innovation in family agriculture

In Uruguay, the Institutional and Regulatory Support Program exists to reduce rural poverty in the MERCOSUR region, by helping vulnerable groups to participate in economic activities, taking advantage of the expansion of the MERCOSUR markets.

Ecological-environmental aspects

Policies aimed at ecological and environmental conservation generally appear to be disconnected from agricultural and rural development policies. The exception is Central America, which formulated the Alliance for the Sustainable Development of Central America in 1994, and the Basic Plan of Action (1996). This initiative includes a series of regional policies related to the following aspects: agricultural trade (intra-regional and extra-regional); agricultural modernization and technology innovation; environmental

management in agriculture; rural development *per se*; and, the participation of the private sector in articulating production and service chains.

More recently, the Central American Regional Agricultural Council adopted a Regional Agenda and Operational Strategy (2001) that includes a chapter on environmental management in agriculture and another on reducing the agricultural sector's vulnerability to natural hazards.

An interesting experience in the coordination of agricultural policies with environmental and natural resource policies is the initiative that is emerging in Central America, based on a joint effort between the Ministers of Agriculture (ACC-CORECA) and the Ministers of the Environment (CCAD).

At the level of individual countries, we can mention Argentina's Component of Support for Small Producers for Environmental Conservation (CAPPCA), which includes the implementation of a pilot program in five areas with high levels of environmental degradation, rural poverty, non-sustainable use of natural resources and proximity to protected natural areas. In Nicaragua, efforts are under way to incorporate road building and rural electrification into the Policy Agenda of the Agriculture and Forestry Sector. In the case of Paraguay, a sustainable development program is being designed for the Chaco region (PRODECHACO), with the aim of conserving the area's natural resources and protecting local livelihoods, mainly of the indigenous population. In Venezuela the *Fondo Unico Social* (a social fund) was set up as part of the country's disaster prevention and mitigation policies. Costa Rica is implementing an organic farming and ecosystem management program through 26 management plans in watersheds, as part of the agricultural sector policies for the period 2002-2006. Mexico is engaged in an interesting initiative to coordinate policies for the implementation of the Rural Development Law, linking rural development and desertification issues, in the context of the National Plan of Action to Combat Desertification. This is a good example of efforts to promote synergy between environmental agreements, something that is currently being encouraged in a very major way. This approach is being promoted in Mexico by SEMARNAP (Secretariat of the Environment, Natural Resources and Fisheries), in collaboration with other institutions, especially SAGARPA (Secretariat of Agriculture).

The Convention on Biological Diversity (CDB) has played a key role in the preparation of responses to biodiversity loss: some countries have incorporated the CDB's objectives into their general legislation, while others have done so by means of sectoral laws. Other countries are in the process of modifying their sectoral laws, among them Cuba, Honduras, Mexico, Nicaragua and Panama. It is important to note that the legislation promulgated to implement the CDB does not normally include references to other agreements related to biodiversity, such as CITES and the Convention on Wetlands of International Importance, especially as Waterfowl Habitat (known as the Ramsar Convention).

Social, cultural, and human aspects

The program *Fome Zero* (Zero Hunger), recently announced by the government of Brazil, is probably the most ambitious package of policies and actions to guarantee the food security of the Brazilian population. This initiative also includes emergency actions to combat poverty and hunger, as well as a set of policies to tackle its causes.

An important measure introduced in Colombia is the promulgation of the Law on Rural Women, which facilitates easy and timely access to credit at preferential rates, promotes the creation and strengthening of local associations, and provides preferential access to family subsidies in the form of cash, kind and services. This law also contemplates vocational training programs, links to land titling programs and guarantees women an equitable share in the assignation and use of land. Colombia is also implementing a Program for the Development of Rural Micro-enterprises (PADEMER), as an instrument to support the reduction of rural poverty, through jobs and incomes, and a social and rural housing policy, aimed at building and refurbishing rural housing.

Meanwhile, in Uruguay, the "*Uruguay Rural"* Project prioritizes actions that focus on the rural family as an integral unit, promoting the participation of all family members in activities within and outside the farm, and in income generating sources. It also includes a number of instruments such as guarantee funds, micro-capitalization funds and technical assistance. The Program for Institutional and Regulatory Support is also being implemented in Uruguay, with the aim of reducing rural poverty by providing assistance to vulnerable groups so that they can participate in business activities and take advantage of the expansion of markets in the context of MERCOSUR. In Ecuador, important programs are being implemented to restore the cultural identity of indigenous peoples and communities, together with a policy of "Cultural Diversity" aimed at promoting dialogue between different communities and ethnic groups so as to value their cultures.

Political-institutional aspects

The most significant progress in political-institutional terms is undoubtedly the growing application of public-private consensus-building mechanisms for national policy-making - from Agricultural Working Groups that define State policies for agriculture (Chile and Honduras), to the signing of competitiveness agreements in agrifood chains (Belize, Colombia, Costa Rica, Ecuador and Paraguay).

At the same time, competitive funds for agriculture and rural development are emerging as instruments to target government action towards a particular demand, operating through selected projects that are financed and implemented through various mechanisms. Their objectives are: (i) to decentralize services aimed at supporting the users and provide incentives to the private sector through contributions of public resources; (ii) to share technical expertise and resources with private institutions and producers' organizations to achieve a common objective, such as the joint development of a product or service; (iii) to achieve greater convergence with demand for resources,

through closer liaison with users; (iv) to achieve a more effective and transparent assignation of public resources for agriculture and rural development; (v) to facilitate the specialization of State institutions in the formulation of standards, supervision, monitoring and evaluation of programs and projects; (vi) to grant professional officers of public sector institutions a regulatory and supervisory role of a high technical level.

Trade liberalization policies and the signing of agreements to open up agricultural trade have given rise to specific institutional mechanisms to support trade negotiations and to promote the development of agribusiness. In this line, the Costa Rican Ministry of Agriculture and Livestock established the Joint Working Party on International Trade, together with a "satellite office" in the city of Miami to facilitate the trade transactions of 20 producers' organizations. In El Salvador agribusiness centers and enterprise centers are being created in rural areas to facilitate international business and provide support for export platforms as part of the country's National Agricultural and Agrarian Management Policy 1999-2004. In Venezuela, internal consultations have been conducted through national forums and meetings, aimed at establishing and fine-tuning the national position on issues such as the liberalization of agricultural trade, the elimination of subsidies and unfair trade practices in the multilateral negotiations of the World Trade Organization (WTO).

The creation of institutions to address specific issues, to modernize services or to resolve problems in the agricultural sector and the rural milieu, is a practice that continues in the region. In Venezuela, the Venezuelan Agricultural Corporation was established as an autonomous institute attached to the Ministry of Agriculture, for the purpose of promoting, coordinating and overseeing the State's business activities for the advancement of the agricultural sector and the implementation of National Agricultural Boards. In Bolivia, the National Agricultural Health and Food Safety Service (SENASAG) was created to oversee issues of food safety and quality.

In essence, the national AHFS institutions require fundamental changes and improved capacity in the three components - regulatory mechanisms, technical capacity and institutional sustainability - analyzed in the previous section, in order to meet international standards and benefit from them. Unless substantial changes take place, the effects of poorly performing AHFS programs, measured in terms of missed market opportunities and adverse impacts on countries' animal, plant and human health, will increase. With regard to changes in the region's science and technology institutions, these have occurred gradually in LAC, though not at the rate and speed demanded by the present context. Table 10 below mentions some examples of institutional transformations of a diverse nature, with varying results and impact.

Several of these institutions, such as the NARI of Peru and others, are working to replace the "supply-side" paradigm - based on technology generation and transfer processes as the only source of innovation in past decades - for another based on technology innovation, which takes into account the aforementioned processes, but focuses on "demand" in order to take knowledge to the marketplace.

Table 10. Principal institutional transformations related to innovation.

Institutional transformations	Some examples
Aimed at responding to the demands of new agriculture and agribusiness, developing new technologies under new forms of partnership, and also focusing efforts on the needs of family agriculture and the conservation and sustainable use of natural resources.	EMBRAPA, Brazil as expressed in its new Master Plan; the Labex Project (EMBRAPA Laboratory abroad) links with Centers of Research and Excellence in developed countries; Labex "Inverted" to support links between LAC institutions with EMBRAPA.
Aimed at improving integration, coordination and effectiveness by mobilizing the capacities of other national and state research bodies, institutes, centers and universities.	National Research Systems: Mexico, the Dominican Republic, Costa Rica and Brazil, seeking to integrate the research efforts of the National R&D Institution and universities, the private sector, state research centers.
Aimed at responding to regional and international demands and needs and promoting reciprocal cooperation between countries through multinational research and technology innovation.	Regional Cooperative programs such as MUSALAC and subregional initiatives such as PROCISUR, PROCIANDINO, SICTA, PROMECAFE PROCITROPICOS, SICTA, PROCINORTE, through joint efforts between countries, various institutional actors and IICA.
Aimed at promoting reciprocal cooperation and synergy between laboratories and research units in the fields of the new biotechnologies.	REDBIO/FAO Network of regional scope
Aimed at developing international public goods to support poverty reduction, food security and the sustainable development of natural resources.	Renewed vision of the International Research System and of the worldwide network of international research centers CGIARS. Several of these are headquartered in the Americas: CIAT, CIP; CIMMYT, IFPRI, ISNAR, and IPGRI (regional headquarters)
Aimed at creating a new institutional framework supported by the private sector's active and decisive participation, investment and leadership in research.	The "Cenis" of Colombia - CENICAFE, CENIPALMA, CENICAÑA; the Research Foundations of several countries such as CEDAF, FUNIC, FUSADES;
Aimed at establishing technology linkages and appraisals through mixed public-private ventures.	INTA Argentina, INIA Uruguay, SIBTA-Foundations in Bolivia among others.
Aimed at facilitating better social monitoring by users, effective mobilization of public and private technology suppliers, universities and technology transfer and to increase and mobilize financial resources for research under the modality of competitive national funds.	The *Produce* Foundations of Mexico, INAGRO, Peru; Competitive Funds to promote technology innovation in Chile; Competitive Funds of National Institutions such as EMBRAPA, the NARIs of Uruguay, Venezuela, PRONATA-Colombia and the National Science and Technology Councils of countries.
Aimed at hemispheric technological integration, creating a space for the analysis of technology policies, lobbying and advocacy in support of research, dialogue, and the promotion of inter-institutional alliances between public-private sectors and with the legislative sector; and to define issues of regional interest. Also those aimed at funding regional research to meet demand, focusing on technological mega-domains and groups of technologies that affect the competitiveness of agriculture.	- **FORAGRO** - Regional Forum on Research and Technology Development, composed of national research institutions, universities, the private sector, research foundations, NGOs , subregional and regional research mechanisms, PROCIS, CATIE, CARDI Regional Centers. International research centers based in the region also participate in this Forum. - **FONTAGRO** - the Regional Agricultural Technology Fund, established with resources from several countries of the region and co-sponsored by the IDB and IICA, which operates under the modality of a competitive fund. The Fund, which is the only one of its kind in the regions of the developing world, finances nearly 25 regional research projects in its start-up phase.

However, it is still necessary to intensify institutional transformation efforts to better harmonize the needs of producers and of the different consumers of new products and services, with the institutional response, above all with an innovative response at local level.

In the rural areas, important transformations have taken place during the last decade that has modified the rural institutional framework in qualitative terms. In the domestic sphere, we can mention the processes of State reform, where the component of the privatization of functions that were traditionally exclusive to public administration has been replaced by the emerging role of new private actors and the dismantling of the institutional framework that characterized the State's intervention in agriculture and the rural milieu. Another important component of this process has been the decentralization policies aimed at giving greater autonomy to local and regional management bodies, in their role as agents of community-based development.

Structural transformations have redefined the rural development institutions, by inducing the dismantling or weakening of the government institutions that supported intervention and development strategies in the agricultural sector, and by promoting a shift of public sector responsibility toward a complex range of organizations, with social and economic responsibilities that reduce the response capacity of the Ministries of Agriculture.

Box 21. Rural Development Policy of Argentina

The rural development policy of the Secretariat for Agriculture, Livestock, Fisheries and Food of Argentina includes the PROINDER project for the Development of Small Agricultural Producers. This initiative is aimed at improving the living conditions of 40,000 small-scale, low-income farmers by increasing their incomes in a sustainable manner and enhancing their organization and participation; and also strengthening institutional capacity at national, provincial and local level for the design, implementation and monitoring of rural development policies.

Source: Secretariat for Agriculture, Livestock, Fisheries and Food of Argentina.

The development of supranational agendas with new institutional arrangements and new game rules has resulted in a loss of institutional response capacity, the weakening of governance and higher costs for communities and rural entrepreneurs.

A development strategy for the rural territories involves Ministries, decentralized organizations, and most particularly, public institutions of a regional order. Rural development policies are increasingly cross-cutting and multisectoral in nature, and involve, in a more comprehensive manner, private and civil society organizations in the design and management of policies and strategies.

3.4.2 Public spending on agriculture and rural development, and its impact

Public spending on agriculture and rural development may be a good indicator of the relative importance given to these areas in public policymaking. However, estimates of public spending on agriculture differ according to which statistical information sources are used, as well as the definitions of what is included under these categories and the periods in question. Thus, while some studies note a significant relative contraction in

public spending on agriculture in most LAC countries (Side, 2003), others indicate that the trend observed is that most countries are actually increasing or maintaining public expenditure on agriculture, within overall spending (FAO, 2001).

At the same time, agricultural public spending cannot only be analyzed as a percentage of the budget, to determine whether its importance is comparatively high or low. It should be weighted according to the size of a country's agricultural and rural sector, in order to obtain a better idea of its correspondence. Box 23 below shows that Argentina, for example, has a relatively low public expenditure on agriculture (just over 3.7 times lower than the figure for Costa Rica), but when considered in relation to the size of its agriculture and its rural environment, this percentage increases to 1.5%, three times higher than the percentage assigned by Costa Rica. It is also evident that in Brazil the percentage of public spending on agriculture is almost double that of Chile, but when re-calculated in the same way, yields similar percentages. Mexico, in turn, is noteworthy for its comparatively high levels of public spending on agriculture.

Box 22. Strength of Public Spending on Agriculture.

Countries	Public Spending on Agriculture (% of public budget for agriculture)	Rural population (% of the total population)	GDPAgr. /GDP (%)	Strength of Public Spending (1)
Argentina	0.88	10.7	5.4	1.5
Panama	1.85	42.4	7.1	0.6
Chile	2.23	14.3	5.8	2.7
Costa Rica	2.97	49.6	11.6	0.5
Guatemala	4.2	60.6	19.9	0.3
Brazil	4.42	20.1	8.5	2.6
Mexico	8.6	25	5.5	6.3

(1) Weighted public spending by the weight of the Rural Population and the size of the agricultural sector
Source: Moscardi, Edgardo R (2003)

In any case, it is also necessary to consider how this expenditure is administered in the region[30]. In this respect, we can affirm that there is a certain consensus regarding best practices in the design and implementation of projects: participation by the beneficiaries in all stages of a project, from priority-setting and design onwards, decentralized management, co-financing, gradual co-management and the need for monitoring and impact evaluation systems, etc.

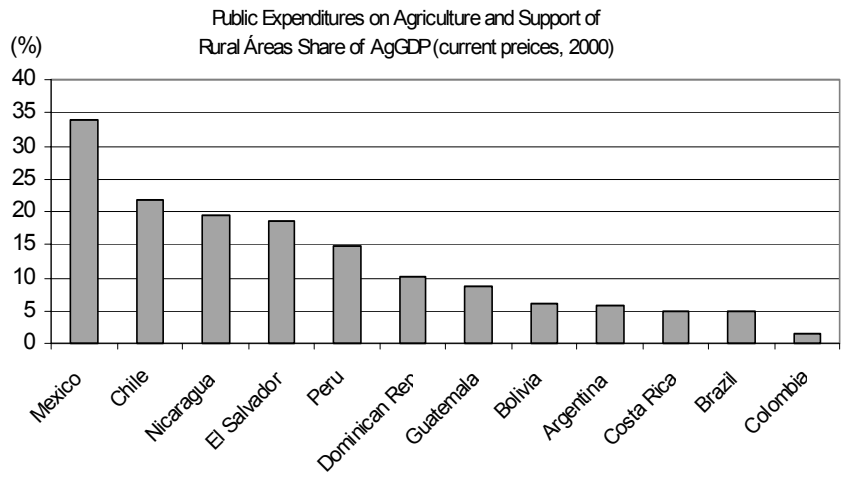
By contrast, the great disparity observed between countries in relation to the importance given to targeting public spending towards the agricultural sector and rural areas, the relative weight between the two, the emphasis placed on different types of

[30] Most of the information in this section comes from the project FAO/TCP/RLA/0176: "Strengthening the Mobilization of Resources and Management of public spending for Agricultural and Rural Development in Latin America and the Caribbean", from the project report prepared by Kerrigan, G. (2001) and a document under preparation by the Agricultural Development Unit. The section on public spending and its impact was prepared by Monica Kjöllerström.

action (from price support to research), shows the lack of a common strategic vision on how to approach agricultural and rural development.

In 2000, public spending on the agricultural sector and rural areas was equivalent to more than US$ 500 per economically active person in agriculture[31](EAPag) in Chile, Mexico and Argentina and to more than US$ 200/EAPag in Nicaragua, the Dominican Republic, El Salvador, Costa Rica, Peru, and Colombia[32]. These expenditures, in turn, represented more than 20% of GDP in some countries (Mexico and Chile).

Figure 13. Expenditures / AgGDP.



Source: ECLAC based on Kerrigan (2001)

Some countries allocate most of this expenditure to the agricultural sector (research and technology transfer, information services, plant protection and animal health, irrigation, forest management, market intervention), as in the cases of Costa Rica and Brazil. Others assign most of these funds to the rural areas (social services and infrastructure). This is the case of Guatemala and El Salvador. In two countries, Colombia and Nicaragua, integrated rural development programs represent 20% of total expenditure on agriculture.

Several countries allocate a relatively large portion of public spending to the agricultural sector for programs aimed at increasing the productivity of a specific group of producers, particularly family or peasant farmers in specific and usually poor regions.

[31] Including agriculture, livestock, fisheries and forestry.

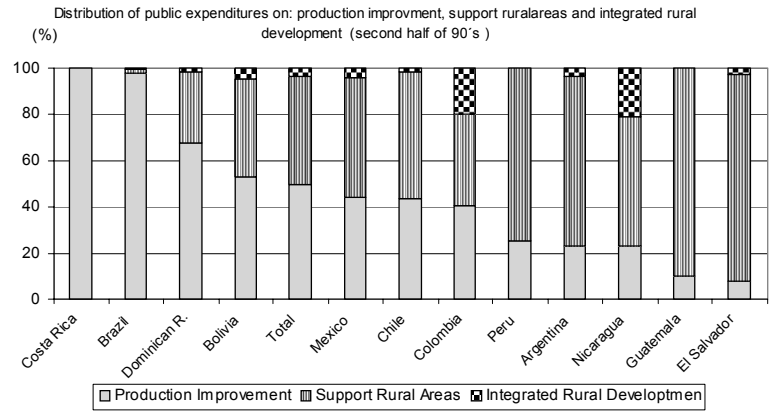
[32] The figure for Colombia includes the "Municipal Assignations" that multiply by nearly 6 times the agricultural and rural spending through the Ministry of Agriculture (when these are not included, spending decreases to some US$ 50/EAP_{ag}).

Brazil, Mexico, Nicaragua, and Peru spend more than 10% on these types of targeted programs, while Bolivia, Chile, and Costa Rica spend more than 30%.

Despite the diversity of individual experiences in different countries, case studies and impact analyses reveal the following common features[33]:

- **Geography**: Policies are implemented in territories that have different levels of infrastructure and are integrated in different ways into regional, national and global markets. Although transaction costs are often not observed, or even visible, they serve to cushion the potential impact of various government policies. This is especially relevant to small producers, since the transaction costs tend to be fixed.

Figure 14. Priority-Setting in Agricultural Public Expenditures.



Source: ECLAC, Based o Kerrigan (2001)

- **Private and public assets:** Private assets and access to public assets determine the capacity of households to generate additional income in response to opportunities and public policies. To this end, a basic, balanced complementary package of assets is required (e.g. title deeds, irrigation, training, access to market information, market access - credit, assets, labor, technology-, quality assurance, drinking water, electricity, etc.)

- **Research:** Research and agricultural extension services have direct and indirect effects on productivity. Financing systems, incentives, and demand driven systems have tended to be geared toward non-traditional export commodities, paying little attention to the improvement of traditional varieties for subsistence consumption..

33 Taken integrally from the conclusions of Kjöllerström, Monica (2003), ECLAC (draft document, version May: "Competitiveness of the agricultural sector and rural poverty: the role of public spending in Latin America")

- **Social programs:** Experience shows that some social programs may have a relatively rapid impact on rural poverty (Mexico's PROGRESA program is one example, Brazil's rural pensions program is another). Direct transfers to small producers (e.g. PROCAMPO in Mexico and once again, Brazil's rural pensions scheme), have shown strong multiplier effects, both by increasing consumption of local goods and services, and by increasing output, since a part of these transfers is invested in production. Finally, programs to promote education, nutrition and health are investments in the quality of human capital that produce effects over the longer term. However, in general terms, it has been extremely difficult to achieve a massive and sustained reduction in rural poverty in the region, with the notable exceptions of Brazil, Chile, Panama and Costa Rica, which managed to reduce rural poverty by five or more percentage points over the course of the decade

The challenges to integrate rural areas (particularly their dispersed populations, geographically remote from "demand-pull factors"[34]and with insufficient private assets) into an increasingly globalized, competitive and dynamic world, are enormous. The additional challenges of improving living standards and quality of life in order to achieve the Millennium Goals within another twelve years, as the proposed minimum, are equally enormous.

This leads us to a proposal that could ultimately bring about a consensus:

1- Determine public spending in pursuit of the productive and social development of the agricultural sector and of rural areas based –at the very least – on an average (weighted) between the weight of GDPag[35] in the country's total GDP, on the one hand, and the weight of the rural population in the total population, on the other.

2- Reserve a certain percentage (for example, 30%) of agricultural public spending for projects aimed at providing the populations of specific areas with a basic balanced complementary package of public and private assets.

   One way to proceed might be to begin by identifying medium-sized towns whose economies are strongly dependent upon economic ties and social services with their rural hinterland, and rank them according to the present strength and expected potential of dynamic local production chains[36]. Then provide this basic package, first to rural areas close to the selected medium-sized towns, gradually expanding the geographical radius around these (obviously taking into account their effectiveness).

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[34] Concept introduced by Thomas Reardon, Professor of the University of Michigan in discussions on non-agricultural rural employment and poverty.

[35] Bearing in mind that recent studies suggest multipliers of around three or more. In other words, in the countries of the region, one peso generated in agriculture would generate three or more pesos in the rest of the economy (see among others: IICA (2003): "More than food on the table: the real contribution of agriculture to economic development " progress report for the joint research project of the Interagency Group for Rural Development, March) and section 3.5, below.

[36] See among others the European initiative described by Courtney, Paul and Andrew Errington (2003): "Small towns as 'sub-poles' in European rural development: policy, theory and methodology", document presented at the Annual Conference of the UK Agricultural Economics Society, Plymouth University, United Kingdom.

Pay special attention (in terms of research, training, extension, etc.) to the populations of these areas over a medium to long-term period (for example, five years).

With regard to the prioritization of households and individuals in these communities, in pursuit of effectiveness and based on what has been learnt from the impact analyses, there should be positive discrimination in favor of those below a certain age (for example, 45-50 years) and with a certain level of education (for example, 6 years for the majority of countries in the region and 9 years for countries where the greater part of the rural population in the age groups considered has already surpassed the 6-year threshold).

3- Use the rest of the public funds to continue supporting the different existing programs and any innovative alternatives that emerge.

3.5 The Real Contribution of Agriculture to the Economies of the Americas

The deficient overall performance of agriculture in Latin America and the Caribbean is due, in large measure, to the insufficient assignment of public and private resources in recent years, as may be deduced from the foregoing analysis of agricultural public spending. The latter, in turn, is affected by political perceptions of the diminished importance of agriculture to national economic development. For this reason, it is necessary to establish the real contribution of agriculture, based on a different reading (as described in the first section of this document), as a first step to achieve its political repositioning.

3.5.1 Beyond food on the table

Agriculture is something more than simply raising crops and livestock, or than food on the table: nowadays, all countries visualize it as a strategic asset[37]. However, the assessment of the importance of agriculture in political circles and among decision-makers differs among countries, to the point that in some, its political value and support has diminished, while in others, especially in the more developed countries, political backing for agriculture is expressed in the assignation of increased resources in the form of subsidies and external support[38].

The main reason for underestimating the importance of agriculture in many countries is that, for the most part, nations measure the performance of agriculture and its contribution to economic development in terms of harvest figures and sales of raw materials, mainly crops and livestock, known as primary agriculture.

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[37] This explains the recognition of agriculture expressed at the Third Summit of the Americas, which should be reflected in specific actions at country level.

[38] In 2002 alone, developed countries, including the United States of America, spent $350 thousand million on government subsidies to support their agriculture (www.wto.org)

However, it is well known that as an economy develops, primary agriculture loses weight in the overall economy, while in contrast, the backward and forward linkages with agroindustry, services and the trade sector are strengthened, both because agriculture is modernized and because consumers demand products with greater added value.

The under-valuation of agriculture has clearly been a concern of the Ministers of Agriculture of the Americas and, faced with the challenges imposed by the new context, it is essential to cast a fresh eye on agriculture in order to reposition it in the arena of political decision-making[39].

A holistic view of rural life must also consider the importance of non-agricultural rural economic activities, and the linkages between them and agriculture. It also takes into account other contributions agriculture and the rural milieu make to development, which have traditionally been overlooked or undervalued. For example, as a contributor to prosperity, non-agricultural activities account for somewhat less than 40% of the employment in rural areas and about half of the income of rural populations. Moreover, rural territories make valuable contributions of an environmental, social and cultural nature that benefit society as a whole. Environmental services, including the protection of water sources, the atmosphere, biodiversity and scenic beauty, are options that can generate new economic activities that will contribute to rural prosperity. Much of the countries' cultural heritage is found in rural territories and the holistic development of same will contribute to social peace and democratic governance.

3.5.2 Primary agriculture versus "Agriculture and Agrifood"

The real contribution of agriculture to national economies goes beyond what is normally reflected in the official statistics. This contribution has quantitative, but also qualitative dimensions. However, the latter are not easily measurable. In order to measure the real contribution of agriculture - emphasizing for now the quantitative aspects - a socioeconomic model[40] was used that allows us to quantify the structural ties between production, consumption, accumulation, income distribution and trade.

The results obtained make it possible to determine that, when Agricultural Gross Domestic Product (AgGDP) is re-calculated by adding that which corresponds to the two sectors directly related to agriculture (the food and agroindustry), the ratio with respect to GDP is much more significant.

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39 This concern was taken up by the Interagency Group for Rural Development at its meeting in Havana (2001). IICA undertook an initiative to conduct the relevant analyses.

40 The Model known as the Social Accounting Matrix (SAM) was used. For this analysis, a SAM was constructed for Costa Rica with data from 1997 and SAMs were obtained for 10 additional countries (Argentina, Brazil, Canada, Chile, Colombia, Mexico Peru, Uruguay, United States, Venezuela) from the database of the GTAP: Global Trade Analysis Project, Purdue University. More information at www.agecon.purdue.esdu/gtap of Purdue University

Indeed, as Table 11 shows, agricultural GDP (AgGDP), as included in official statistics, represents less than 7% of GDP for the countries shown, except for Costa Rica (11.34%) and Colombia (8.00%), during 1997. However, when agriculture and agrifood is considered, this figure increases to around 30% for most countries, except in the case of the United States, Canada and Venezuela, where the figures are lower.

The importance of agriculture re-calculated in this way is multiplied by a minimum of 2.86 times in the case of Costa Rica, and a maximum of 11.6 for the United States. This is due to the fact that, as an economy develops and becomes more diversified, the primary agricultural sector loses weight, whereas the previous and subsequent linkages of the chain are strengthened.

Table 11. Gross domestic product and aggregate value of agriculture in thousands of US$ and percentage, for 1997.

	GDP (1)	AgGDP (2)	AgGDP/ GDP (3)	AgGDP Expanded (4)	AgGDP Expanded /GDP (5)	Relationship between GDP AgGDP Expanded (6)
Argentina	326	14.9	4.60%	104.9	32.20%	7
Brazil	789.7	34	4.30%	206.9	26.20%	6.1
Canada	631.1	11.5	1.80%	96.5	15.30%	8.4
Chile	76.1	4.3	5.60%	24.4	32.10%	5.7
Colombia	94.6	7.6	8.00%	30.4	32.10%	4
Mexico	388.8	17.9	4.60%	95.2	24.50%	5.3
Peru	64.9	4.3	6.60%	20.6	31.80%	4.8
Uruguay	19.1	1.2	6.20%	6.6	34.80%	5.6
United States	7,945.2	55.4	0.70%	644.9	8.10%	11.6
Venezuela	83.7	3.4	4.00%	17.2	20.50%	5.1
Costa Rica	22	2.5	11.30%	7.2	32.50%	2.9

Source: IICA. With data from GTAP 5.0 and the SAM of Costa Rica of 1997 (IICA).

Includes: agriculture, forestry, and fisheries (chapters 01 to 04 of the CPC and 05 of the ISIC)
Includes: primary sector plus food and manufacturing derived from this sector (chapters 21 to 25 of the CPC and 17 to 22 of the ISIC)
For Costa Rica the primary sector consists of the first 9 lines of the SAM 97 and for agriculture and agrifood lines 10 to 23 are added.

3.5.3 Target markets of the agricultural production

An interesting result is obtained if we analyze the target markets of agricultural gross output (Q) including intermediate demand (D); investment (I); private consumption by families (C); exports (X); government consumption (G); and, imports (M).

Table 12. Destination of the Gross Output in 11 Countries of Americas. (In percentage by sector)

Sector	D	I	C	X	G	M	Q
Total Extended Agriculture	54.3%	2.1%	43.1%	9.3%	1.7%	10.4%	100.0%
Primary	73.8%	1.1%	19.6%	11.5%	0.5%	6.5%	100.0%
Food and Agroindustry	48.8%	2.4%	49.7%	8.7%	2.0%	11.5%	100.0%
Natural Resources	109.5%	0.1%	0.2%	25.8%	0.1%	35.8%	100.0%
Rest of Economy	43.1%	11.4%	37.0%	6.7%	9.5%	7.7%	100.0%
Total	45.5%	10.0%	37.4%	7.3%	8.3%	8.4%	100.0%

D: Intermediate Demand I: Private Investment C: Personal Consumption Q: Gross Output

X: Exports G: Government M: Imports

Source: IICA with GTAP 5.0 data and SAM for Costa Rica (1997)

Weighted average for 10 countries (Argentina, Brazil, Canada, Chile, Colombia, Mexico Peru, Uruguay, Estados Unidos y Venezuela). Exclude Costa Rica

Table 12 shows that on average, around 73.8%[41] of the agricultural gross output of the countries analyzed, is devoted to supplying intermediate demand from other sectors of the economy (a greater percentage than the rest of the sectors), which confirms the hypothesis that the linkages between agriculture and the rest of the economy are strong and underestimated.

Table 12 also shows that, on average, only 19.6% of the production of the primary agricultural sector goes to domestic household consumption, that 11.5% is exported, that the government hardly consumes agricultural output (0.5%) and that about 6.5% of the total supply is imported by the countries studied[42].

By contrast, in the countries analyzed, the target markets of the food and agroindustrial production (including the products of pre-processed agricultural commodities) are, on average, distributed in similar proportions between intermediate demand (48.8%) and direct private household consumption (49.7%), and only 11.5% is exported.

3.5.4 The role of intermediate procurement in gross output costs

As in the previous case, the cost structure may be analyzed by sector for each country, to see how costs are distributed between: intermediate inputs (II); remuneration of skilled work force (Lc); remuneration of unskilled workforce (Lnc); remuneration of capital (K); remuneration of the land factor (T); and, net taxes on production subsidies (I).

41 Excluding Costa Rica where it represents almost 53%. Costa Rica's exclusion from the total is due to the fact that the figures come from a different source and the consolidation must be done very thoroughly. In addition, the small size of its economy means that the overall results do not vary.

42 In the case of Costa Rica, 39.3% of the gross output is exported and 41.7% of the gross output is imported.

Table 13 shows that, on average, intermediate procurement represents 46.7% of the primary sector costs in the countries included in the analysis (excluding Costa Rica, where it represents 40.3%)[43].

Table 13.Domestic Supply Cost of the Gross Output in 11 Countries of Americas. (In percentage by sector)

Sector	II	Lc	Lnc	K	T	I	Q
Total Extended Agriculture	54.3%	2.1%	43.1%	9.3%	1.7%	10.4%	100.0%
Primary	73.8%	1.1%	19.6%	11.5%	0.5%	6.5%	100.0%
Food and Agroindustry	48.8%	2.4%	49.7%	8.7%	2.0%	11.5%	100.0%
Natural Resources	109.5%	0.1%	0.2%	25.8%	0.1%	35.8%	100.0%
Rest of Economy	43.1%	11.4%	37.0%	6.7%	9.5%	7.7%	100.0%
Total	45.5%	10.0%	37.4%	7.3%	8.3%	8.4%	100.0%

II: Intermediate inputs Lc: remuneration of skilled workforce Lnc:remuneration of unskilled workforce

K: remuneration of capital T: remuneration of the land factor I: net taxes on production subsidies Q: Gross Output

Source: IICA with GTAP 5.0 data and SAM for Costa Rica (1997)

Weighted average for 10 countries (Argentina, Brazil, Canada, Chile, Colombia, Mexico Peru, Uruguay, Estados Unidos y Venezuela). Exclude Costa Rica

Furthermore, we can see that primary agriculture demands less skilled labor, since on average, only 0.9% of the costs of primary agriculture are assigned to pay for skilled labor, while the percentage for unskilled labor is 18.7%. If we analyze the situation of agriculture and agrifood, the percentage of skilled labor increases to 3.5% and that of unskilled labor decreases to 14.8%. The latter could be a sign of the higher education levels - in this case technical education – required by food production and agroindustrial activities, in which urban, rather than rural employment, has a greater share.

For their part, capital remunerations are important, both in primary agriculture and in the food and agroindustrial sectors, and similar to the rest of the economy. However, the same is not true of the land factor, as would be expected, since its cost is only significant in primary production.

3.5.5 Linkages between agriculture and the rest of the economy

One way of measuring the linkages in an economy is through multipliers that are used to quantify existing ties between a given activity - in this case agriculture - with the rest of the economy. For example, if changes occur in the agricultural supply, these generate changes in demand for inputs, employment, and the generation of income in rural and urban areas. In turn, changes in other sectors of the economy affect agricultural production, agricultural employment and the distribution of agricultural income.

[43] However, if we take the expanded agricultural sector we can see that, both on average and for each one of the countries, intermediate procurement represents nearly 56% of the costs of this sector, ranging from a maximum of 59.7% in the case of Brazil to a minimum of 37% in the case of Peru.

The figures obtained for Peru, for example, show us that to satisfy a one-unit increase in demand in the primary sector requires an increase of 3,744 units in demand for products and inputs from all the economy, directly and indirectly. This generates an increase of 2,171 units in the national private income.

It should be emphasized that when the SAM model is used, the results obtained on multiplier figures for agriculture and agrifood are similar to those for the rest of the economy. This would appear to contradict the traditional view that agriculture has fewer linkage effects than other activities, especially the industrial sectors[44]

Similarly, the results obtained make it possible to generate simulations of the impact of external events or of given public policies. By way of illustration, a simulation of a hypothetical 10% increase in coffee exports[45] in Costa Rica shows that this would produce an increase of almost 1% in the total aggregate value of the economy, as a result of the growth induced in the food sector (1.8%), in the primary sector (1.3%), in agribusiness (0.4%) and in rest of the economy (0.3%). Furthermore, thanks to this change, rural wages would increase significantly, by 0.8%, almost three times the increase experienced by urban wages (0.3%) and higher than capital remuneration (0.6%).

[44] For a more detailed explanation refer to the study carried out by IICA (2003): *More than food on the table: the true contribution of agriculture to economic development*

[45] A 10% increase in coffee exports for Costa Rica represents 0.3% of the gross output for 1997.

SECTION IV

THE OUTLOOK FOR AGRICULTURE AND RURAL LIFE

The exercise conducted in this section is eclectic, in the sense that it does not concern itself with the results of a complex and specific simulation model. Instead, it attempts to create a picture of the situation up to 2015, based on future projections of the present macro-trends that are described and analyzed in the previous section. These are complemented with quantitative and qualitative elements, as well as information taken from different sources and models used by different agencies.

4.1 The Global Scenario up to 2015

The global scenario that is envisioned up to 2015 is a continued process of globalization and trade liberalization, although mechanisms will be developed to attenuate their negative impact; the world population will exceed 7,000 million people, despite a deceleration in the growth rate; the global economy will be increasingly dependent on trends in the leading industrial economies (the U.S., the Euro Zone, Japan and an emerging China); the information society will have prevailed; progress will have been made toward the development of a supranational institutional framework that will increasingly govern the way in which societies and their economies operate; and, there will be advances in efforts to combat poverty and environmental degradation, although these will still be insufficient.

4.1.1 Globalization and trade liberalization will advance

Globalization will follow the dynamic course that has characterized this process in the last two decades and trade liberalization will advance, in the measure that reforms are

consolidated within the multilateral framework of the WTO, free trade areas are implemented in various regions of the planet and progress is made in pending national economic reforms. However, evidence of growing problems of inequality in terms of the benefits and costs of globalization and trade liberalization (between countries and within countries), together with greater pressure applied by an organized civil society, coordinated at the global level by means of networks, will result in the introduction and development of mechanisms and policies to moderate the adverse effects of those mega-trends.

Advances in technology, communications and informatics will gradually bring people and business communities together to form a global village, but they will also enable civil society to gradually develop better and more efficient mechanisms to enable citizens to monitor the actions of governments and corporations.

4.1.2 Population

The world population will grow at a decreased rate of 1.2% between 2000 and 2014, compared with a growth rate of 1.5% during the period 1977-1999, reaching 7,207 million inhabitants. Of these, 81% will live in developing countries, which will continue to grow at rates 3.5 times higher than those projected for the industrialized countries.

Table 14. Population Projections to 2015

	1997-1999			2015		
	Millions	**Percentage**	**Growth rate (% annual)**	**Millions**	**Percentage**	**Growth rate (% annual)**
World	5,900	100%	1.5	7,207	100%	1.2
Developing Countries	4,595	78%	1.7	5,858	81%	1.4
Industrializad Countries	892	15%	0.7	951	13%	0.4
Economies in Transition	413	70%	0.1	398	6%	-0.2

Source: FAO

4.1.3 The global economy

The global economy, which has been submerged in a period of recession, is showing signs of a revival in the United States, though it remains relatively stagnant in the European Union and Japan has not yet emerged from the recession that has lasted more than a decade. Moreover, the monetary policies that have reduced interest rates to their lowest historical levels, have not had the expected revitalizing effect.

The outlook suggests a revival in growth from 2003 onwards, reaching average rates similar to those experienced by the world economy during the nineties, of approximately 3% to 3.5%, as an annual average. The recovery will be particularly noticeable in the transition economies (countries of the former Soviet Union and Central and Eastern

Europe), which will grow by between 3.7% and 4%, compared with a contraction of nearly -2% observed during the nineties. The developing world is expected to grow at an average rate of around 5%, slightly higher than the levels seen during the 1990s, but will still not recover the growth levels reached during the 1970s (FAO, 2002; USDA, 2003).

Inflation rates will be kept relatively low throughout the world, although in developing countries and economies in transition these will remain at significantly higher levels than the average for more developed countries, projected at 2.5% or less (USDA, 2003).

The United States

The economy of the United States, which grew at an annual average rate of 2.4% during the nineties, and then slowed from 2000, will begin to recover its growth from 2003, reaching an annual average rate of 1.9% during the first five-year period of 2000 and subsequently an average growth of between 2.7% (FAO, 2003) and 3% (USDA, 2003). Meanwhile, the dollar is beginning to recover in relation to other leading currencies and is expected to remain strong, with a tendency towards real appreciation.

However, there are also some troubling signs in the United States economy: a high and growing trade deficit, as well as the impact derived from the costs of the war in Iraq and the lack of confidence in company share prices in the stock markets, due to bankruptcies and fraudulent accounting practices[46].

The European Union

The European Union is beginning a process to incorporate new partners from the transition economies of Eastern Europe. Although this implies an expansion of its markets, it will also impose increased costs on the economies of the leading countries of this bloc, and may possibly boost unemployment in those countries, through the displacement of industries and activities from countries with higher costs towards the new partners with lower relative costs. The overall result could be a contraction in the living standards of the leading economies of the old continent.

Japan, China and India

The performance of the leading Asian economies will be disparate, though on average, Asia will be the continent of highest growth in the world, with annual average growth rates of between 5% and 6%, led by the dynamic economies of China, North Korea and India. Japan is expected to slowly recover its growth rate, reaching an average

[46] Between 2000 and 2001 alone, 433 companies traded on the stock exchange disappeared, resulting in asset losses of US$ 353.000 million, the most significant being ENRON. Similarly, 26 of the 100 leading companies in the Fortune ranking went bankrupt during that period, according to a report by the American Marketing Association.

of 1.5% by the second half of the decade, similar to its performance during the 90s (USDA, 2003). However, it will continue to be crucial because of its investments in the region. China, for its part, will continue with high growth rates (between 6 and 7%) consolidating itself as the world's great factory. The rise in per capita incomes among its large population will have a significant impact on the expansion of world demand for food.

India will become the world's most populous nation, but its economic performance will be successful after having implemented a program of economic reforms. The outstanding growth achieved during the 1990s (annual average of 5.5%) is likely to be slightly surpassed during the decade of 2000. The USDA estimate for the period 2006-2012 is an annual average of 6%.

Latin America

Latin America will continue to be afflicted by instability, at least during the first half of the 2000-2010 decade. However, with the gradual recovery of the Argentinean economy and with the end of the "lost half-decade" cycle, which resulted in a –0.3% drop in per capita GDP between 1998 and 2002, as well as unemployment rates that reached a record high of 8.9% of the workforce (ECLAC, 2003), the regional economy is expected to recover its buoyancy, climbing to nearly 2% by 2005 and improving its performance to achieve an annual average rate of 4.3% for the period 2006-2012 (USDA, 2003).

However, concerns remain over the impact of the decline in the international financial markets, which resulted in a return to a situation of negative net transfer of external resources (unprecedented since the lost decade of the 1980s). This meant a net outflow of 39,000 million dollars in 2002, equivalent to 2.4% of regional GDP at current prices (ECLAC, 2003). This, despite the fact that remittances sent to LAC by emigrant workers continue to grow (these were estimated at US$ 25,000 in 2002, with a growth of 17.1% with respect to the previous year) and have surpassed direct foreign investment as sources of financing for the region (World Bank, 2003).

A synthesis of the global scenario suggests moderate growth worldwide, low inflation, with markets experiencing growing instability and greater competition at the level of countries, at the level of products and also due to consumer incomes.

4.1.4 Progress in combating poverty and the Millennium Goals

Poverty estimates in the world, and particularly in Latin America, vary according to the source and the methodology used to determine poverty lines and the actual definitions of what constitutes poverty. They also vary according to whether income is considered as the only explanatory variable to determine the achievement or non-achievement of certain living standards, or whether non-material or symbolic aspects are included in the concept of poverty. Determining what is "rural", in order to assess poverty in such areas,

adds complexity to the problem, since the definitions of "rural" vary from country to country.

The above situation presents problems when it comes to establishing whether or not the world is on track to fulfill the Millennium Goals. For example, according to the World Bank, poverty will be reduced from 29.6% in 1990 to 13.3% in 2015 (though with regional disparities) and therefore the WB estimates that the respective Millennium Goal can be achieved (World Bank, 2002). However, this same report mentions that another study considers that the Bank is overestimating global poverty.

Meanwhile, ECLAC/IPEA/UNDP (2002) point out that if countries were to continue along the same path of growth and inequality of incomes followed during the decade of the 90s, only 7 of the 18 countries studied would manage to achieve the goal of reducing extreme poverty.

Evaluations conducted by the United Nations regarding the degree of progress made in achieving the Millennium Goals[47] indicate that, despite notable advances in some fields and regions, many difficulties stand in the way of reaching these goals.

In the 2003 Human Development Index, six countries of Latin America and the Caribbean rank high in the human development index, 13 obtain a medium ranking and one a low ranking. Furthermore, the Index classifies countries in relation to their probability of achieving each of the Millennium Goals, identifying them as "top priority" and "high-priority". In Latin America and the Caribbean a total of four countries are classified as a "priority" (Haiti as a "top priority", while Bahamas, the Dominican Republic and Venezuela are listed as "high priority").[48]

With respect to the goal to eradicate extreme poverty and hunger - aimed at reducing by half the proportion of people on the planet living on less than a dollar a day - although this goal has been achieved in East Asia and the Pacific, other regions such as Latin America, Sub-Saharan Africa and some parts of Europe and Central Asia, are having difficulties in doing so.

With regard to achieving universal access to complete primary education, most regions are expected to meet this target by 2015, but others, such as Sub-Saharan Africa and Western and Southern Asia, show low levels of achievement.

The elimination of gender inequalities in primary and secondary schools by 2005 and at all levels of education by 2015, as means for promoting gender equality and empowering women, has not been achieved in developing countries.

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47 United Nations (2002). Application of the United Nations Millennium Declaration: Report of the Secretary General (A/57/20). July 13, 2002.

48 Gabriel Bidegain. Fourteenth Meeting of Directors of International Cooperation of Latin America and the Caribbean. Panama City, Panama. 21,22 and 23 July, 2003.

Although the 2003 Human Development Index indicates that Latin America is the region with greatest possibilities of meeting the targets in the area education, according to its national averages, the data also reveals major inequalities in the volume and quality of primary education in remote and rural areas, and in indigenous territories, which are precisely the areas with the highest poverty levels.[49]

The goal to reduce the mortality rate among children under five by two-thirds between 1990 and 2015 has not been fulfilled, and it is estimated that out of every 1,000 children born, 100 die of hunger before reaching the age of five. In relation to the goals and targets related to children, there have been some achievements in LAC, but these are still insufficient[50]. However, the region *did* achieve the following targets related to children and adolescents during the 1990s: reduction of infant mortality from 43 to 30 deaths per 1,000 live births; reduction of mortality in children under five from 53 to 37 deaths per thousand live births; immunization coverage close to 90%; lack of access to potable water reduced from 31% to 16%'; and, primary school enrollment increased to 90%, though with differences in the progress achieved between and within countries.[51]

The goal to improve maternal health has not been achieved in developing countries and maternal mortality rates remain particularly high in Sub-Saharan Africa.

Efforts to halt and reverse the spread of HIV/AIDS by 2015 do not appear to be succeeding and, on the contrary, the number of cases continues to increase, especially in developing countries.

Finally, there have been partial advances in efforts to reverse the loss of natural resources, given that world consumption of Clorofluorocarbons (CFCs) has been significantly reduced with the signing of the Montreal Protocol (1986). However, there have been few changes in worldwide carbon dioxide (CO2) emissions, the leading cause of the greenhouse effect.

It is estimated that to achieve the Millennium Goals, it will be necessary to have the renewed support of Official Development Assistance (ODA), with an additional US$ 50,000 million annually. The Monterrey Consensus was signed at a time when ODA contributions, as a percentage of the donor countries' Gross Domestic Product, had not only decreased in the last 10 years, but was also at its lowest historical levels[52].

During the World Food Summit of 1996, countries also established the goal to reduce by half the number of undernourished people in the world by the year 2015. According to

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49 Words of Elizabeth Fong, UNDP. Fourteenth Meeting of Directors of International Cooperation of Latin America and the Caribbean, Panama City, Panama. 21,22 and 23 July, 2003.

50 Gabriel Bidegain. Fourteenth Meeting of Directors of International Cooperation of Latin America and the Caribbean. Panama City, Panama. 21,22 and 23 July 2003.

51 UNICEF. Poverty is eradicated from childhood: linking the Millennium Goals to targets related to children and adolescents. Fourteenth Meeting of Directors of International Cooperation of Latin America and the Caribbean. Panama City, Panama. 21,22 and 23 July 2003.

52 In 1971, at the United Nations, the Donor Countries had pledged to donate 0.7% of their GDP as Development Cooperation (equivalent to some US$165 thousand million) but only Denmark, Luxembourg, Holland and Sweden, have achieved this goal.

recent FAO estimates (FAO, 2001), the total number of people suffering from chronic undernourishment in the world has been reduced by around 40 million, but this reduction has been slow and inadequate: it does not exceed an average of 6 million per year, when it should be 8 million. FAO points out that, at the current rate of progress, this goal will be achieved in more than 60 years, and not by 2015.

4.1.5 Agriculture, natural resources and the environment

Projections of world agricultural output indicate an average annual growth rate of 1.6% for the period 2000-2015, less than the 2% observed for the same variable during the previous period, 1989-1999. In developing countries, agricultural output will expand at a rate higher than the world average (2%), and at 2.5 to 3 times the rate for industrialized countries and economies in transition.

Processed products will continue to gain ground in the markets at the expense of basic commodities, while the prices of the leading agricultural commodities in world markets will remain low, but with a slower rate of decline, unless decisive progress is made in the liberalization of markets and the reduction of internal supports and subsidies.

Consumption patterns among the world population are becoming increasingly similar and in general, the trend is toward better quality, higher priced foods. Consumption of meat and vegetable oils is expected to continue increasing in the developing countries.

In general, it is estimated that by 2015 an ever-greater proportion of the world's population will be well fed (FAO, 2002) and as this occurs, the increases in world demand for commodities will continue to decrease. However, in developing countries, where almost half of the population still has low consumption levels, the fall in the growth of demand will be smaller and slower.

Caloric intake in the world, measured in per capita terms, will rise from 2,803 Kcal. daily during the period 1997-99, to 2940 kcal/day by 2015. Developing countries will be positioned near the world average (2850 kcal/day), but this consumption will represent nearly 83% of the figure observed for industrialized countries. Nevertheless, the gap between the caloric intake of developing countries and industrialized nations will have been reduced with respect to the period 1977-1999.

By 2015, per capita consumption of grains and raw legumes will stabilize at levels similar to the current levels, both worldwide and in the developing countries. However, consumption of these products will increase in LAC, although its per capita consumption of grains is almost 20% lower than the world average, whereas in the case of legumes it surpasses world averages and those of developing countries.

Average sugar consumption will remain more or less stable, in terms of kilograms per capita, although LAC's average consumption is more than the double the average for the world and for developing countries.

In relation to meat, milk and dairy products, LAC also shows significantly higher average levels of consumption than the world average, and also higher in relation to the period 1977-1999.

It is estimated that increased food production in the near future will be due essentially to increases in productivity, especially in developing countries. FAO estimates indicate that in these countries, increased yields will be responsible for almost 70% of the growth in production (in which biotechnology will play a growing role) and only 20% will be due to the incorporation of additional land (10% is due to other factors).

Table 15. Changes in food consumption structure: 1997-1999 to 2015.
(Kg/per capita/year)

	Cereals	Roots and tubers	Sugar Cane	Legumes (Raw)	Vegetables, Oils and Oily seeds	Meat (carcass)	Milk and Diary products
World							
1977-99	171	69	24.0	5.9	11.4	36.4	78
2015	171	71	25.1	5.9	13.7	41.3	83
Developing Countries							
1977-99	173	67	21.3	6.8	9.9	25.5	45
2015	173	71	23.2	6.6	12.6	31.6	55
LAC							
1977-99	132	62	48.9	11.1	12.5	53.8	110
2015	136	61	48.2	107	14.5	65.3	125

Source: FAO (2003).

The use of arable land will increase in developing countries from 956 million hectares in the period 1997-99 to 1017 million in 2015. Sub-Saharan Africa and Latin America and the Caribbean will be responsible for nearly 56% and 33% of this increase, respectively, since they are the two regions with the option of expanding their agricultural frontier. The increase in land use will be less than in the past and it is estimated that much of this expansion will result from the reduction of the forested area.

Despite a slower growth rate, deforestation will continue to be a global problem and water (for irrigation and human consumption) is an emerging and growing challenge, with serious shortages forecast for certain regions of the world. Is estimated that one out of five developing countries will be affected by water shortages (FAO, 2002).

The area under irrigation is projected to grow during this period and will be essential to guarantee the food supply. At the same time, there are concerns over the consequences of increased demand for land, due to the expected growth of livestock and dairy production, as well as the effects of climate change and adverse conditions as droughts, floods and salination of water and soil, etc.

4.1.6 Production and agricultural trade

According to the USDA projections (USDA, 2003), the production and trade of oilseeds (particularly soybean and its by-products: oil and meal) will continue to expand in the coming years, surpassing the volume of trade in wheat, traditionally the largest traded commodity. Soybean exports will rise from 60.6 million metric tons in 2002/03 to 78.0 million in 2012/13 (a growth of almost 30% during the period), and Brazil (which will more than double its exports during this period) will become the leading soybean exporter, displacing the United States. Argentina will remain the world's third soybean exporting country. The leading soybean importers will be China and the countries of the European Union.

Exports of soybean meal will also grow, though less dynamically than soybean exports, with Argentina as the leading world exporter, representing almost 40% of world exports by 2012/13. The European Union emerges as the leading importer of soybean meal.

The trade in soybean oil is not only of a smaller scale than the above, but will also experience moderate growth, led by exports from Argentina and Brazil.

Table 16. Main Agropecuarian Products Projections.
(millions of MetricTons)

	Cereals		**Meat**		**Vegetable Oils and Oily seeds**		**Milk and Diary Products**	
	World	***Developing Countries***	**World**	***Developing Countries***	**World**	***Developing Countries***	**World**	***Developing Countries***
Production								
1997-99	1889	1026	218	116	104	68	561.7	219.3
2015	2387	1354	300	181	157	109	715.1	346.2
Growth between periods (%)	1.4%	1.6%	1.9%	2.7%	2.5%	2.8%	1.4%	2.7%

	Roots and Tubers		**Sugar**		**Legumes**		**Coffee**	
	World	***Developing Countries***	**World**	***Developing Countries***	**World**	***Developing Countries***	**World**	***Developing Countries***
Production								
1997-99	680	501.9	173.4	128.8	56	39.3	6.5	6.5
2015	846.5	662.9	219.8	173	67.7	51	7.8	7.8
Growth between periods (%)	1.3%	1.7%	1.4%	1.8%	1.1%	1.5%	1.1%	1.1%

Source: FAO

After a period of stagnation during the 1990s, the world trade in wheat and basic grains is estimated to grow due to the expansion of world demand. This commodity is essential for the recovery of the economies in transition (countries of the former Soviet Union and Central and Eastern Europe). The world trade in basic grains is estimated to increase from 100.7 million metric tons in 2002/03 to 128.1 million by 2012/13, with Argentina and the European Union as the leading exporters, but with a rising participation by the East European countries. Corn emerges as the leading traded basic grain, representing 72% of the total traded in the period.

The wheat trade (including flour) will expand by 27% between 2003 and 2012, the leading exporters being the five countries that concentrate 75% of the world trade (Argentina, Australia, Canada, European Union and the United States). The main factors fuelling the growth of this trade, on the import side, will be the developing countries, mainly Africa, the Middle East and Asia, and particularly the growing importance of imports by China, which will experience a deficit in its domestic wheat supply.

The trade in meat products is also predicted to undergo major growth, both in relation to poultry meat (the most dynamic segment), as well as red meats and pork. There are two reasons for this dynamic expansion: firstly, the increased market access guaranteed by the WTO agreements and secondly, an increase in the incomes of a large group countries that import these products. It is estimated that beef exports will rise from nearly 6,000 metric tons in 2002, to just over 7,400 metric tons in 2012, with Australia, the United States and Argentina, in that order, as the leading world exporters.

The poultry meat market is expected to grow by just over two thousand metric tons between 2002 and 2012, with the United States, Brazil and the European Union as the leading world exporters, and with the US taking more than a 43% share of the export market. Meanwhile, the growth of pork production will be more moderate (from 3,748 metric tons in 2002 to 4,447 metric tons in 2012), with the European Union as the leading world exporter, followed by Canada and the United States.

4.2 Outlook for Latin America and its Agriculture

4.2.1 Multilateral Negotiations, FTAA and others: scenarios for agriculture in LAC

During the second semester of 2003, as mentioned in section II, trade negotiations have been taking place at different levels, with the general aim of bringing about greater trade liberalization, either at the multilateral level in the context of the WTO, or as part of efforts to create more or less comprehensive free trade areas. These processes have pre-established dates for their different phases, ranging from the shorter-term deadline for the CAFTA negotiations between Central America[53] and the United States, to the longer-term target date of 2005, in the case of the WTO and the FTAA.

[53] Other initiatives are under way in other latitudes of the Continent, such as the forging of closer ties between MERCOSUR and the Andean countries.

These agreements seek to guarantee more stable and better-defined trade conditions among the partners involved, and at the same time create an enabling environment to attract investment.

Various positions in favor and against the negotiations are adopted by potential winners and losers, particularly in relation to the possible outcomes. In the case of agriculture, this subject becomes even more sensitive because of the different stakeholders involved and the social and environmental considerations that go beyond the mere production and exchange of goods.

In the present context, and looking to the near future, the one option that is not being discussed is the possibility of remaining outside a process to forge closer links with one or other of the world's three main economic blocks: North America (NAFTA), the European Union, and the Asian bloc headed by Japan and China. However, what **is** being called into question is the way in which countries and their agriculture should be linked to those blocs, either through a collective effort (for example the FTAA), or through a strategy to first consolidate negotiating positions within the subregional systems, in order to then move on to the larger scenario, as appears to be the case with MERCOSUR. Chile has adopted a third variant as its strategy: diversifying its array of commercial links with various countries all over the planet.

The three leading economic blocs mentioned above acquire a greater or lesser importance for the LAC countries, according to their own particular circumstances and geographical positions. For example, for the MERCOSUR countries, NAFTA and the European Union are non-excludable options (hence the lack of interest in the FTAA shown by some countries), and they have already made progress on several fronts in their negotiations with the EU, with the exception of the subject of agriculture.

The Andean Group appears more interested in forging closer links with MERCOSUR, than in the scenarios of NAFTA, via the FTAA, or the European Union. The exception is Colombia, which has shown interest in a Free Trade Agreement with the United States.

Central America, for its part, is on the verge of concluding its trade negotiations with the United States, already has agreements with Mexico and some countries have agreements with Canada (and therefore the FTAA loses importance). Moreover, in the foreseeable future, the European Union does not offer the possibility of real commercial integration and, in addition, it would be necessary to first overcome certain core problems to be able to negotiate region to region.

At the same time, the European Union is currently immersed in a process of incorporating the eastern countries of its continent, an initiative that will require major efforts and resources. Asia, for its part, is advancing in its efforts to create a bloc around the ASEAN nations and this market of almost 2,000 million people, particularly China, has been the focus of attraction of the foreign investment in recent years, and will probably remain so in the years to come.

Given this panorama, the options with the greatest impact for LAC as a whole will be the scenarios of the WTO and the Free Trade Area of the Americas, achieved either through a comprehensive approach (as contemplated by the current FTAA) or through the signing of bilateral and subregional agreements that gradually converge toward a broader system. In this regard, many analysts believe that the future of the FTAA will depend to a great extent on the way in which the WTO negotiations in Geneva evolve, after the failure of the recent ministerial meeting held in Cancun, Mexico.

4.2.2 Effects of the WTO and the FTAA on agriculture and the rural sector of LAC

The results outlined below are based on research conducted by Samuel Morley and Valeria Piñeiro, as a contribution of the International Food Policy Research Institute (IFPRI). This study proceeded to analyze the possible impact of these two scenarios on agriculture and the rural sector in LAC, assuming that in the first case – the WTO option - there would be a complete elimination of all trade barriers (including subsidies) within the framework of the WTO or, in its absence the implementation of a Free Trade Agreement in the Americas, or the FTAA option[54].

The results in both cases indicate that international commodity prices would increase. In the case of the FTAA, the aggregate increase would hover around 0.5%, with the prices of rice, sugar and fruits and vegetables experiencing the greatest increase in the primary sector, and meat and milk products being those with the greatest growth in the agrifood industry (see Table 15). Furthermore, wool, forestry and fisheries are the activities that would see their prices reduced. For the rest of industry and petroleum derivatives, all the prices would decrease under the FTAA scenario.

In the WTO scenario, the impact on relative and absolute prices is much greater[55]. For agriculture as a whole, the increase in prices would hover around 11%. Prices would rise more steeply in those products for which farm subsidies are highest in the OECD countries: grains, meat and dairy products. In these sub-sectors, full compliance with the WTO agreements would increase prices by more than 20%.

Impact on production

The changes in world prices, shown above, show that full trade liberalization under the WTO scenario would have an expansive impact on production and that 10 of the 15 countries included in the sample would see their production increase (see Table 16). Agriculture and agribusiness would be the main beneficiaries of this positive change,

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54 To conduct this exercise, data was used from two previous research efforts carried out by IFPRI: one a simulation using the world GTAP model and the other, a United Nations Project, which developed 16 General Equilibrium Models for 16 countries in the region.

55 The World Bank has estimated that the agreement reached in Cancun could have increased global income by $520 thousand million in 2015, mainly benefiting developing countries, which in turn would have freed more than one hundred and forty million people from poverty (World Bank, 2003).

except in Costa Rica, El Salvador, Mexico and Venezuela. In the case of Costa Rica, the decline of agriculture under this scenario is explained by the fall in the production of coffee, banana, and sugar, which would offset the positive changes in the rest of agricultural sector. The situation is similar in El Salvador, where coffee and cotton would be the most affected commodities.

Table 17: Results of the FTAA and WTO simulations.
International prices

	ALCA		OMC
rice	1.013		1.149
Wheat	1.001		1.231
Other grains	1.002		1.204
fruits and vegetables	1.005		1.052
oleaginous	1.000		1.113
sugar	1.009		1.106
fvegetable fibers	0.998		1.011
others crops	1.002		1.015
Wool	0.995		1.066
silviculture	0.996		1.001
Fishing	0.996		1.016
Bovine, ovine meats and products	1.009		1.213
Other meats and products	1.002		1.190
vegetables oils	1.000		1.044
Diary products	1.007		1.262
Other food products	1.002		1.068
Beverages, tobacco products	1.000		1.087
energy	0.997		0.980
mining	0.995		0.998
textiles	0.998		1.014
iClothing	0.997		0.993
Leather products	0.997		0.992
Paper and y printing products	0.998		1.010
Oil products	0.997		0.996
Chemical products, rubber and plastic	0.998		1.013
mineral products	0.997		1.012
Motor vehicles and parts	0.999		1.013
transportation equipment, others	0.997		1.002
electronic equipment	0.997		1.000
Machinery	0.997		1.007
Electricity and water	1.000		1.000
construction	1.000		1.000
Comercial services,transport, financing and others	1.000		1.000
Public administration, defense, education y health	1.000		1.000

Source: work sheet provided by E. Diaz Bonilla and X. Diao.

Mexico is a unique case, due to its special access to the markets of the United States under NAFTA. Here, the effect of producing more grains and milk products in response to the rise in world prices, would lead to a fall in production in other sectors of agriculture. Depending on the assumptions made, Mexico's agricultural output would fall by a minimum of 0.4% and a maximum of 2.7%.

The countries that would benefit most would be those that produce large quantities of grains, meat and dairy products, such as Argentina and Honduras, or those with large export sectors oriented towards the US market, such as Chile and the Dominican Republic.

The impact of the WTO scenario is negative for Uruguay and Brazil, even if their agriculture expands. This is partly because the agricultural sector is a relatively small part of their economies and partly because the reduction in tariffs affects the import substitution industries in both countries.

Most of the countries analyzed, with the exception of Mexico and Costa Rica, would experience a significant growth in their exports, exceeding that observed in their respective GDP. For Mexico, as mentioned earlier, the WTO scenario is far less advantageous than for the rest of the countries, due to NAFTA. However, the movement in the exchange rates suggests that the increase in exports is prompted more by the need to pay higher prices for imports, that by the positive impact of higher prices on the countries' exports.

Meanwhile, the simulation of the FTAA scenario (see Table 17) shows the effects of eliminating trade barriers between the countries of the hemisphere, without a change in production subsidies (which is an important component of the WTO simulation). The results indicate that for almost all the countries, the impact of the FTAA is less than that observed in the WTO scenario, which is to be expected, since the changes in world prices are of a smaller scale. The result shows that all the countries in which aggregate output contracts in the WTO scenario, are better off in the FTAA scenario. Indeed, Mexico, Colombia and Costa Rica, whose production would drop under the WTO scenario, would actually experience a slight growth with the FTAA. Furthermore, the FTAA would be positive for Brazil and Uruguay, in terms of growth in their output.

However, for a number of countries, mostly the small ones, (Costa Rica, El Salvador, Paraguay and Venezuela), the FTAA scenario would imply a fall in exports. In these countries, the lifting of trade barriers would lead to an inflow of foreign capital and an appreciation of the exchange rate, a contraction of exports, and a rise in imports.

Impact on employment and wages

The results of the simulation indicate that, in all the countries (except for Mexico and Venezuela), demand for labor increases in both the WTO and the FTAA scenarios. This leads either to an increase in employment, or in wages, or both, depending on the market

factors considered. In the majority of countries, the WTO scenario particularly favors the rural sector, because it produces the goods whose prices grow rapidly in the simulations. This applies to Argentina, Bolivia, Costa Rica, Peru, the Dominican Republic, El Salvador, and Brazil. Although no disaggregated information is available for the rural and urban workforce in Honduras, estimates on welfare indicate that rural households also benefit under both scenarios, but to a greater extent in the FTAA scenario. The results also seem to suggest that unskilled labor benefits under both scenarios (see Table 18 and 19).

Table 18. Changes in Macro-variables in the WTO scenario

	ARGENTINA	BOLIVIA	BRAZIL	CHILE	COLOMBIA	COSTA RICA	ECUADOR	EL SALVADOR	HONDURAS	MEXICO	PARAGUAY	PERU	DOMINICAN	URUGUAY	VENEZUELA
Absorción	0.40	0.40	-0.01	0.67	0.31	2.50	0.50	1.70	1.90		0.69	0.54	1.30	-0.09	-0.13
Consumo de hogares	0.50	0.32	0.18	1.13	0.21	3.60	0.70	1.80	2.80		0.67	1.44	1.70	-0.13	-0.13
Inversión		1.26	-0.97	0.00	0.12	0.00	0.00	2.20	0.00	0.10	0.74	-2.04		0.00	-0.20
Consumo del gobierno		-0.18	0.96	0.00	0.92	0.00	0.00	0.90	0.00		0.83	0.00		0.00	0.00
Exportaciones	4.30	2.11	1.00	1.83	5.87	-0.50	1.50	-0.20	0.70	0.60	0.00	4.78	9.70	2.19	-0.36
Importaciones	3.60	1.82	2.00	1.59	0.16	4.70	1.60	4.00	2.40	0.60	1.02	4.28		1.30	-0.72
Tipo de cambio real	0.80	2.00	1.26	1.70	2.81	-2.00	1.80	-0.70	-0.10		-0.20	1.60	2.20	1.20	-1.84
agriculture	2.62	0.05	0.41	1.18	0.67	-0.02	0.85	0.05	2.44	0.37	-0.39	0.11	0.46	0.51	0.28
mining	-0.27	1.60	-3.86	0.62	1.38		0.02	-1.27	0.00			1.71	1.11		-0.07
food mfg	1.53	0.05	0.68	0.77		0.05	0.69	0.81	1.50	0.03		0.97	0.00	-0.26	-0.09
other industry	0.00	0.75	-0.24	0.77	0.43	0.25	-0.05	-0.31	-0.63	0.05	0.33	0.22	1.34	-0.91	-0.27
services	0.20	0.10	-0.48	0.63	-0.28	0.29	0.38	0.80	0.28	0.00	0.44	0.46	1.11	0.05	-0.03
total	0.36	0.28	-0.32	0.71	0.00	0.23	0.42	0.40	1.21	0.04	0.29	0.50	0.95	-0.05	-0.08

Table 19. Changes in Macro-variables in the FTAA scenario

	ARGENTINA	BOLIVIA	BRAZIL	CHILE	COLOMBIA	COSTA RICA	ECUADOR	EL SALVADOR	HONDURAS	MEXICO	PARAGUAY	PERU	DOMINICAN	URUGUAY	VENEZUELA
Absorción	0.40	0.40	-0.01	0.67	0.31	2.50	0.50	1.70	1.90		0.69	0.54	1.30	-0.09	-0.13
Consumo de hogares	0.50	0.32	0.18	1.13	0.21	3.60	0.70	1.80	2.80		0.67	1.44	1.70	-0.13	-0.13
Inversión		1.26	-0.97	0.00	0.12	0.00	0.00	2.20	0.00	0.10	0.74	-2.04		0.00	-0.20
Consumo del gobierno		-0.18	0.96	0.00	0.92	0.00	0.00	0.90	0.00		0.83	0.00		0.00	0.00
Exportaciones	4.30	2.11	1.00	1.83	5.87	-0.50	1.50	-0.20	0.70	0.60	0.00	4.78	9.70	2.19	-0.36
Importaciones	3.60	1.82	2.00	1.59	0.16	4.70	1.60	4.00	2.40	0.60	1.02	4.28		1.30	-0.72
Tipo de cambio real	0.80	2.00	1.26	1.70	2.81	-2.00	1.80	-0.70	-0.10		-0.20	1.60	2.20	1.20	-1.84
agriculture	2.62	0.05	0.41	1.18	0.67	-0.02	0.85	0.05	2.44	0.37	-0.39	0.11	0.46	0.51	0.28
mining	-0.27	1.60	-3.86	0.62	1.38		0.02	-1.27	0.00			1.71	1.11		-0.07
food mfg	1.53	0.05	0.68	0.77		0.05	0.69	0.81	1.50	0.03		0.97	0.00	-0.26	-0.09
other industry	0.00	0.75	-0.24	0.77	0.43	0.25	-0.05	-0.31	-0.63	0.05	0.33	0.22	1.34	-0.91	-0.27
services	0.20	0.10	-0.48	0.63	-0.28	0.29	0.38	0.80	0.28	0.00	0.44	0.46	1.11	0.05	-0.03
total	0.36	0.28	-0.32	0.71	0.00	0.23	0.42	0.40	1.21	0.04	0.29	0.50	0.95	-0.05	-0.08

Source: *IFPRI Project documents*

Changes in poverty

It seems clear from the information included in Table 20 that a world without trade barriers and without production subsidies benefits the poor, since poverty is reduced in 11 of the 15 countries under the WTO scenario. In several cases, such as Brazil, Colombia,

Mexico and Uruguay, this occurs despite the fall in production. In all these cases, the benefits of higher commodity prices for rural workers and households offsets the higher costs of food prices in urban households: the net effect on poverty is positive, since poverty rates are higher in rural households than in urban ones.

Table 20. Changes in employment and welfare in WTO.

Empleo por tipo de factor															
	ARGENTINA	BOLIVIA	BRAZIL	CHILE	COLOMBIA	COSTA RICA	ECUADOR	EL SALVADOR	HONDURAS	MEXICO	PARAGUAY	PERU	DOMINICAN	URUGUAY	VENEZUELA
rural calificado	na	na	13790.00	na	na	na	na	na	na	na	na	0.59	29749.00	na	na
rural no calificado			2622.00									3.01	524589.00		
rural total	0.00		16412.00									3.60	554338.00		
urbano calificado	2615.21	20.88	28925.00	608.26		639.15	1286.66	702.36	7319.19	41.63	3517.21	3.11	474475.00		2610166.87
urbano no calificado	7905.83	7.47	7657.00	752.93		843.16	2390.43	1572.37	12839.72	328.19	3950.60	2.14	1329081.00		4226431.84
total urbano	10521.04	28.35	36582.00	1361.19		1482.31	3677.09	2274.73	20158.91	369.82	7467.81	5.26	1803556.00		6836598.71
total fuerza laboral			52994.00									8.85	2357894.00		
Remuneracion por tipo de factor															
rural calificado	na	na	1666.44	na	na	na	na	na	na	na	na	2.10	1999.00	na	na
rural no calificado			1283.00									0.71	1529.00		
rural total			1605.18									0.94	1552.50		
urbano calificado	10.07		3385.45	na	5.73		5.12			11.97		5.44	2212.45	0.075	2.40
urbano no calificado	5.96		2708.24		6.51		1.50			2.77		2.35	1501.64	0.037	1.40
total urbano	6.99		3243.70		6.12		2.77			3.80		4.18	1656.42	0.053	1.80
total fuerza laboral	6.99		2736.26		6.12		2.77			3.80		2.86	1631.48	0.046	1.80
Bienestar a nivel de los hogares															
Consumo per cápita real															
Hogares Rurales		4.80	31208.00		945020.68	0.04	2322.08	803.06	1679.48	na	6637.20	11.33	40.50		
Hogares Urbanos		23.5	24841.00		1343722.82	0.036	10736.71	133.52	13744.43		14301.28	60.02	59.10		
Total Hogares		28.3	56049.00	1747.3	2288743.50	0.038	13058.79	936.58	15423.91		20938.48	71.35	99.60	90.61	18766576

Source: IFPRI, Project documents

Table 21. Changes in employment and welfare with FTAA.

Empleo por tipo de factor															
	ARGENTINA	BOLIVIA	BRAZIL	CHILE	COLOMBIA	COSTA RICA	ECUADOR	EL SALVADOR	HONDURAS	MEXICO	PARAGUAY	PERU	DOMINICAN	URUGUAY	VENEZUELA
rural calificado	na	na	0.232	na	na	na	na	na	na	na	na	1.68	1.29	na	na
rural no calificado			0.12									1.13	4.37		
rural total			0.21									1.22	4.21		
urbano calificado	0.78	-2.46	0.26	0.01		0.59	0.00	1.47	0.18	0 *	0.71	1.62	-0.09		-0.11
urbano no calificado	0.76	-6.49	0.25	0.01		0.42	1.08	1.19	1.03	0.10	0.72	2.04	2.67		-0.11
total urbano	0.76	-3.52	0.26	0.01		0.49	0.70	1.28	0.72	0.05	0.72	1.79	1.95		-0.11
total fuerza laboral			0.21									1.56	2.48		
Remuneracion por tipo de factor															
rural calificado	na	na	0.14	na	na	na	na	na	na	na	na	-0.01	2.10	na	na
rural no calificado			0.08									-0.01	-1.66		
rural total			0.14									-0.01	-1.47		
urbano calificado	-0.91		0.17	0.32	1.39		1.67			0.01		0.00	4.64	0.40	-0.97
urbano no calificado	-0.94		0.17	0.29	1.22		0.01			-0.31		0.00	0.80	0.62	-0.97
total urbano	-0.93		0.17	0.31	1.31		0.76			-0.21		0.00	1.79	0.53	-0.97
total fuerza laboral			0.17									-0.01	1.00		
Bienestar a nivel de los hogares															
Consumo per cápita real															
Hogares Rurales	na	0.5	0.41		0.01	4.10	0.72	1.80	5.31	na	0.66	1.30	2.02		
Hogares Urbanos		0.3	0.36		0.01	3.10	0.78	1.46	1.63		0.66	1.56	1.40		
Total Hogares		0.3	0.39	1.10	0.01	3.60	0.77	1.76	2.03		0.66	1.52	1.65	-0.13	-0.13

Source: IFPRI, Project documents

Most of the countries that would experience substantial reductions in poverty would also experience significant increases in agricultural output (for example, in Chile, Colombia, Honduras, the Dominican Republic, Peru and Uruguay). In those countries where the WTO scenario does not benefit the poor (Costa Rica, Ecuador, Paraguay and Venezuela), the reason may be found in the decline of agricultural production or because the agricultural sector represents a small proportion of the total output.

The FTAA would also benefit the poor in the majority of the countries. However, its impact would be less than in the case of the WTO. Broader market access would not help the poor in Paraguay, Ecuador, and Venezuela, under either of the two scenarios, but the FTAA would be better for the poor in Costa Rica. For Bolivia, the situation would be worse in both cases, probably due to the changes that would be generated in agricultural output.

Table 22. Changes in Poverty and Distribution Under WTO and FTAA.

	Poverty			Income Distribution		
	Base	% change		Base	% change	
	P_0	ALCA	WTO	Gini	ALCA	WTO
Argentina	0.3011	-0.0174	-0.0120	0.4533	0.0028	0.0010
Bolivia	0.6247	0.1081	-0.2317	0.5939	-1.0346	-1.9402
Brazil	0.3341	-1.2272	-1.3768	0.6000	-0.3333	-0.1667
Chile	0.2054	-4.8968	-5.9497	0.5639	-0.2688	-0.4505
Colombia	0.3669	-6.8921	-7.3921	0.4885	-0.0002	-0.0005
Costa Rica	0.1918	-0.3650	0.8863	0.3839	0.2605	0.5991
Dom Rep	0.2975	-2.6900	-3.8300	0.4433	-0.2500	-1.2300
Ecuador	0.3190	0.0043	0.0034	0.5290	0.0025	0.0032
El Salvador	0.4130	-1.2833	-0.9803	0.5427	-0.6737	-0.6737
Honduras	0.7259	-0.7160	-1.1763	0.5315	-0.3387	-0.4327
Mexico	0.6145	-0.0025	-0.0009	0.5756	-0.0009	-0.0007
Paraguay	0.4009	0.0071	0.0011	0.5765	0.0042	-0.0030
Peru	0.4820	-1.5472	-1.9665	0.4797	0.3750	0.9414
Uruguay	0.2275	-0.6302	-1.9926	0.4165	-0.0409	-0.2622
Venezuela	0.6227	0.3420	0.2415	0.4750	-0.3584	-0.0669

Note: P_0 corresponds to the estimate for each country of the percentage of the population in the base year with income below the poverty line. Income is measured as the total income of the household by member. Poverty lines were defined with reference to the cost of a basic food basket and other essential items. The poverty lines vary between the countries, in accordance with the cost and the definition of basic needs, which implies that poverty levels in the base year cannot be compared between countries.

Finally, there would be progressive changes in income distribution in response to both scenarios, but these would be of little significance in each case[56].

[56] The results, as in several other similar studies, would seem to indicate that the Gini coefficient is not very sensitive to changes in the growth rates or to growth strategies, whose effects should be analyzed in the long term (authors' note).

4.2.3 The technology gap will increase

Insufficient public and private investment in research and technology transfer will undermine LAC's possibilities of maintaining the necessary levels of competitiveness in its agricultural production, in a scenario where the agro-biotechnologies will have gained great importance and where genetically modified varieties with special characteristics (for example resistance to drought, flooding, soil acidity, salinity and extreme temperatures) might help to ensure sustainable production in marginal areas, or to recover impoverished lands, in addition to reducing the use of agrochemicals[57].

The pressure to increase output in a situation where the possibility of expanding the area arable land is increasingly limited, will force producers to increase yields and this will require improvements in innovation systems and the allocation of more resources for research in science and technology, as well for the transfer of its results.

Higher income levels, a greater availability of consumer information and growing concerns over health and the environment will result in increased demand for quality food and certified products that are prepared using clean production methods. This in turn will translate into a growing demand for technology packages, which will not always be available to all the actors of agriculture. Therefore, there is a risk of widening the technology gap between those who have access to technology and those who do not, and who, as a result, may find themselves excluded from the market.

4.2.4 Health and food- food-safety systems will improve

The pressures of demand, health concerns and the higher standards imposed by the regulations that govern international trade, will lead to an improvement in health and food-safety systems, though probably with differences in countries' capacity to comply with these.

Health and food-safety regulations in the countries will increasingly be harmonized with international standards and the most developed countries will continue to pressure for higher standards in order to protect their populations, their livestock and their crops. This will become more evident given that, with globalization and trade liberalization- which implies the reduction of trade barriers - countries are more exposed to the introduction of pests, diseases or to are more likely to import health hazards, as happened in the case of *Bovine Spongiform Encephalitis (mad cow disease)* and dioxin in the European Community.

LAC will need to make additional efforts to improve the sustainability of its institutions, the main weakness detected in the analysis presented in the previous section.

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[57] There is a growing consensus that technological advances and improvements in efficiency are crucial in determining growth patterns. It is estimated that the role of Total Factor Productivity (TFP) is responsible for more than 40% of the growth in output in industrialized countries and 30% or more in the majority of countries in Latin America (Easterly & Levine, 2001)

4.2.5 Rural poverty and living standards

Rural poverty in LAC[58] will not decline in the short-term, though there will be variations between countries, However, by 2015 we may expect a reduction, both in absolute terms (from 57 million calculated in 1999, to 47 million in 2015), and in percentage terms (from 11.1% in 1999 to 7.5% in 2015).

This reduction in rural poverty is not necessarily explained by the relationship between growth and poverty, since the region's GDP is expected to grow only slightly, but rather by the slow growth of the population, better baseline conditions resulting from reforms carried out during the recent years, substantial improvements in the achievement of the macroeconomic stability, greater investment in infrastructure and education and the acceleration of technological advances.

Furthermore, it has been noted that the difference in the level of development of the human resources between LAC countries and other regions is increasing. This inequality is observed graphically in all the key educational results: secondary school enrollment rates, educational levels, participation in higher education and the number of scientists and engineers produced by the system.

The level of education of LAC's workforce is comparatively low. The average of years of schooling among workers in OECD countries is 11.1 years, while in East Asia (except for China) it is 8.1 years. However, the average for LAC workers is only 5.4 years (UNDP, 1994). This gap could widen, because many countries (for example, the OECD countries) have established a goal to raise the educational standards of their workforce in the coming decades. This enormous and growing gap between the education of LAC workers and that of workers in the rest of the world is dramatically evident, both in terms of productivity, and in terms of wages.

4.2.6 *Ecological-environmental aspects*

Latin America is among the regions of the world that can still expand its farmland. However, this expansion will be limited by urbanization processes, by the degradation of lands and insufficient investment in irrigation, plus the disincentives generated by the limited profits derived from stable or falling real prices. However, the latter may change, depending on the potential impact and advances made in the application of the WTO agreements or the implementation of the FTAA, according to the scenarios that were analyzed in point 4.2.2.

Climate change and global warming will affect agriculture and ecosystems, though the consequences are very uncertain. Based on simulation models, we would expect different effects according to the geographical areas. The most probable impacts are a

[58] Calculated by the World Bank for people living on less than a dollar a day. The figures estimated for people living on less than US$ 2 a day, are also moving in the same direction (World Bank 2002)

favorable net effect in the coldest parts of the temperate areas and, at the other extreme, adverse consequences for the semi-arid subtropical areas.

In many parts of Latin America, yields of major crops are expected to decline, even when the effects of CO_2 are taken into account; subsistence farming could also be at risk in some regions of LAC. The rate of biodiversity loss is also likely to increase (UNEP, 2002).

In North America, some crops would benefit from a moderate warming, accompanied by an increase of CO_2. However, the effects would vary according to the crops and regions, for example, there could be losses due to drought in some areas of the Canadian prairies and in the vast plains of the United States, but a possible increase in food production in parts of Canada located to the north of areas that are currently productive and a greater and more varied production in warm and temperate forests (UNEP, 2002).

In the small island states of LAC, limited agricultural land and the salination of the soil[59]makes agriculture very vulnerable to climate change, both in terms of domestic food production, and cash crop exports. These nations would begin to experience greater coastal erosion, loss of land and property, as well as the displacement of populations, if the sea level rises, as expected (UNEP, 2002).

Recent news of the melting of some glaciers and of the polar icecap shows us the impact of global warming. The natural systems of the polar regions are very vulnerable to climate change and the existing ecosystems have a low capacity for adaptation. This may particularly affect some local indigenous communities, with traditional lifestyles, limited capacity to adapt and fewer options (UNEP, 2003).

4.2.7 *Agrifood chains: greater internal and external integration*

Quality production throughout the agrifood chains, the incorporation of greater added value, efficient marketing and distribution systems, supply volume, product differentiation and the ability to take full advantage of trade opportunities, will be some of the key factors to remain in the market. To achieve this, it will be necessary to forge strategic alliances between the different stakeholders, both internally and externally.

The growth of incomes expected worldwide (and in the region) will result in growing demand, - but a demand that is more exacting in terms of quality. The generalized adoption of "Hazard Analysis and Critical Control Point" (HACCP) regulations, tracking and quality assurance systems will require responsible standards of conduct among all the actors involved in the different links of the agrifood chains. Changing consumer tastes and eating habits are creating a demand for differentiated products that offer greater added value. The need to have adequate supply volumes to satisfy mass demand and mass marketing, forces countries - especially the smallest ones - to coordinate outputs of

[59] Salination caused by irrigation affects 18.4 million hectares in LAC, particularly in Argentina, Brazil, Chile, Mexico and Peru (AQUASTAT, 1997)

uniform quality in accordance with market requirements. Insertion and survival in more open and competitive markets, dominated by large transnational food companies, will increase pressures to establish joint ventures and other forms of strategic partnerships, that not only guarantee market access, but that also serve as vehicles for acquiring technological advances. The seasonal nature of the markets and the differentiation of consumer demand, will make it indispensable to have timely information in order to make investment decisions and to take better advantage of the opportunities that arise.

It is virtually impossible to accomplish all the above in isolation. Integration around agrifood chains is essential, and is practically the only viable option for small and medium-sized producers, whose transaction costs are greater and whose access to market services is more restricted.

4.2.8 *The rural territories*

The growing recognition of the importance of a new approach to address the problems of rural development, will lead to the adoption of more comprehensive policies that make it possible to reconcile production and development objectives, combat poverty and promote social and human development and the rational use of natural resources and environmental conservation, all of which will help to improve standards of governance and foster progress in sustainable development.

However, it is necessary to make simultaneous progress toward the construction of a new institutional framework for rural development, which goes beyond the notion that it is the Ministries of Agriculture, through policies centered on agriculture, that will make it possible to create the necessary synergies to achieve a sustained increase in the well-being of rural communities.

4.2.9 *Food security*

If the food supply increases, if per capita income grows, if trade liberalization makes it possible to take advantage of higher prices and market access, if agricultural and non-agricultural employment increase, if rural poverty is reduced and if distribution networks are improved, then the basic conditions will be in place to make progress in relation to food security.

Latin America and the Caribbean, as a region, will continue to be the only net exporter of agricultural commodities and this must be borne in mind in order to prevent thousands of people suffering from hunger and malnutrition. Efforts to fulfill the Millennium Goals will probably force countries to adopt policies to reduce their vulnerability, in order to guarantee an adequate food supply for themselves, and policies to improve the distribution of the fruits of this growth, in order to guarantee individual access to food.

The analysis carried out by IICA for the period 1998-1999 identified Haiti, the Bahamas, the Dominican Republic, Grenada and Nicaragua, as the countries facing the greatest limitations in supplying their populations with sufficient food. The analysis also identified United States, Argentina, Uruguay, Costa Rica, Canada, Paraguay and Brazil, in that order, as the least vulnerable countries, with fewest probabilities of facing food security problems.

The recent experience of Argentina - whose crisis triggered an increase in unemployment, a reduction in per capita income, a deterioration in the distribution of the income and a significant increase in poverty, at a time when production and exports of agricultural products were growing - teaches us a lesson about the importance of economic policies, macroeconomic stability and social food-safety nets, to avoid being plunged into a state of food insecurity, within a very short period.

IFPRI[60] estimated possible scenarios for the evolution of food security by 2020. In an optimistic scenario, Latin America could practically eliminate malnutrition. To achieve this, it will be necessary to increase productivity and agricultural growth, reduce the population growth rate and increase investments in education and health. In a pessimistic scenario, if the above conditions are not met, the problem of malnutrition will worsen in developing countries, the price to be paid for poor economic and agricultural performance.

[60] IFPRI "VISION 2020".

SECTION V

The Challenges

5.1 The Repositioning of Agriculture and Rural Life

Section 3.5 addressed the need to view agriculture through a broader lens – one which recognizes that the sector's real contribution to the economies of the hemisphere is significantly higher than official statistics suggest, in terms of its contribution to national production and its ability to generate income, foreign currency and jobs.

Such a perspective would emphasize the fact that agriculture is crucial to the economy and to society, and its importance is expressed through a variety of facets and dimensions. Its indirect contributions, through linkages with the rest of the economy, magnify the impact of its growth on the global economy. This aspect of agriculture is of special significance to developing countries. Its contributions to nutrition, health, the preservation of ways of life, customs and natural resources are also generally overlooked.

By providing food and inputs to other sectors of the economy (for example, the food, textile, furniture, paper, pharmaceutical and chemical industries), agriculture acts as an economic bridge between urban and rural spaces. Agriculture and rural areas provide urban centers with services such as clean air and scenic beauty, both of which are important in the development of tourist and recreational activities. Rural areas also play a crucial role in the protection of natural resources that benefit the entire population, such as water and biodiversity.

Rural life transcends agriculture, and agriculture plays an important part in its development. Its importance varies, however, depending on the specific characteristics of each area, especially in terms of economic diversification and availability of natural

resources. Thus, while agriculture is still the heart of the local economy in many rural areas, in many others the solution to development issues must necessarily involve non-agricultural activities.

The recognition of the importance of agriculture and rural life in the development of countries must therefore lead to the repositioning of those elements in national development strategies. Agricultural and rural-life issues must be a crucial part of the long-term strategies devised by the countries of the region. This repositioning must be viewed as part of a holistic approach to development that fully includes productive/trade, ecological/environmental, socio-cultural/human and political/institutional aspects.

Productive and trade aspects are important; agriculture is crucial, given its contribution to the economic growth of countries, and it should no longer be perceived simply as crop production and livestock breeding. Rather, it should be viewed as a rural network of systems or agro-food chains that are joined together, from the provision of goods to their consumption in local and international markets, as well as their production, transformation, services and marketing. Agriculture should not be approached solely from a supply standpoint (yields, productivity of inputs, innovation and technological change, quality and food-safety, trade negotiations, financing, etc.), but also from a demand perspective (long-term trends, the dynamics of niche markets, seasonal issues, changes in consumer taste, evolution of income, etc.). All of these factors must be considered in the quest to improve the competitiveness of agriculture.

Ecological and environmental factors have become increasingly important, given their potential role in curbing the growing deterioration of natural resources, preserving water sources and the environment and developing the environmental services market[61]. In this regard, the growing interplay between agriculture and non-agricultural activities in rural areas should be acknowledged. These activities include eco-tourism, agro-tourism, valuing of biodiversity, protection of native species and the promotion of environmentally friendly technologies and best practices in production, transformation and distribution. These factors bring to light another objective, namely ***the sustainable use of natural resources and the environment.***

Social, cultural and human factors underline the need to acknowledge the contribution of agriculture to the alleviation of poverty, job access, preservation of traditions, cultures and ethnic groups, human and community development, education, nutrition, health, reduction of exclusion and discrimination, and improvement of popular participation. All of these issues must be considered if equity and social inclusion are to be achieved.

Finally, political and institutional factors underscore the need to make institutional adjustments in the fields of agriculture and rural development, in order to improve their effectiveness, reduce transaction costs and generate the synergies needed to respond to the changing conditions of a new era in a more timely and efficient manner. Thus, it is important to strengthen mechanisms that foster participation, dialogue and consensus-

[61] Conversely, extractive practices or inadequate technologies aggravate the deterioration of natural resources and the environment.

building at the communal, national, regional and inter-American levels. These are necessary prerequisites for the establishment of a politically viable inter-American strategy for the modernization of agriculture and the improvement of rural life in the Americas, both of which are critical to ensuring good governance.

The Heads of State of the hemisphere took the first major step toward repositioning agriculture and rural life when they signed the Declaration of Quebec City. The Ministers of Agriculture, for their part, led a broad national dialogue and hemispheric consensus-building process that culminated with the adoption of the "Declaration of Bavaro for the Improvement of Agriculture and Rural Life in the Americas". The Bavaro Declaration lists the sustainable development of agriculture and the promotion of rural prosperity and food security as strategic objectives. The following sections will address those objectives, as well as the challenges which must be met to fulfill them.

5.2 The Sustainable Development of Agriculture

The sustainable development of agriculture requires a modernization process that will enable the sector to compete on the markets, manage natural resources in a sustainable manner and distribute the benefits of those resources in an equitable, inclusive fashion. Agriculture would thus contribute to good governance, and, as a result, the model would withstand the test of time.

To be competitive in a globalized world, agriculture must meet the price requirements established by the international market (it must therefore be efficient), as well as other requirements not related to price (quality, packaging, timeliness, compliance with environmental standards and, probably, in the near future, social standards, etc.); it may not be required to respond to artificial incentives, such as subsidies or protective measures. It must also be profitable, to provide adequate compensation for the efforts invested in production; flexible, to adapt to changes in its surroundings and in the level of demand; and innovative, to make increasing use of knowledge as a means of continually improving production, conservation and distribution processes and increasing the variety and diversity of its products.

A competitive agricultural sector must not only achieve or maintain a share of the market, but also provide for the participation of the poor and help preserve natural resources.

An equitable and inclusive agricultural sector should promote forms of social organization that encourage production, but it should also provide for a more equitable distribution of the benefits of the productive-commercial efforts involved. It is essential to increase investments in rural education and training of actors, in order to: a) improve their capability to make human resources more efficient; b) help them to better exploit opportunities and face challenges; c) enable them to absorb and make use of information possibilities; d) help them to develop a taste for technological change; and e) improve their participation in the decision-making process at every level of society.

If agriculture is to be sustainable, social, economic and legal conditions must be created to encourage the rational use of natural resources. This entails the use of mechanisms to ensure that such resources are conserved, organized and exploited, not only to protect the natural base required for agricultural production, but also to improve the means and living conditions of the community.

Finally, if agriculture is to contribute to governance, it is necessary to promote systems and networks of organizations and actors that participate effectively in decisions affecting the transformations referred to above.

5.2.1 Toward a systemic competitiveness that integrates chains and territories

Agro-food chains allow for the inclusion of every actor and process involved in the production, transformation and marketing of agricultural goods. Their inclusiveness makes them a valuable tool for the analysis and formulation of policy, for three basic reasons: a) they explain the processes that make up the total agricultural sector, and make it possible to assess its real contribution to the economy of a country; b) in the current climate of open and competitive markets, they make it possible to determine how the links in the chain can best be integrated, thereby ensuring the competitiveness of agriculture through the proper operation of the chain; and c) the insights they provide can be used to create new forms of public-private organization that contribute to better governance; in this case, governance emerges from the whole of civil society.

Agro-food chains are a means of integrating and coordinating actors and facilitating their strategic association, in order to obtain final products that are in line with the demands of the market. They are also valuable fora for the discussion of public policies that encourage productivity and facilitate and promote a more equitable distribution of the surpluses created throughout the chain.

A number of countries have identified agro-food chains as an ideal tool to promote policies encouraging competitiveness, mobilize investment, organize processes and create a new institutional framework for agriculture that integrates that which is rural and that which is urban. The creation of the Bolivian productivity and competitiveness system, the chain analysis program of the Institute for Rural Development in Mendoza, Argentina, the work currently under way with product-systems in Mexico and the Honduran agricultural board's formulation of policies by chain are all examples of the progress that has been made in institutionalizing work with agro-food chains.

The Bolivian productivity and competitiveness system (SBPC) was created in 2001, as a result of exchanges that took place during the National Dialogue, where actors demanded agreements to foster competitiveness and strengthen production chains. The SBPC is a coordinating entity made up of the Bolivian council on productivity and competitiveness (CBPC), the inter-institutional committee on productivity and competitiveness (CIPC) and the productivity and competitiveness office (UPC). The

SBPC works with three ministries that share a common vision of competitiveness; they have signed an inter-ministerial agreement that includes the Ministry of Economic Development, the Ministry of Foreign Trade and Investment[62] and the Ministry of Agriculture, Livestock and Rural Development[63]. One objective of the SBPC is to form a strategic alliance between the public, private and academic sectors and implement public productivity and competitiveness policies at the national level. To that end, it will strengthen and deepen its work with productive chains, promoting appropriate strategies and coordinating inter-institutional efforts.

The Institute for Rural Development (IDR) of Argentina is a foundation created through the integration of various public and private institutions, all of which are committed to identifying and supporting tools that contribute to the sustained development of the rural sector in the province of Mendoza. One of its programs, entitled "agro-food chain analysis", is dedicated to the study of the province's main agro-food products. It employs a systemic approach to the interactive components of the process – namely, production, transformation, distribution, services and consumer market. One of its objectives is to establish priorities and recommendations for the public and private sectors.

In Mexico, the secretariat of agriculture, livestock, rural development, fisheries and nutrition (SAGARPA) believes that productive chains or product-systems are the vehicle by which benefits and development can be brought to producers, by organizing processes, unifying resources and entering national and international markets as a block. During their sixth meeting, the representatives of the sectors that make up the Mexican council for sustainable rural development agreed to double their efforts to integrate productive chains as the nerve center of progress in rural Mexico. To that end, they will speed the formation of specific committees in this area.

The 2002-2021 Honduran agricultural board, supervised by the secretariat of agriculture and livestock and the management planning and evaluation office (UPEG), comprises 20 lines or chains of the country's main agricultural products. Each line is made up of producers, transformers and marketers. The chief objective of the board is to ensure that the various actors involved in the agro-food chain as a whole draft proposals and policies for the solution of issues in the short, medium and long term over the next twenty years. The consolidated document will serve as a reference point which the government, acting through SAG, can use to effect a genuine process of reactivation and growth in the agricultural sector, thereby helping to reduce rural poverty, create equitable conditions for small farmers and improve the environment.

The agro-food chain competitiveness agreements subscribed in Colombia and the proposals set forth in Mexico's recent national rural agreement are two examples of how a new institutional framework can be created for agriculture. Such a framework can be used to find comprehensive solutions to the problems that hamper the competitiveness

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62 Which, as of February 2003, includes the vice-ministry of trade.

63 Currently the ministry of rural, indigenous and agricultural affairs (MACIA).

and profitability of agriculture, as well as to promote investment and deal with social and economic disparities in a manner which allows for the participation of all actors.

5.2.2 Comprehensive policies for enhancing competitiveness

Efforts to enhance competitiveness must be based on comprehensive policies geared toward agro-food chains as a whole. Such policies must not be narrow in scope, focusing on individual links in the chain, but rather they must also take into account the location of the actors in those chains and their interaction with the environment.

In drawing up and implementing policies for promoting competitiveness, it is important not only that many different actors be involved but also that they be involved in different fields, such as technological innovation, health, quality, market access, information and human resources. Thus, the formulation and execution of competitiveness policies must be based on an objective and agreed diagnosis which outlines the responsibilities of the State and those of private actors.[64]

Creating conditions for market access

In a globalized world, trade liberalization policies must go hand in hand with policies for improving the competitiveness of agro-food chains. International trade negotiations are an indispensable complement to policies that are designed to promote competitiveness so as to guarantee better access to markets and set standards to clarify the rules of the game for the growth of agro-food chain trade flows.

In this context, the Latin American and Caribbean countries are faced with major challenges, especially when it comes to preparing to take part in agricultural trade negotiations (in FTAA, WTO and subregional and bilateral initiatives) and to enhance their capacity to administer the Agreements.

In order to be in a position to participate effectively in the agricultural negotiations, those concerned should promote dialogue and exchange information,[65] conduct research studies to develop criteria for dealing with new issues in the negotiations and in training activities, not only for actors in the public sector, but also in the private sector and among civil society organizations.

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64 IICA has developed methodologies for analysis, dialogue and action that have been applied in a number of Latin American and Caribbean countries. Other international agencies and academic organizations (such as ECLAC and INCAE) have developed their own studies and gained experience through their work in the countries of the region.

65 For example, through the joint IICA-FAO effort to maintain the forum made up of the Informal Agriculture Negotiating Group and the INFOAGRO network of IICA, which includes pages containing information on trade, health and food safety, innovation, agribusiness and rural development.

Development of domestic markets

With trade liberalization, domestic producers are faced with a growing demand for their products and greater export opportunities; on the domestic market, however, they must compete with imports of agricultural products from developed countries that subsidize agricultural production. This situation, along with the flaws and asymmetries that are already prevalent in the agriculture markets of Latin America and the Caribbean, creates serious constraints for the development of agribusiness. The situation is even worse in the rural areas of the Americas, where markets are poorly developed (or even non-existent, in some rural areas).

Consequently, if these countries are to become competitive, they must find ways to develop their domestic markets so as to make trade more efficient and transparent, shoring it up with securities instruments to enable actors (buyers and sellers) to obtain more financing for agribusiness, reduce their risks and increase their benefits.

Promotion of agribusiness

The creation of a favorable environment and development of agribusiness capabilities represents a challenge that must be met in order to make agriculture more competitive and increase the participation of small- and medium-scale producers. International agencies have an important role to play in this regard, but so do the private agricultural organizations, with additional support from governments.

Positive experiences such as the "building exporters" program, or innovative undertakings like the Inter-American Program for the Promotion of Trade, Agribusiness and Food Safety (both IICA programs) should be strengthened and supplemented with programs designed to strengthen agribusiness networks and promote strategic alliances among private actors, thus enhancing their competitiveness on globalized markets, as well as programs for building capacity in agribusiness management.

Promotion of innovation

Innovation, in the broad sense of the word, is a key factor for achieving competitiveness. Countries should strive to include in their national and regional agendas, the issue of changing or adjusting their institutions so as to enable them to develop technological and managerial innovations and incorporate them throughout the agro-productive chain, including the management of institutional innovations.

To that end, it will be necessary to promote political recognition of the strategic importance of research, transfer and development of technological innovation in promoting national economic development, reducing poverty and using the strategic abundance of natural resources and biodiversity in Latin American and Caribbean countries.

Instances of institutional change that have been successful should be reviewed in order to determine whether they can be replicated. The trend towards a downsizing of the budgets and operational capabilities of public national research institutions must be reversed. Additional human resources need to be added to those now engaged in research and technological development, in order to counteract the gradual ageing of such personnel and increase the limited critical mass working in strategic fields of knowledge. Adequate institutional incentives must be developed in order to encourage greater participation on the part of users, producers and agroindustrialists in mechanisms for identifying priorities, financing projects and evaluating research findings to increase their impact.

As far as policies on technology are concerned, the challenge is to design and implement technology policies that take into account national needs but also consider the prospects for regional integration. Such policies should cover certain priority issues, such as equitable access to new know-how (e.g., in the field of biotechnology); conservation, use of and access to genetic resources; biotechnology, biosafety, food safety and quality; intellectual property in agriculture; technological innovations geared toward agribusiness and rural family agriculture and the promotion of technological integration among countries. Such integration would be aimed at developing transnational public goods in the field of technology for the benefit of large regions in the hemisphere, since existing national public goods are insufficient.

Production with clean technologies

It is imperative to promote the design of national strategies and policies that will make it possible to take advantage of new market trends, such as the growing demand for food products produced with environment-friendly techniques and high sanitary standards. Programs might be developed to strengthen agri-food systems based on Good Practices in Agriculture, environmentally clean agriculture, organic agriculture, eco-labeling and life-cycle analysis, among others.

Protecting plant and animal health and public health

The growing concern with plant and animal health, food safety and food quality stems from countries' concerns on the domestic scene, given the need to protect the local population, as well as animals and plants. However, international trade in foodstuffs and tourism are two other forces that have become increasingly important in recent years.

In order to achieve food security and food safety and to ensure plant and animal health, countries must give priority to managing intersectoral know-how, providing guidelines for strategies and intervention programs and promoting the participation of all actors in the agro-food chain and the community. It is essential to ensure coordination between the public and private sectors and the different entities that represent society in order to strengthen their role in plant and animal health and food safety, which is essential to public health as well as to trade.

The ability of Latin American and Caribbean countries to implement the necessary measures to ensure food security, promote public health, food safety and food quality is limited by the existing imbalances in development of their technological capabilities, regulatory mechanisms and institutional sustainability.

Thus, the great challenge is to develop a system of plant and animal health and food safety that will inspire confidence. To achieve this, it is necessary to change the roles of actors involved throughout the agro-food chain so that they share responsibilities, promote the integration and articulation of actions between the public and private sectors, make decisions based on scientific criteria and promote standards that are in line with international standards.

Investing in human resources

Human resources are fundamental to the achievement of the objectives of competitive agriculture within a sustainable framework. There is a need for human resources with skills that are not necessarily developed in conventional training programs (such as economics, sociology, anthropology, agronomy and geography). The new conditions call for know-how and skills and, especially, attitudes and values for addressing the new challenges, which are multisectoral, multidimensional and multidisciplinary. They must be able to promote strategies and working methods that will encourage participatory planning and management, cooperation, negotiation – in short, team work.

Thus, probably one of the greatest challenges in any effort to modernize agriculture and promote rural life is to improve the education and training of human resources in agriculture.

It is also important to improve the educational levels of the rural population. A good education is essential for anyone who wishes to find a non-agricultural job in a rural setting. Education is also key to improving health conditions. Greater educational achievement produces significant intergenerational returns, given that the educational level of the parents, especially the mother, has a definite effect on the performance of children. This is especially important for the implementation of rural development and poverty reduction strategies.

Knowledge as a strategic practice

In a globalized world, having timely access to new opportunities has become crucial in efforts to improve the competitiveness of agriculture and raise living standards in rural areas. Timely access to the information and knowledge needed in every link of the agro-food chain is essential in order to compete successfully in a globalized environment with increasingly open markets.

Adequate management of knowledge, supplemented with the use of new information and communication technologies, facilitates the development of market intelligence, electronic stock exchanges and virtual agricultural supply stores, among others.

Electronic commerce, which is growing rapidly in the globalized economy, is an option for enhancing the competitiveness of agriculture.

Enabling remote rural communities in Latin America and the Caribbean to achieve technological advances that will facilitate their access to and exchange of relevant information is a strategic tool for introducing new types of production that call for the use of these new information and communication technologies. These advances are also useful in the planning, development and maintenance of local information systems which produce the information needed by the population of rural areas, in terms of quality, quantity and timing.

5.3 The challenges of rural prosperity

One of the Millennium Development Goals is to halve, between 1990 and 2015, the levels of poverty and hunger in the world. In Latin America and the Caribbean, this goal is key to increasing rural prosperity, given that it is estimated that the incidence of extreme rural poverty is three times higher than that of extreme urban poverty. It should be noted that the concept of prosperity also covers some of the other Millennium Development Goals, such as those relating to education, health, gender equality, environmental sustainability and cooperation for development.

If rural prosperity is to be achieved, efforts must be strengthened as follows: (a) rural development must be viewed from a territorial perspective; (b) public policies that have a positive impact on rural development must be coordinated; (c) organization, participation and management capacity must be strengthened; and (d) natural resources must be managed in a sustainable manner.

A territorial approach to development

During the past decade, there were certain persistent structural phenomena and emerging endogenous and exogenous factors that influenced rurality in Latin America. The challenges and opportunities that these factors represent for rural development should be viewed in their entirety; it is important to go beyond merely identifying "rural" with "agriculture" so as to get away from the rural-urban dichotomy.

Moving from the concept of agricultural economy to one of territorial economy

Most public policies reflect a sectoral production-oriented approach to the rural economy. Thus, "rural" is seen as synonymous with "agricultural", and agricultural strategies are seen as the only response to the problems of poverty and rural development.

Strategies for promoting rural prosperity must take into account the complexity of rural territories and of the complementary, intertwined and interdependent economic structures that make up an economy that is more than simply an agricultural economy. Such strategies should underscore the interdependence between production activities and the overall economic structure, which is based on natural resources, population dynamics and social relations, as well as the institutional processes that arise from those social relations.

This in no way means that agriculture is any less important as the fundamental ingredient of rural development initiatives. On the contrary, in a territorial approach, the strategic importance of agriculture to rural development strategies is acknowledged, although from a broader perspective. The territorial perspective stresses the complementarities and linkages between agriculture and other sectors of the rural economy and makes it possible to open up new options for strengthening endogenous development processes that allow for the successful linking of rural territories as part of dynamic development processes of broader scope (in spatial and temporal terms).

Bringing the territorial and the rural-local economy to bear in growth strategies

Different types of exchanges take place in rural territories, i.e., those that are directed inward, focusing on the local economy; and those that are directed outward, focusing on an export market that includes other territories and other regional or national spaces, as well as the international economy. The dynamics to which these activities give rise affect the potential for economic growth and generation of wealth at the local level.

As a general rule, most commercial transactions in rural territories take place in local and regional markets; they occur to a lesser extent in national markets and to a much lesser extent, in international markets. This spatial distribution of trade relations points to the importance of viewing the local and national markets as pillars of growth and including them explicitly in rural development strategies.

Toward a comprehensive approach to competitiveness

Adopting the concept of territorial economy entails changing one's approach to competitiveness so as to take into account the social, economic, environmental and global factors involved.

From the social standpoint, adopting this new concept of competitiveness involves taking into account the ability of agents to act effectively and in unison, on the basis of consensus regarding the territory and the different institutional levels involved.

From the economic standpoint, it is important to promote and develop the capacity of agents to produce and maintain maximum value added in the territory, by strengthening the linkages between sectors and ensuring that the mix of resources leads to the creation of assets that show the value of local products and services.

From the standpoint of the environment, a comprehensive approach to competitiveness would entail developing and strengthening the capacity of agents in the territory to appreciate the importance of the environment and recognize it as a distinctive element while at the same time ensuring the conservation and renewal of natural and patrimonial resources.

In order to achieve the above, it is important to develop and strengthen the capacities of agents in the territory and enable them to gain perspective and see their situation against the backdrop of other territories and of the world at large. Thus, they should work to promote progress in their own territory and ensure its viability in the context of globalization.

Coordinating public policies

Coordinating rural development policies with macroeconomic and sectoral policies. Approaching rural development as a territorial strategy brings to light the importance of a number of policy areas that directly influence the progress of rural territories and of the sectors that compose them, especially agriculture. Thus, at least three policy levels may be identified, namely: (a) macroeconomic policies, (b) sectoral policies, and (c) territorial policies.

Rural development efforts should take into account the context of macroeconomic, sectoral and territorial policies that have a bearing on the development strategies adopted by a nation. Macroeconomic policies provide the overall framework in which territorial and sectoral policies are laid out; territorial policies are conceived as frameworks into which sectoral policies are fit together, and sectoral policies reflect priorities for action by public and private entities and, in the final analysis, define the components of a development strategy.

A rural development strategy that does not allow for the coordination of macroeconomic policies with sectoral policies is likely to be inefficient and costly. Policy coordination requires a significant capacity to keep communication channels open, in order to ensure consistency between public policies at the national and sectoral levels and bring to light shared interests in development strategies at the local and regional levels. Policy makers should also move away from the concept of rural development as a vehicle for welfare and to begin to see it as a valid strategy for territorial development.

Moving away from compensatory policies and coordinating sectoral policies in rural territories

Given the prevalence of sectoral policies, even in proposals that do reflect a comprehensive approach to development, the tendency has been to promote rural policies that are extremely compensatory in nature. Such policies are based on the assumption that economic development in agriculture, trade and business neglects the impoverished communities and that they therefore are in need of assistance. This approach has given rise to rural development strategies that focus on the peasant population and on agrarian issues and reinforce models that do not allow the rural poor to overcome their marginalization, poverty and food insecurity.

If a new approach to agricultural and rural development is to truly reduce poverty and food insecurity, it must involve all stakeholders in local and regional development in the existing economic model of production. Such an approach, however, calls for the adoption of comprehensive policies instead of the prevailing sectoral approach.

Strengthening organization, participation and management capacity

Decentralization initiatives must be implemented in tandem with land-use planning. Over the past two decades, significant progress has been made in deconcentration and decentralization processes aimed at improving efficiency in land-use management. However, these processes have still not succeeded in overcoming the obstacles created by the fragmentation of territorial spaces. Decentralization has led to deconcentrated administration, but not necessarily to changes in the political responsibilities of territories that would bring them in line with the structural adjustments that are being implemented throughout the hemisphere.

Trying to change the competencies, functions and responsibilities of the different levels of territorial government is a much more complex task than merely managing diversity and differentiation, the bases for decentralization. These changes must be reflected in a shift in responsibilities –from the national to the local and regional levels— in order to strengthen a new pattern of land use. Thus, changes must be made at the institutional and policy levels, not merely at the administrative and legal levels.

Supplementing participatory initiatives with cooperation and shared responsibility

Up to the late 1970s, rural development efforts were typically managed from the top down. Rural development policies and initiatives were defined and implemented from a central national level, with little input from local actors. Since the 1980s, however, the theory and practice of rural development have stressed participation as a mechanism for democratizing decision making and empowering communities and local social actors involved in production models.

A territorial approach to rural development leads to the development of a management model that incorporates both approaches. It strengthens local cooperation, self-management and sharing of responsibility. In other words, there is a the top-down approach, whereby development priorities that have been established at the national level are reflected at the local level; and a bottom-up approach, whereby local priorities are coordinated.

Local cooperation is a broader form of relationship between public and private efforts that relies on the autonomy of communities, of institutions, of organizations and of entrepreneurs. It calls for a redefinition of the dynamics, initiatives and development management processes that are involved. Cooperation is based on recognition of the social actors who are present in a given territory and leads to self-management and shared responsibility as expressions of the collective will to establish the rules of the game, to enter into commitments and develop organization methods, and thus to have greater likelihood of empowerment. Out of this convergence arises a new relationship between the State and civil society with new contractual models and new roles for the State and for private agents.

Promoting the development of social capital

The extent to which social capital is effective and efficient in promoting rural development is directly related to the strength of the social networks that enable an individual to develop his or her full potential.

Two aspects of social capital are vital: (a) the reciprocity between social capital and human development; and (b) the need to train and strengthen social capital that is oriented toward sustainable development.

The investments that are made in education and training and the degree to which the population avails itself of these opportunities will determine how much individuals will contribute to a network, organization or institution. Enhancing the capabilities of the population and integrating the people into a process of horizontal relations expands the competency of those institutions that play a fundamental role in development. At the same time, networks can strengthen learning (including self-learning) of specific skills for sustainable development.

Moreover, the training and strengthening of social capital that is oriented toward sustainable development calls for the existence of cultural patterns that inspire confidence and solidarity and are expressed through coherent practices and mechanisms for regulating social relations.

Sustainable management of natural resources

The natural resource base should be mentioned explicitly as a component of rurality. A fundamental element that is unique to rural territories is their dependence

upon the natural resource base. Recognizing this phenomenon is essential to overcoming traditional conceptions that establish a dichotomy between that which is urban and that which is rural, on the basis of population density or the existence of an agrarian economic base.

The recognition that dependence on natural resources is an intrinsic element of rurality makes it possible to bring the concepts of region and territory to bear in planning for development and drawing up public policy. This recognition is also fundamental in a hemisphere which can boast of an abundance of natural resources as one of its comparative advantages. Rurality then becomes strategic to the construction of a sustainable development model that is in harmony with the natural resource base and is economically, politically and socially viable.

Promoting synergies between environmental conventions and rural development initiatives

The use of global sustainability criteria, as reflected in multilateral agreements on the environment, allows for the creation of mechanisms for linking the crosscutting interests of different regions and countries. Environmental conventions, especially those pertaining to biodiversity, climate change and desertification, provide frameworks for international cooperation that open up new opportunities for advocacy for the rights and interests of the rural territories of the planet.

The environmental agreements acknowledge the global significance of the environment and the role of the rural population in safeguarding and protecting it. They also recognize the invaluable role played by the environment in sustaining production systems, meeting basic needs and creating opportunities for overcoming rural poverty.

Promoting the development of markets for environmental services

Environmental services can give impetus to development. Although the economic role of such services has not been sufficiently taken into account in production options for rural territories, there are a number of possibilities – only incipient at present, but sure to be consolidated in the near future – in local development models. Payment for the service of producing water though conservation practices and the sustainable development of natural resources, ecotourism and rural tourism are some examples of this new type of activity. Many such initiatives throughout the hemisphere have produced positive results.

Sustainable environmental management of production

Once the importance of environmental issues is recognized, mechanisms can be created for adding value to private goods that are produced according to standards that

ensure the protection of the environment and the proper management of natural resources. Some examples are mechanisms such as those relating to appellations of origin, organic production, clean production systems and environmental quality management and certification. These mechanisms also take advantage of the greater environmental awareness of national urban consumers and the stricter environmental quality requirements of the developed countries.

5.4 The challenges of food security

As a result of the commitment adopted at the World Food Summit (Rome, 1996) to halve the number of chronically undernourished people on the Earth by the year 2015, food security has become a high-priority item on the political agendas of most countries and development agencies.

Food security is understood to refer to the conditions that enable human beings to have physical and economic access to a safe and nutritious diet that will enable them to meet their food requirements and live productive and healthy lives. This concept supplements the conventional view according to which food security is seen as national self-sufficiency in the production of foodstuffs.

The issue of food security must be approached from a broader perspective. It has to do not only with production, but also with the extent to which countries and individuals have access to food, as well as with non-trade concerns in WTO negotiations, donations and the needs of countries that are net food importers.

Food security is a complex issue that calls for creative collaboration on the part of different stakeholders, including governments, national and international organizations and civil society. When access to food is limited calls, a coherent set of policies must be put in place which should cover different sectors of the economy and be geared towards eliminating the structural obstacles faced by different groups, especially the rural poor. Public policies aimed at solving short-term problems must not lose sight of the longer-term objective of achieving food security.

The role played by small-scale farmers and rural women in the production, distribution and use of foods, both for consumption and for income generation, is essential to the promotion of food security. Furthermore, in order to improve the availability and distribution of foods, it is important to draw up public policies and carry out different types of intervention to facilitate the adoption of modern production technologies and improve the efficiency of domestic markets, thus reducing the adverse impact on agricultural trade.

5.5 Addressing the challenges

Given the situation on the national and international scenes and the prospects for agriculture and rural life, it is important to implement strategic measures in four major areas, with a view to addressing the challenges mentioned above: (a) revamping of the development model; (b) construction of an institutional framework that will have a positive impact on agricultural development and the improvement of rural living standards; (c) improvement of public and private management of agriculture and rural development; and (d) development of the capacities needed to address the aforementioned challenges successfully and in good time.

5.5.1 Revamping the development model

During the last two decades, the Latin American and Caribbean countries have gone through several adjustments to their development models. There have been three generations of reforms, namely: (a) macroeconomic reforms, (b) reforms aimed at increasing market participation, and (c) institutional reforms.

The objective of the macroeconomic reforms was to bring the countries back to stable macroeconomic scenarios and overcome the serious problems of hyperinflation, recession, unemployment and sluggish growth which prevailed in the early 1980s in almost every country of the hemisphere. These reforms entailed a revamping of the role of the State and, in general, they called into question the use of discretionality in macroeconomic management as the main tool for promoting development.

During this first stage of reform, the rules of the game were rewritten, especially with regard to the objectives of macro stability over the exchange rate, fiscal management, tax structure, controlling inflation and trade policy. The second generation of reforms – which were implemented simultaneously with the first stage – consisted of redefining the role of the market in the economy. While emphasizing different aspects, the changes in the economic structure designed to give priority to the market have set the tone for the new rules of the game in most countries of the hemisphere. One outcome of this new emphasis on the market was a change in the role of the State with respect to the dynamics of the economy, investment, employment, the production of goods and the supply of services.

This second generation of reforms went hand in hand with a broad discussion as to what was the best way to bring about the growth of markets. This discussion was influenced by the so-called Washington Consensus, which saw economic growth as a key variable and posited the idea of the "trickle-down effect", according to which the benefits of growth resulting from greater market transparency would trickle down to the rest of society. This hypothesis, however, did not take into account the true extent of the complex constraints that would have to be overcome in order for unequal and imperfect economies to generate enough economic growth to benefit every sector of the population. It has now become clear that while growth is necessary, it is not sufficient in and of itself;

hence the need to review the mechanisms used to correct the flaws, distortions and asymmetries that limit the potential of market institutions to ensure more dynamic and effective development.

The third generation of reforms – institutional reforms – is aimed at creating the conditions necessary to make the first two generations of reforms viable. This has led many to question the criticism of the role of the State that was implicit in the Washington Consensus.

The structural adjustment of development models in the hemisphere is far from over. The three generations of reforms have advanced to varying degrees. Perhaps the greatest progress has been made in the area macroeconomic stability – the first generation of reforms – although many countries are still in a volatile and vulnerable situation. There is no question that the targets for stability must be maintained, and that the ongoing discussions about mechanisms, strategies and costs of such adjustments are timely. The success of efforts to generalize market rules – the second generation of reforms – has been more modest, while the agenda of reforms has grown considerably. Markets are still highly distorted, flawed, asymmetrical and inefficient. The role of the State has been adjusted to the new rules, but there has been considerable confusion and discussion about its new responsibilities. Moreover, its weakness has set back efforts to consolidate economic processes that would make it possible to establish some real market rules. The institutional reforms – the third generation – are way behind and represent the most critical area in the structural adjustment processes.

In summary, the region is undergoing an intense transition in which many reforms are still pending. There is a framework agenda – one that stresses stability, fair market rules and sound democratic institutions – and the goal is to reach certain minimum targets that will make it possible to achieve a more harmonious vision of development. But the job is not finished, and there are certain points of controversy that must be addressed in order for a model that has shown great potential but few results to become viable.

The outcome so far, after two decades of structural adjustments and reforms, suggests the need to reflect on how to build an inclusive type of development that will not only emphasize the importance of promoting exports but also explicitly recognize the need to satisfy the aspirations of the rural population. In order to ensure the continuity of national development efforts, the State must assign priority to achieving consensus on broad and far-reaching policies for agriculture and rural life.

5.5.2 Developing a new institutional framework

Reflecting on development models opens the way for building an institutional framework that will promote cooperation and convergence of interests of the State, private enterprise and civil society. This new institutional framework should be able to meet new demands, involve new actors within an appropriate context of interaction,

redefine the roles of traditional actors and seek creative ways to manage public policies to ensure the sustainable development of agriculture and promote rural prosperity.

Developing this new institutional framework goes beyond the scope of the reforms that have been applied over the last two decades, as it entails drawing up new roles for the State, for civil society and for public-private sector relations.

Different entities in the public and private sectors should assume responsibility for building a renovated structure of institutions for agriculture and rural life. The ministries of agriculture, however, are clearly called to play a leading role. Not only must they redefine their duties, they must also guide the interests and the commitment of other stakeholders in the field of agricultural and rural development.

In building a new institutional framework for agriculture and the rural environment, it will be important to take into account the expanded universe of actors who have something to do with agriculture and the new relationships that now exist between agriculture and the rural territory. It is also important to redefine the duties and responsibilities of public actors, private enterprise and civil society organizations, so as to enable them to provide new services for agriculture and to develop new rural spaces. This includes supplying or preserving public goods that may be likely to become scarce or to deteriorate, including natural resources and the environment.

Elements of the institutional reform

Efforts to build a new institutional framework to meet the challenges of agriculture and rural development must take place in a context that is conducive to development and goes beyond a merely sectoral approach. It is necessary to take into account issues other than the purely agricultural and rural ones, and deal with matters such as citizen participation in decision making, the efficacy of the State, legal certainty, access to land, appropriate management of natural resources and the environment, and provision of necessary support services such as financing and rural investment.

Governance

An ample margin for governance, in terms of both the ability of governments to maintain control over society as a whole and of their technical and administrative competence, is a prerequisite for the modernization of agriculture and the rural environment. The competitiveness of these sectors must be enhanced within a context of equity, sustainability and better living conditions for the rural population. Governance is necessary to legitimate public action in agriculture. This means that policy priorities must be based on a broad social consensus, with all the people being involved in decision making, in a participatory and transparent manner, including the poorest and most vulnerable groups. The development of forums for consensus building will make it possible to build up majorities who will help support public policies, give citizens a reason to trust the State and prevent social unrest and uncertainty.

Legal certainty

In a society that is under the rule of law, legal certainty[66] is another prerequisite for the management and application of policies to promote agricultural and rural development and encourage agribusiness. The recent history of Latin America and the Caribbean is full of examples of problems that were created by inconclusive agrarian reforms and specific political situations that affected the land ownership system. That is why legal certainty in the rural environment is key to reactivating productive investment in agriculture and in agricultural and non-agricultural rural employment.
The development model has changed, special interest groups have changed and multiplied as new actors have appeared on the scene, and legal frameworks have become obsolete as they have been overtaken by the realities of the new environment. Consequently, the existing **legislation** needs to be changed or new legislation needs to be enacted, particularly to address new issues arising from international agreements such as those relating to intellectual property in agricultural trade, labor rights, biodiversity and bioterrorism.

Access to production assets

One of the biggest problems as far as rural poverty is concerned continues to be access to production assets, especially land. This is particularly true of LAC countries where land is limited. Access to land with proven potential should be controlled, to protect natural resources and prevent the rapid expansion of the agricultural frontier. Past experience suggests that simply distributing land is not enough; additional production services must also be provided and further investments made in infrastructure to support production. Land markets also need to be further developed, the legal and institutional framework strengthened and cadastral and registry systems instituted that guarantee transparent transactions, secure land tenure and land titling and the short-, medium- and long-term leasing of land.

Financing and investment

Public policies for competitive agriculture and the development of the rural environment should be complemented with agricultural and rural financing systems that support public policies designed to boost investment in agribusiness and rural areas. Rural financial markets need to be developed to ensure a supply of credit and financial services for innovative projects that dovetail with competitive agriculture or profitable activities in the rural sector. The situation calls for dynamic and solid public-private forms of institutional investment that lead to consensus and the design, coordination and execution of sectoral investment strategies.

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[66] Legal certainty, as a function of the State in its dealings with citizens, has to do with the accessibility and transparency of laws, decrees, reforms and decisions relating to the State as such and its raison d'etre. It refers to the existence of rights that are exercised and obligations that are demanded and the recognition of a competent higher authority that oversees those rights and obligations.

The lack of public resources in most countries in the hemisphere makes it even more essential to focus on the capacity of private investment to generate further economic activity with the limited public resources available. The development of decentralized financing mechanisms should be supported, with rules adapted to the local clientele and that will help increase economic and social activity in the territories.

Natural resources and the environment

One of the priorities is the need to ensure the sound management of natural resources and the environment. This calls for the participation of different actors and institutions, and effective, proactive and forward-looking organization. The reasons are obvious, given that the natural conditions in the regions and countries of LAC are linked to growth and poverty indicators. Some regions and countries find it difficult to be competitive and generate well-being for their inhabitants because of the quality and quantity of their natural resources. These are major challenges that have to be overcome if sustainable use is to be ensured. Development policies and programs are needed that take into account variables such as the quality of natural resources, climatic conditions, the risks posed by these variables and the socioeconomic status of the inhabitants whose life and activities depend on the use of natural resources. In many countries, institutional management also has to bear in mind regular extreme climatic events (for example, hurricanes in the tropical region) and the recurrence of "*El Niño*".

New institutional framework and the sustainable development of agriculture

An important element in constructing an institutional structure for agriculture and rural life is the need to redefine the functions of the ministries of agriculture, focusing on at least two major areas. Firstly, some traditional responsibilities should be transferred to new forms of organization involving private actors, without ruling out possible joint forms of public-private partnership. And, secondly, the capacity to meet the new needs of a broader spectrum of actors must be developed. These actors are located in the different links in the agrifood chains -suppliers of inputs, processors, bulking centers, service providers, marketers- or are members of the different social groups that operate in the rural environment, such as farmers, women, young people, ethnic groups and nongovernmental organizations.

The role of the ministries of agriculture in rural development needs to be rethought as far as the social actors are concerned. The ministries usually do not have the policy instruments required to link and coordinate strategic actions for rural development, many of which are the responsibility of other public institutional actors, such as those involved in providing infrastructure, education, tourism, housing, health, etc.

To ensure the sustainable development of agriculture, the new institutional framework should also include the development of modern sectoral policy instruments compatible with international regulations that include incentive schemes for a wide range

of actors. Another issue involves the negative externalities in the rural environment and agrifood sector. The State must be capable of resolving the social concerns that the market has not been able to address satisfactorily.

The new institutional framework and rural development

The new institutional fabric must be capable of providing solutions to the changes that have taken place in rural areas in recent decades. In particular, there is a need to coordinate policies, advance the participation and empowerment of local stakeholders and foster public-private collaboration.

Policy coordination at the territory level. The territorial approach to rural development calls for territorial policies. However, only in some cases does the unit of intervention coincide with the limits of territorial political-administrative units, such as counties or departments. Territorial coordination is frequently established based on other unifying factors, such as natural resources or cultural elements, which transcend administrative borders.

Hence the need to foster and develop institutional arrangements based on considerations other than local political-administrative boundaries (e.g., associations of ecologically homogeneous counties or micro-regions). Policies designed for units of this kind should aim to magnify the effect of the interactions between adjacent territorial units and thereby develop production complementarities and facilitate substantive public investment projects.

When designing policies for micro-regions, special attention must be paid to matters such as the importance of instituting and strengthening administrative structures and rules; coordinating sectoral policy and making it consistent; creating financing and incentive mechanisms to spur private investment; training micro-regional entities to guarantee balanced negotiation processes with the central government; and strengthening the capacity for the joint design and execution of policies that target given areas.

Differentiated strategies keyed to the level of development of rural territories

From the territorial perspective, the goal of rural development must be to raise the most backward territories or actors to higher levels of development. This means that rural development strategies must combine two elements: a) differentiated strategies for achieving national territorial cohesion; and b) differentiated policies for achieving intra-territorial social cohesion.

Different territorial situations call for differentiated approaches and public interventions. A case-specific combination of basic policies will be required that provide assistance, access to and the redistribution of assets, training and skills development, and

more universal policies aimed at fostering production, technological development, market access and the development of legal and institutional frameworks.

Territories that are relatively backward require policies that will diversify production alternatives in the short term, complemented with policies that strengthen the linkages between the territory in question and other, faster-growing ones. Policy objectives and instruments should aim mainly to strengthen and develop collective goods (amenities, clusters, organizations, etc.), to make the territory more competitive; boost strategic investments in new activities and enterprises; establish or consolidate local entities that facilitate the retrieval and dissemination of information and knowledge, as input for specific production processes; strengthen natural networks as vehicles for disseminating and transferring knowledge and technologies; train human resources to manage local development and rural enterprises; and strengthen public services, such as distance learning using information and communications technology.

The differentiated strategies should be developed via participatory processes, basically adopting bottom-up approaches that make it possible to coordinate the demands and needs of each territory with the priorities established at the national level. This constitutes a change in the methods used to draw up rural development strategies, combining the top-down and bottom-up approaches so that the strategies for each territory are tailored to local needs and conditions, and also help achieve the objectives of a new social order or "*Proyecto de Nación*".

5.5.3 Adoption of new management methods

Any new institutional framework should consider the participation and contribution of fresh actors, with a view to facilitating collaboration among public and private institutions, the coordination of development efforts among national and regional entities, and the development of work arrangements that foster collaboration and shared management and responsibility.

A key element of institutional change is the devolution of political power to local governments and civil society with regard to resource allocation and decision-making capabilities. This involves establishing guidelines for relationships, rules for interaction and institutionalized negotiation mechanisms that include actors from the national, regional and local levels. In some countries this institutional framework is gradually evolving from an informal arrangement to a more formal one, depending on the levels decentralization of the state apparatus.

At the national level, institutional niches need to be established that involve (by type of activity) ministries of agriculture, the environment, planning, governance (decentralization), health, education, public works, trade, tourism, etc. Inter-ministerial coordination mechanisms of this kind (working groups or specialized committees) should be used to plan development strategies; design harmonized sectoral policies; allocate resources by means of mechanisms that guarantee the practical application of a policy of

demand, with more local initiatives and tools such as competitive and co-financing funds; establish and contribute to the growth of planning mechanisms and methods that are based on bottom-up, participatory arrangements; establish information mechanisms and knowledge management via networks that guarantee a dynamic flow and broad access to all the territories; and institute programs for training trainers, professional updating and education for professionals specializing in the development of rural territories.

At the local level, the institutional framework should boost the creation and strengthening of effective local organizations, participation -furthering public-private- and the coordination of local training needs, to develop the capabilities required to manage rural development and enterprises.

5.5.4 Developing new skills, know-how and attitudes

The challenges that lie ahead for the development of agriculture and rural life are immense, as are the objectives set. Allied to their growing participation in production, trade and political processes, public and private actors need to enhance their technical, business and political skills. To assume new responsibilities in the emerging institutional structure, other national and international economic and social actors must also improve capabilities for dialogue, negotiation and consensus-building.

The local population must develop new skills for the new forms of work, so they can act independently and responsibly, and successfully manage their enterprises. New institutional abilities are also needed to forge relations of collaboration, and public officials need new to learn new methods of work. To attain these goals, additional mechanisms must be devised for skills training and development that also facilitate knowledge management.

The key objectives of this skills development would be to: a) update key technical and methodological guidelines; b) remedy the lack of validated knowledge; and c) transfer positive attitudes to professionals so they can adapt to the changes and innovations resulting from the process.

Societies are moving rapidly toward economies in which knowledge is the chief asset for development. The community of agriculture and rural life cannot afford to be left behind in this global trend. It is essential that knowledge be used as a strategic resource for achieving the sustainable development of agriculture and rural life, food security and rural prosperity.

Accordingly, knowledge management is a key tool for furthering the development of the new abilities and attitudes required to foster collaboration, teamwork, decentralization and participation, and to facilitate policy-making, strategic planning, the implementation of actions and the development of technologies for rural development.

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ACRONYMS

CAC-CORECA	Central American Agricultural Council Regional Council for Agricultural Cooperation
ADC	Andean Development Corporation
AgGDP	Agricultural Gross Domestic Product
AHFS	Agricultural health and food safety
ASEAN	Association of Southeast Asian Nations
CABEI	Central American Bank for Economic Integration
CAFTA	US-Central American Free Trade Agreement
CAPPCA	Component of Support for Small Producers For Environmental Conservation
CARDI	Caribbean Agricultural Research and Development Institute
CATIE	Tropical Agriculture Research and Higher Education Center
CBPC	Bolivian Council on Productivity and Competitiveness
CCAD	Central American Commission for Environment and Development
CDB	Convention on Biological Diversity
CEDAF	Centro para el Desarrollo Agropecuario y Forestal, Inc.
CELADE	Latin American and Caribbean Demographic Centre
CENICAFE	Coffee Research Center
CENICAÑA	Sugar Cane Research Center
CENIPALMA	Oil Palm Research Center
CFCs	Cloroflurocarbons
CGIAR	Consultative Group on International Agricultural Research
CIAT	International Center for Tropical Agriculture
CIMMYT	International Maize and Wheat Improvement Center
CIP	International Potato Center
CIPC	Inter-institutional Committee on Productivity and Competitiveness

CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CONATEL	National Telecommunications Company
CSU	Corporación Supermercados Unidos
DFID	Department for International Development
DIPEMI	Directorate of Strategic Planning and Institucional Modernization
DMB	Ministerial Declaration of Bavaro
ECLAC	Economic Commission for Latin America and the Caribbean
EMBRAPA	Brazilian Agricultural Research Corporation
FAO	Food and Agriculture Organization of the United Nations
FBD	Food-borne diseases
FISDL	Social Investment Fund for Local Development
MIF	Multilateral Investment Fund
FONTAGRO	Regional Fund for Agricultural Technology
FORAGRO	Forum for the Americas on Agricultural Research and technology Development
FTAA	Free Trade Area of the Americas
FUSADES	Salvadoran Foundation for Economic and Social Development
G-20	Group of twenty
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GIS	Geographic Information System
GMO	Genetically modified organisms
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
HACCP	Hazard Analysis and Critical Control Point
HONDUTEL	Honduran Telecommunications Company
IABA	Inter-American Board of Agriculture

ICTs	Information and Communications Technologies
IDB	Inter-American Development Bank
IDR	Institute for Rural Development
IFAD	International Fund for Agricultural Development
IFOAM	International Federation of Organic Agriculture Movements
IFPRI	Food Policy Research Institute
IICA	Inter-American Institute for Cooperation on Agriculture
INCAE	Central American Institute of Business Administration
INTA	National Institute of Agricultural Technology
IPEA	Instituto de Pesquisa Econômica Aplicada
IPGRI	International Plant Genetic Resources Institute
ISNAR	International Service for National Agricultural Research
IUCN	The World Conservation Union
LAC	Latin America and the Caribbean
LDCs	Least Developed Countries
MDB	Ministerial Declaration of Bavaro
MDG	Millennium Development Goals
MEAs	Multilateral Environmental Agreements
MERCOSUR	Common Market of the South
MUSALAC	Plantain and Banana Research and Development Network for Latin America and the Caribbean
NARI	National Agricultural Research Institute
NGOs	Non-governmental organizations
OAS	Organization of American States
OECD	Organization for Economic Cooperation
PADEMER	Program for the Development of Rural Micro-enterprices

PAHO	Pan American Health Organization
PANAFTOSA	Pan American Center for Foot-and-Mouth disease
PREDEG	Farm Modernization and Development Program
PROAGRO	Agricultural Supply Program
PROCIANDINO	Cooperative Agricultural Research and Technology Transfer Program for the Andean Region
PROCINORTE	Cooperative Program in Research and Technology for the Northern Region
PROCISUR	Coopertive Program for the Development of Agrifood and Agroindustrial Technology in Southern Cone
PROCITROPICOS	Cooperative Program in Research and Technology Transfer for the South American Tropics
PRODECHACO	Sustainable Development Program for the Chaco Region
PRODESAL	Program to Support the Development of Small Cotton Farms
PROINDER	Project for the Development of Small Agricultural Producers
PROMECAFE	Regional Cooperative Program for the Technological Development and Modernization of Coffee Cultivation in Central America, Panama, the Dominican Republic and Jamaica
PRONADEGA	Proyecto Nacional de Desarrollo Ganadero
PRONATTA	National Agricultural Technology Transfer Program
R&D	Research and development
RCA	Revealed Comparative Advantages
SAG	Honduran Secretariat of Agriculture and Livestock
SAGARPA	Secretariat of Agriculture, Livestock, Rural Development, Fisheries and Nutrition
SAM	Social Accounting Matrix
SBPC	Bolivian System of Productivity and Competitiveness
SEMARNAP	Secretariat of the Environment, Natural Resources and Fisheries
SENASAG	National Agricultural Health an Food Safety Service
SIBTA	Bolivian System of Agricultural Technology

SICTA	Central American System for Agricultural Technology Integration
SIDALC	Agricultural Information and Documentation System for the Americas
SIRVETA	Regional Information System for Food-borne Disease Surveillance
SNPA	National Agricultural Research System
SPS	Sanitary and Phytosanitary Measures
TRIPS	Trade-related aspects of intellectual property rights
UNCBD	United Nations Convention on Biological Diversity
UNCCC	United Nations Framework Convention on Climate Change
UNCCD	United Nations Convention to Combat Desertification
UNDCP	United Nations International Drug Control Program
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UPC	Productivity and Competitiveness Office
UPEG	Management Panning and Evaluation Office
USDA	United States Department of Agriculture
WRI	World Resources Institute
WTO	World Trade Organization
WWC	World Water Council

FIGURES

TABLES

BOXES

APPENDIX

Appendix A. Evolution of agriculture and food security in the Americas: Statistical references and selected indicators, 1986-1988 / 1997-1999.

I. LIST OF STATISTICAL REFERENCES AND SELECTED INDICATORS

A. Evolution of Agriculture in the Americas

- Growth of GDP and Agricultural GDP (Index 1986-1988 = 100)
- Agricultural Value Added Percentage of Gross Domestic Product
- Agrifood Trade as a Share of Total Trade in Goods
- Productivity and growth of production
- Agricultural inputs
- Soil Use
- Sustainability of natural resources
- Sustainable development indicators
- Rurality and gender
- Poverty and quality of life
- Agrifood Trade: Primary vs. processed products (1986-1988 =100)
- Agrifood Exports, main destinations
- Agrifood Imports, main origins

B. Evolution of Food security in the Americas

- Indicators on consumption and domestic supply of food
- Food trade, production and consumption, by selected groups of products (in Kg/inhab.)
- Index of Revealed Comparative Advantage and Balance of Trade (Value Exp/Value Imp) in Food
- Real Income, Production and Food Consumption (per inhabitant, 1986-1988 = 100)
- Factors that affect access to food

II. DEFINITION OF VARIABLES AND TECHNICAL NOTES

In this section you will find definitions of variables and methodological aspects related to chapter II: Statistical references and selected indicators by country. The variables are listed in alphabetical order, and written the same way as they appear in the tables and graphs of that chapter.

AGDP per Worker US$ 1995. Agriculture value added per worker (constant 1995 US$) is a measure of agricultural productivity. Data are in constant 1995 U.S. dollars.

Agricultural Land (1000 ha. And ha/inhab.) Includes arable lands and those under permanent cultivation, as well as permanent pasturelands and meadows.

The area of agricultural land is one of the most important variables that determine the domestic supply of agricultural products, without ignoring other factors such as soil degradation (erosion), the exhaustion of the agricultural frontier, and delayed investments in irrigation systems (Ardila). Countries with limited availability of land for production become increasingly dependent on the international food market as their populations grow.

Agricultural Value Added (Percentage of Gross Domestic Product). Agriculture corresponds to International Standard Industrial Classification (ISIC), revision 3 divisions 1-5 and includes forestry, hunting, and fishing, as well as cultivation of crops and livestock production. Value added is the net output of a sector after adding up all outputs and subtracting intermediate inputs. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources. The origin of value added is determined by the ISIC.

Agrifood Exports. Agrifood products includes chapters zero, one, two (excluding items 232, 27 and 28) and four of The Standard International Classification (SITC), third revision.

Agrifood Imports. Agrifood products includes chapters zero, one, two (excluding items 232, 27 and 28) and four of The Standard International Classification (SITC), third revision.

Arable Land. Land under temporary crops (double-cropped areas are counted only once), temporary meadows for mowing or pasture, land under market and kitchen gardens and land temporarily fallow (less than five years). The abandoned land resulting from shifting cultivation is not included in this category. Data for "Arable land" are not meant to indicate the amount of land that is potentially cultivable.

Consumption (kg/inhab.). This refers to the amount of the product in question, and of any product derived from it, which is available for human consumption during the reference period. Maize consumption, for example, includes the amount of maize, corn flour and any other product derived from it, available for human consumption. Milk consumption includes the amount of milk consumed *per se*, as well as its equivalent in milk products, excluding butter.

Consumption of Fixed Capital % of GDP. Consumption of fixed capital represents the replacement value of capital used up in the process of production. This indicator has been derived for the purpose of estimating genuine domestic savings.

CPI Food (% Change). Food Inflation (annual %) measured by the consumer price index of food and reflects the annual percentage of change in the prices of foods used for private family consumption. Food price indexes are sub-indexes of the consumer price index.

Food prices have a major impact on the demand for food, especially among middle and low-income sectors of the population.

Damage by CO2 Emissions. Carbon dioxide damage is estimated to be $20 per ton of carbon (the unit damage) times the number of tons of carbon emitted. This indicator has been derived for the purpose of estimating genuine domestic savings.

Debt Service as % of Exp. Goods and Services: Debt Service as a percentage of Exports of Goods and Services**.** The total of the debt service is defined as the sum of the reimbursements of the principal and interest payments effected in foreign currency, goods or debt service over the long-term, payment of debt interests in the short-term and reimbursements (buy-back and charges) to the IMF.

The service of the external debt is one of the greatest limitations to finance food imports, since the principal and the financial costs must be repaid in foreign exchange.

Degradation of resources (% of GDP): Energy, Minerals and Forests.
Energy depletion (% of GDP). Energy depletion is equal to the product of unit resource rents and the physical quantities of energy extracted. It covers crude oil, natural gas, and coal. This indicator has been derived for the purpose of estimating genuine domestic savings.

Mineral depletion (% of GDP). Mineral depletion is equal to the product of unit resource rents and the physical quantities of minerals extracted. It refers to bauxite, copper, iron, lead, nickel, phosphate, tin, gold, and silver. This indicator has been derived for the purpose of estimating genuine domestic savings.

Net forest depletion (% of GDP). Net forest depletion is calculated as the product of unit resource rents and the excess of roundwood harvest over natural growth. This indicator has been derived for the purpose of estimating genuine domestic savings.

Direction and Dynamism of Trade. Presents the transactions of each country with its main trading partners (imports and exports of goods). Includes the heading "others" to complete the trade flows. The data is for 1999. The value of the transactions of a trading partner can be calculated by multiplying the market share by the total value of exports or imports, as the case may be.

Elasticity Price of Income (%). If we consider this aspect at the level of a production unit, the effects on family wellbeing in the face of changes in the prices of food products that they sell and also consume, may be determined by using "Roy's Identity"[1] (Barrett and Dorosh; Budd; Deaton). If the marginal benefit of the income is positive, the effect on the wellbeing of the productive unit in the face of a change in prices is of the same order as the net supply (m_s); in other words, the effect on wellbeing is positive, if the unit is a net seller and negative, if it is a net buyer. This effect, in the short term[2], can be deduced from the elasticity of real income with respect to changes in prices, which is equivalent to the ratio between net supply (supply minus consumption) and the real income of the productive unit (Minot and Goletti).

1 $V_y m_s = V_p$ where V_y is the marginal benefit of the income, $m_s = F_s - C_s$ (supply minus consumption), and V_p is the marginal benefit of the price.

2 Because it ignores possible effects on supply and demand, jobs, salaries, technological changes, etc.

The same concept can be applied to a country, where net supply is calculated as exports minus imports (net exports) and the income is the gross domestic product (GDP). From this reasoning, it may be inferred that the immediate effect of an increase in food prices is to reduce the real benefit resulting from the international food trade in the net importing countries, and to increase the benefit in the net exporting countries. Moreover, the magnitude of the impact is greater according to the proportion of net exports over GDP.

For example, if the elasticity is equal to -10% (which also indicates that the country is a net food importer), an overall increase in food prices of 1%, would reduce the real income of the economy by 10%. If the country is a net exporter, the elasticity would be positive and this same effect would produce a real increase in incomes.

Employment in Agriculture % Total. Employment in agriculture is the percentage of the total labor force in agriculture, hunting, forestry, and fishing, corresponding to major division 1 (ISIC revision 2) or tabulation categories A and B (ISIC revision 3). Labor force comprises all people who meet the International Labor Organization's definition of the economically active population.

Fertilizer arable land 100g/ha. Fertilizer consumption (100 grams per hectare of arable land) measures the quantity of plant nutrients used per unit of arable land. Fertilizer products cover nitrogenous, potash, and phosphate fertilizers (including ground rock phosphate). The time reference for fertilizer consumption is the crop year (July through June). Arable land includes land defined by the FAO as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded.

Food Aid (kg/inhab.). This refers to transfers of food products (Grains + Non-grains) from all donor countries to beneficiary countries, either as a donation or else under very favorable conditions.

Food Imp. % Merchandise Exports: Food Imports as a percentage of Goods Exports. This is the ratio between food imports (excluding fish) and total exports of goods. This indicator is included because the earnings that a country receives from the export of goods are one of its most important sources for financing food imports.

Forested Land % Total Surface Area: Forests and Woodland. Land under natural or planted stands of trees, whether productive or not. This category includes land from which forests have been cleared but that will be reforested in the foreseeable future, but it excludes woodland or forest used only for recreation purposes. The question of shrub land, savannah, etc. raises the same problem as in the category "Permanent meadows and pastures". In the year 1995 and onward there will be no data for this element, data relating to forest area can be obtained from the FAO Forest Resources Division.

Irrigated land % of Land under Crops. Irrigated land refers to areas purposely provided with water, including land irrigated by controlled flooding. Cropland refers to arable land and land used for permanent crops.

GDP. Gross Domestic Product is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the

products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.

Gini Index. Gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus a Gini index of zero represents perfect equality, while an index of 100 implies perfect inequality.

Gross Domestic Savings % of GDP. Gross domestic savings are calculated as GDP less final consumption expenditure (total consumption).

Human Development Index. Measures the overall achievements in a country in three basic dimensions of human development: longevity, knowledge and a decent standard of living. It is measured by life expectancy, educational attainment (adult literacy and combined primary, secondary and tertiary enrolment) and adjusted income per capita in purchasing power parity (PPP) US dollars.

Index of Dependence (%). The dependence index is defined as food imports over domestic food supply, all this multiplied by 100. Domestic supply is the sum of production plus imports, minus exports, plus the change in inventories.

The greater the net food imports per capita, the greater the importance of imports as a source of internal food supplies. Therefore, domestic production is limited to satisfying demand. It is important to note that the countries with the lowest levels of self-sufficiency in food are more vulnerable politically to the pressures of those who are their suppliers.

Index of Revealed Comparative Advantage (RCA). This index compares the efficiency of countries, as revealed by the trade flows of goods, whereby the most efficient countries are those with the lowest opportunity costs of resources (Arias and Chacón).

The RCA index is calculated according to the notion of a world composed of two countries (country ***i*** and the rest of the world ***r***) that participate in the commercial exchange of two goods (one good ***a*** and the rest of goods ***n***).

This index was calculated as follows:

$$RCA^{i}_{a}=RCAE^{i}_{a}-RCAI^{i}_{a}$$

where:

$$RCAE^{i}_{a} = \ln [(X^{i}_{a} / X^{i}_{n}) / (X^{r}_{a} / X^{r}_{n})]$$

$$RCAI^{i}_{a} = \ln [(M^{i}_{a} / M^{i}_{n}) / (M^{r}_{a} / M^{r}_{n})]$$

X and M represent exports and imports respectively, *r* refers to the world except for the country under consideration, while *n* refers to the trade in all goods or commodities, except for commodity *a*

Implicitly, CAE or CAI combines six types of market share:

1. The country's world share in the *total trade of goods*.
2. The country's world share in *trade of good a*.
3. The country's world share in the *trade of the rest of goods*.
4. The *rest of the world's* world share *in the trade of* total *goods*.
5. The *rest of the world's* world share *in the trade of good a*.
6. The *rest of the world's* world share *in the trade of the rest of goods*.

There are two possible interpretations of this index. One is that if **RCA** > 0 the country has *Comparative Revealed Advantages* in food exports, and this generally shows that *exports* exceed *imports* (Exp/Imp >1). By contrast, if **RCA** < 0 this indicates that the country shows a *Revealed Comparative Disadvantage* in food exports, and generally indicates that the country is a net food importer (Exp/Imp <1). This index may be used to make comparisons between products, between countries and in time; therefore, the higher the RCA of a product/country, the more favorable is its competitive position in the international market

Index processed/primary products. These groups were calculated based on the structure for primary and processed products of the Agricultural Market Access Database (AMAD) (www.amad.org) with some modifications done by the authors.

Int. Reserves def. in months of Imports. International Reserves defined in months of Imports**,** where gross international reserves include monetary gold holdings, special drawing rights (SDR), the reserve position of member countries in the IMF and the foreign exchange holdings under the control of the monetary authorities. The gold component of these reserves is valued at end of year prices (December 31) in London. This shows the number of months of imports of goods and services that could be paid with these reserves.

The above indicator reflects the evolution of a country's current account and the capital of the balance of payments. As a general rule, it is said that a country should hold sufficient reserves to cover at least three months of imports.

Land used for Meadows & Pastures. Land used permanently (five years or more) for herbaceous forage crops, either cultivated or growing wild (wild prairie or grazing land). The dividing line between this category and the category "Forests and woodland"; is rather indefinite, especially in the case of shrubs, savannah, etc., which may have been reported under either of these two categories

Land Area. Total area excluding area under inland water bodies. The definition of inland water bodies generally includes major rivers and lakes. Data in this category are obtained mainly from the United Nations Statistical Division, New York. Possible variations in the data may be due to updating and revisions of the country data and not necessarily to any change of area.

Livestock production index (1989-91 = 100). Livestock production index includes meat and milk from all sources, dairy products such as cheese, and eggs, honey, raw silk, wool, and hides and skins.

Net domestic savings (% of GDP). Net domestic savings are equal to gross domestic savings less the value of consumption of fixed capital. This indicator has been derived for the purpose of estimating genuine domestic savings.

Net Imports (kg/inhab.). This is defined as imports minus food exports (in metric tons) divided by the country's total population. When this figure is greater than zero, the country is termed a net food importer.

The above is based on the FAO food classification, which includes 20 groups of products (Grains, Milk Products (excludes butter), Fruits, Sugar and Sweeteners, Sugar Crops, Meat, Alcoholic Beverages, Roots and Tubers, Vegetables, Vegetable Oils, Legumes, Fish and Shellfish, Oilseeds, Eggs, Animal Fats, Stimulants, Edible Offal, Spices, Nuts and Aquatic Products.).

In cases where the value of the food trade is used, and not the volume, (trade balance index, revealed comparative advantage index, etc.) the totals exclude fish. The main reason for this is that the FAO's figures for the fish trade are generally one year behind.

% Annual Growth of GDP and AGDP. Annual growth rate for the Gross Domestic Product and the Agricultural Value Added, based on constant local currency. Aggregates are based on constant 1995 U.S. dollars.

% Annual Growth of Rural Population. Is the exponential change for the period indicated.

% of Population Living Below Poverty Line. National poverty rate is the percentage of the population living below the national poverty line. National estimates are based on population-weighted sub-group estimates from household surveys.

% of Population Living with Less than 1$ or 2$. Population below $1 a day and population below $2 a day are the percentages of the population living on less than $1.08 a day and $2.15 a day at 1993 international prices (equivalent to $1 and $2 in 1985 prices, adjusted for purchasing power parity). Poverty rates are comparable across countries, but as a result of revisions in PPP exchange rates, they cannot be compared with poverty rates reported in previous editions for individual countries

Permanent Crops. Land cultivated with crops that occupy the land for long periods and need not be replanted after each harvest, such as cocoa, coffee and rubber; this category includes land under flowering shrubs, fruit trees, nut trees and vines, but excludes land under trees grown for wood or timber

Population. Many of the indicators are in units per inhabitant or per capita in order to eliminate the size factor and allow for comparisons between countries. The figures were taken from the World Bank, and are based on a de facto definition of the population, which includes all residents, regardless of their legal status or nationality. However, refugees who are not permanently settled in their host country are generally considered to be part of the population of their country of origin.

Production (kg/inhab). This figure describes total domestic production, either within or outside the agricultural sector. For example, it includes non-commercial production and production from family vegetable plots. Production of crops and livestock is reported at farm level (in the case of crops, it excludes post-harvest losses).

Production of Crops (Index 1989-91=100). Crop production index shows agricultural production for each year relative to the base period 1989-91. It includes all crops except fodder crops. Regional and income group aggregates for the FAO's production indexes are calculated from the underlying values in international dollars, normalized to the base period 1989-91.

Protected Areas % Total Surface Area. Nationally protected areas are totally or partially protected areas of at least 1,000 hectares that are designated as national parks, natural monuments, nature reserves or wildlife sanctuaries, protected landscapes and seascapes, or scientific reserves with limited public access. The data do not include sites protected under local or provincial law. Total land area is used to calculate the percentage of total area protected

Spending on Education % of GDP. Education expenditure refers to the current operating expenditures in education, including wages and salaries and excluding capital investments in buildings and equipment. This indicator has been derived for the purpose of estimating genuine domestic savings.

Real Income per in hab. (1995 US$). This refers to the Gross Domestic Product (GDP) per capita in constant 1995 dollars. Net food imports are the result of the balance between a country's internal demand and supply. Therefore, factors such as income levels, which have a direct and positive effect on demand, indirectly affect the level of net food imports. At the higher levels of income, demand is more refined and there is greater access to the enormous diversity of food products offered on the international market. With economic growth, food security improves as consumers gain greater control over resources, resulting in increased food consumption. From another point of view, as incomes increase, the proportion of spending on food decreases and the probabilities of falling into a situation of food insecurity also decrease; moreover, the savings that accompany a country's development also improve long-term food security.

Rural population (% of total population). Rural population is calculated as the difference between the total population and the urban population.

Rural population Density (Per/km2). Rural population density is the rural population divided by the arable land area.

Tractors per each 100 ha. Tractors per each hundred hectares refers to the number of wheel and crawler tractors (excluding garden tractors) in use in agriculture at the end of the calendar year specified or during the first quarter of the following year. Arable land includes land defined by the FAO as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded.

Tractors per 1000 Workers. Refers to the number of wheel and crawler tractors (excluding garden tractors) in use in agriculture at the end of the calendar year specified or during the first quarter of the following year. Workers in agriculture, hunting, forestry, and fishing, corresponding to major division 1 (ISIC revision 2) or tabulation categories A and B (ISIC revision 3). Comprises all people who meet the International Labour Organization's definition of the economically active population.

Trade balance index (Exp/Imp). This is calculated by dividing the value of exports by the value of food imports. A value greater than one indicates that the country, in terms of the value of trade, is a net food exporter, otherwise it is a net food importer. If the value of the index is 2, exports are two times or 100% greater than imports.

Unemployment (as % labor force). Total unemployment as a percentage of the work force refers to the proportion of the work force that is jobless but available and seeking employment. Definitions of the work force and unemployment differ among countries (ILO).

III. STATISTICAL REFERENCES AND SELECTED INDICATORS BY COUNTRY

The first and second parts of this compendium comprise thirteen indicators referring to the evolution of production and other characteristics of the agricultural sector. Five indicators, many of which include multiple variables, refer to the food situation in the countries and the "revealed comparative advantage" of agrifood products in international markets.

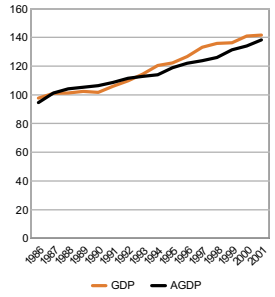
The base period for these indicator are the years comprised between 1986 and 1990, a second period of comparison comprise the years 1991 to 1999 and a final period reaching to 2001, which is the last year for which complete indicators are available for all countries of the American Hemisphere.

This publication is available in English and Spanish in a CD-ROM format. The Directorates of Agribusiness and Trade, and Strategic Planning and Institutional Modernization wishes to thank Joaquin Arias, Oswaldo Segura and Julio Alfaro, for their intellectual contribution.

IICA hopes that this compendium of statistical references and indicators of the evolution of agriculture and the food situation in the countries will be useful to decision makers, analysts and scholars involved in agricultural and rural development issues in the Americas.

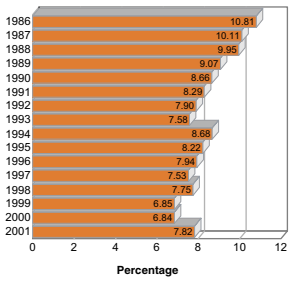
Growth of GDP and AGDP

Index 1986-1988=100

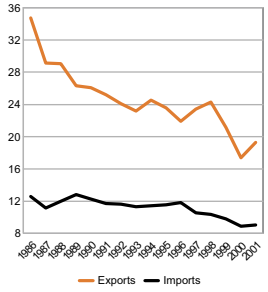


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	2,621.3	3.00	2,030.9	94.7	97.9
1991-1999	3,040.9	2.38	2,179.1	118.5	108.6
2000-2001	3,961.7	2.65	2,567.5	133.8	120.4

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	683.3	5.53	41.56	124,406	12.8
1991-1999	731.1	5.33	35.22	131,116	13.7
2000-2001	923.3			133,428	13.9

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	739,587	16.82	19.92	3.09	49.39
1991-1999	757,380	17.31	20.66	3.33	49.13
2000-2001	761,063	17.53	20.94	3.40	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	4.74	1.26	0.03	0.64
1991-1999	3.08	0.66	0.03	0.67
2000-2001	5.05	0.57	0.02	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	3.25	10.72	23.29	9.96
1991-1999	3.96	10.82	19.64	7.67
2000-2001	4.17	10.45	19.06	7.38

Rurality and gender

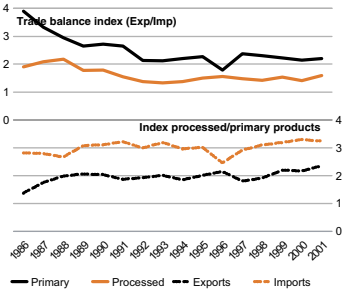
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	30.12	-0.06	203.92	19.72	8.03
1991-1999	26.71	0.02	226.29	18.51	12.27
2000-2001	24.39	-0.14	235.21		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990					
1991-1999					
2000-2001	0.767	49.50			

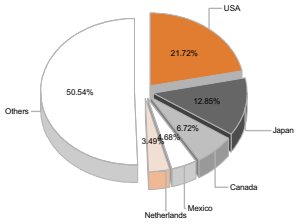
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

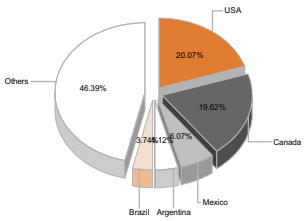
Main destinations



Anual average US$183,515 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$121,705 millions (1997-2001)

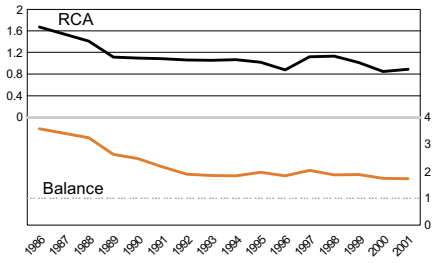
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-78.64	592.45	2,178.39	1.75	4.21	4.59	2,700.68	68.46
1991-1999	-76.06	627.90	2,178.95	1.59	6.18	2.63	2,770.63	72.64
2000-2001	-85.06	654.58	2,186.46	1.46	7.42	1.71	2,847.15	76.25

Food trade, production and consumption, by selected groups of products (in kg/inhab.)

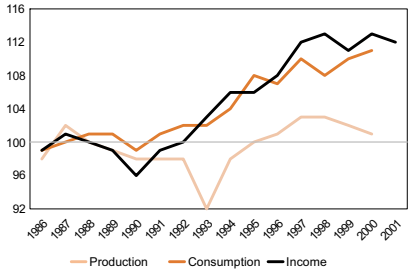
Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	7.58	3.16	18.00	11.45
1991-1999	10.55	4.78	21.77	11.78
2000-2001	13.13	5.17	25.34	11.20
Meat				
1986-1990	3.37	1.56	44.33	41.56
1991-1999	3.79	2.38	52.79	50.22
2000-2001	5.27	3.71	60.67	57.90
Cereals				
1986-1990	26.72	49.36	236.38	124.55
1991-1999	38.59	72.08	243.45	122.84
2000-2001	53.48	90.61	252.46	122.73
Fruits				
1986-1990	40.70	2.28	167.88	98.68
1991-1999	46.48	4.90	182.70	109.46
2000-2001	48.73	7.02	187.11	114.51
Vegetables				
1986-1990	5.60	0.73	52.47	41.94
1991-1999	8.82	2.38	56.78	44.07
2000-2001	10.75	3.26	62.41	47.98
Oilcrops				
1986-1990	16.17	5.52	95.50	3.22
1991-1999	22.91	11.65	111.86	4.72
2000-2001	36.77	15.78	139.30	6.69
Dairy Products				
1986-1990	1.41	14.80	94.09	94.47
1991-1999	2.93	15.05	105.17	104.29
2000-2001	4.83	14.68	112.08	108.54

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption

(per inhabitant, 1986-1988 = 100)

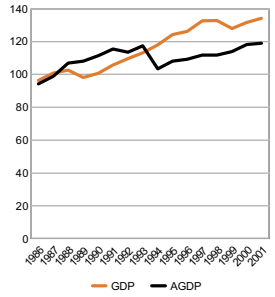


Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	3,368.40	1.99	33.96		5.11	7.84	5.80
1991-1999	3,620.11	0.94	30.02		6.22	9.25	7.98
2000-2001	3,841.50	0.77	37.09		4.80	7.70	

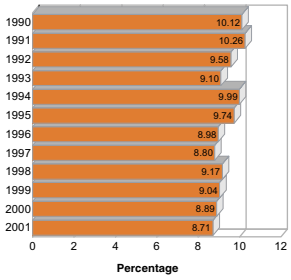
Growth of GDP and AGDP

Index 1986-1988=100

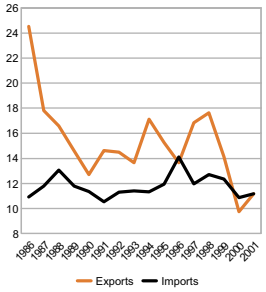


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	2,604.0	4.30			95.6
1991-1999	2,522.2	0.37			113.1
2000-2001	2,597.5	2.26			126.9

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	980.2	0.79	3.26	13,443	17.5
1991-1999	919.5	0.82	2.46	12,171	20.6
2000-2001	1,095.2			12,476	20.8

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	141,079	9.53	3.07	87.40	54.27
1991-1999	141,696	8.59	3.43	87.98	54.47
2000-2001	142,560	8.75	3.43	87.82	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	12.26	2.68	-	1.04
1991-1999	10.78	0.56	-	1.11
2000-2001	12.61	0.52	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	3.02	9.41	22.75	9.98
1991-1999	3.36	9.46	19.73	8.96
2000-2001	3.46	9.36	19.42	9.61

Rurality and gender

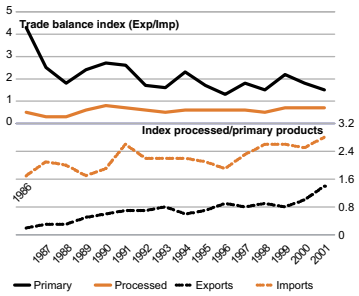
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	31.74	0.23	209.88		
1991-1999	27.72	0.13	234.39		
2000-2001	25.00	0.05	229.40		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990					
1991-1999					
2000-2001					

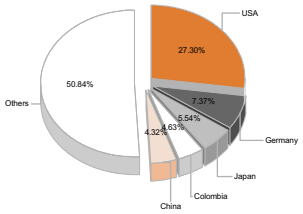
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

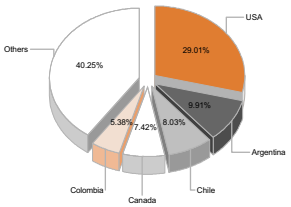
Main destinations



Anual average US$10,261 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$5,974 millions (1997-2001)

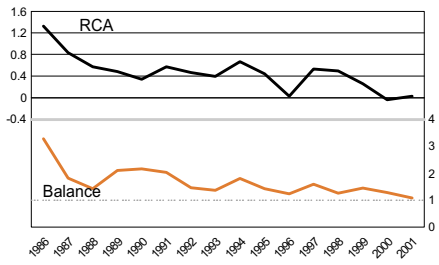
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-16.51	531.28	1,283.53	1.59	7.49		2,342.94	53.87
1991-1999	-32.62	555.05	1,319.76	1.37	9.85		2,427.79	57.47
2000-2001	-44.53	474.31	1,131.87	1.25	10.17		2,533.84	60.33

Food trade, production and consumption, by selected groups of products (in kg/inhab.)

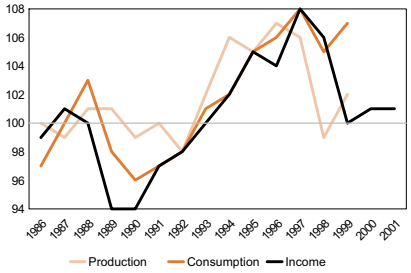
Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	0.34	4.26	7.83	9.83
1991-1999	1.41	5.32	10.24	10.66
2000-2001	3.44	5.31	11.87	9.24
Meat				
1986-1990	0.21	0.51	31.50	29.62
1991-1999	0.19	0.44	34.71	32.48
2000-2001	0.08	0.59	37.84	34.86
Cereals				
1986-1990	1.24	63.14	99.16	99.42
1991-1999	3.63	80.95	88.08	106.20
2000-2001	2.92	65.89	74.40	81.57
Fruits				
1986-1990	31.53	0.96	151.56	92.67
1991-1999	51.68	3.30	184.36	99.65
2000-2001	55.11	4.40	167.27	89.16
Vegetables				
1986-1990	0.66	0.13	40.49	33.07
1991-1999	1.49	1.14	45.10	36.74
2000-2001	0.59	2.34	35.46	32.11
Oilcrops				
1986-1990	0.57	2.81	16.71	1.71
1991-1999	3.19	4.94	17.30	2.56
2000-2001	5.41	7.65	18.30	1.95
Dairy Products				
1986-1990	0.02	11.24	85.04	80.07
1991-1999	0.35	10.73	91.73	84.90
2000-2001	1.17	10.51	91.88	83.66

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption

(per inhabitant, 1986-1988 = 100)

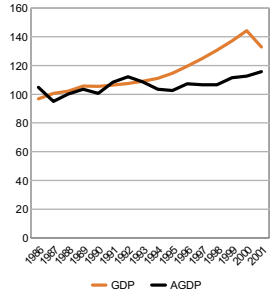


Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	2,241.40	1.43	33.76		4.54	7.41	8.90
1991-1999	2,344.78	0.72	28.03		3.86	8.39	9.89
2000-2001	2,321.00	0.23	24.80		4.90	6.79	

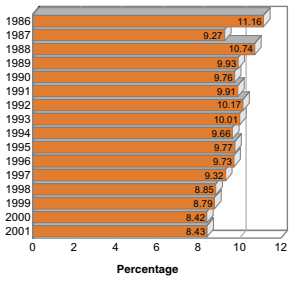
Growth of GDP and AGDP

Index 1986-1988=100

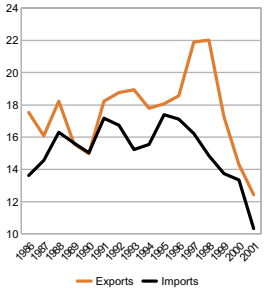


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	910.4	-0.83			104.8
1991-1999	927.6	1.23			96.2
2000-2001		1.81			87.0

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	600.2	0.61	1.84	2,359	15.0
1991-1999	698.9	0.60	1.63	2,431	15.8
2000-2001	698.0			2,491	16.4

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	7,487	31.51	13.37	55.11	67.34
1991-1999	7,587	32.05	13.98	53.97	67.66
2000-2001	7,661	32.52	13.99	53.49	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	3.86	2.29	0.11	1.28
1991-1999	2.74	1.14	0.11	1.53
2000-2001	4.67	0.62	0.06	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	3.10	8.47	16.58	
1991-1999	3.04	8.63	17.67	
2000-2001	3.09	8.65	17.21	

Rurality and gender

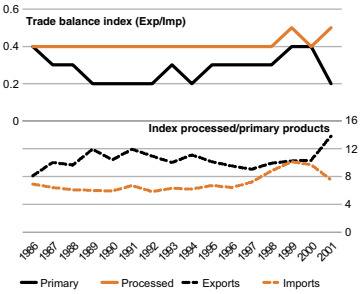
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	53.82	0.32	427.72		
1991-1999	49.68	0.40	425.67		
2000-2001	46.60	0.36	423.40		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990					
1991-1999					
2000-2001					

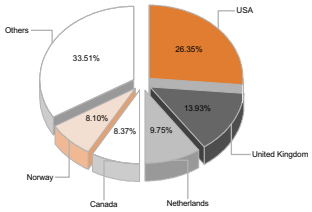
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

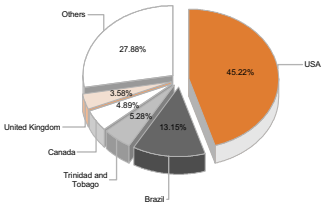
Main destinations



Anual average US$1,649 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$1,733 millions (1997-2001)

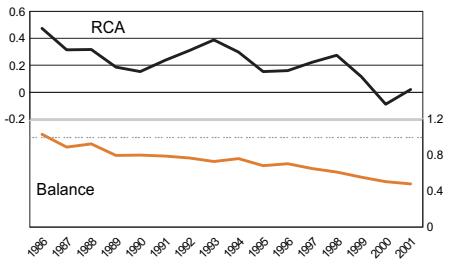
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	94.78	529.44	1,493.02	0.40	12.70		2,237.63	54.13
1991-1999	124.10	498.87	1,246.36	0.36	16.68		2,228.25	52.61
2000-2001	155.66	486.33	1,018.87	0.34	21.22		2,325.26	53.80

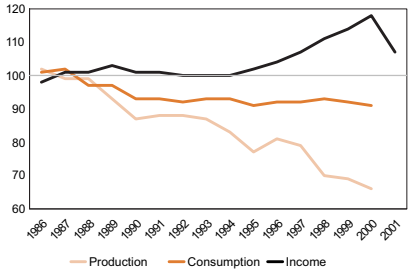
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	0.59	8.72	3.96	8.51
1991-1999	0.61	10.96	3.85	10.32
2000-2001	0.41	12.87	3.10	13.10
Meat				
1986-1990	0.64	6.43	21.04	26.10
1991-1999	0.36	7.48	24.46	30.93
2000-2001	0.17	8.47	27.71	34.76
Cereals				
1986-1990	9.64	97.46	60.88	96.72
1991-1999	16.18	118.04	59.39	93.98
2000-2001	14.27	131.19	54.67	97.68
Fruits				
1986-1990	22.79	5.74	189.35	142.42
1991-1999	24.57	7.44	157.22	113.86
2000-2001	19.84	11.56	128.68	97.46
Vegetables				
1986-1990	2.70	3.40	42.13	38.51
1991-1999	1.95	4.16	39.47	37.65
2000-2001	3.79	4.74	45.82	42.77
Oilcrops				
1986-1990	2.49	7.84	28.33	8.12
1991-1999	3.14	7.29	27.40	8.89
2000-2001	1.82	5.55	22.22	10.59
Dairy Products				
1986-1990	0.39	35.27	26.77	59.98
1991-1999	0.76	32.13	26.26	55.49
2000-2001	1.06	27.60	25.25	48.67

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)

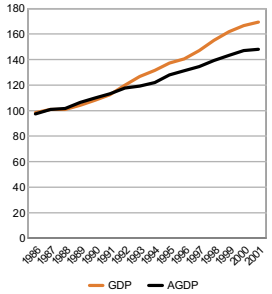


Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	1,613.20	-0.54			2.36	16.08	
1991-1999	1,671.00	-1.47	12.65		3.32	21.85	
2000-2001	1,807.50	-2.04	8.40		3.25	17.87	

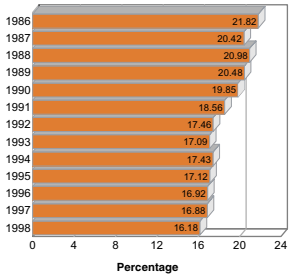
Growth of GDP and AGDP

Index 1986-1988=100

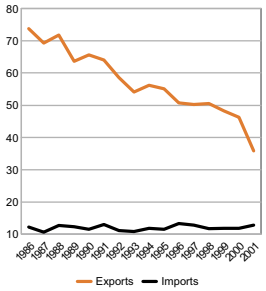


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	1,746.4	3.12			91.8
1991-1999	1,958.1	2.98			127.5
2000-2001		1.77			144.0

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	724.9	0.46	2.81	5,884	5.4
1991-1999	848.7	0.43	2.36	6,596	5.3
2000-2001	1,127.9			6,234	5.9

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	20,678	28.45	8.39	63.16	41.47
1991-1999	21,992	29.99	8.55	61.46	41.15
2000-2001	21,723	28.70	8.76	62.54	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	0.09	0.16	0.95	0.46
1991-1999	0.13	0.02	0.78	0.56
2000-2001	0.29	0.01	0.55	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	3.31	6.28	13.59	8.65
1991-1999	3.26	8.23	12.85	7.66
2000-2001	3.32	8.29	12.43	6.72

Rurality and gender

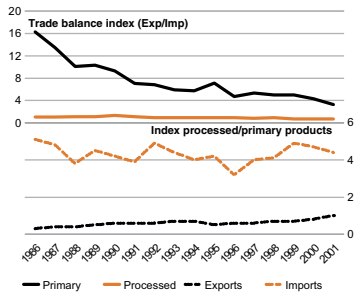
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	54.86	1.67	251.04		
1991-1999	51.52	1.44	249.58		
2000-2001	48.40	1.16	281.60		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990					
1991-1999					
2000-2001					

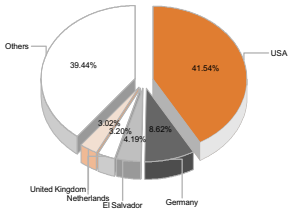
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

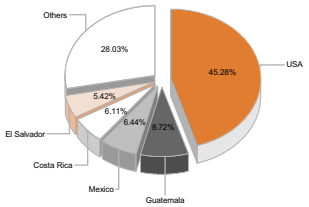
Main destinations



Anual average US$5,823 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$2,997 millions (1997-2001)

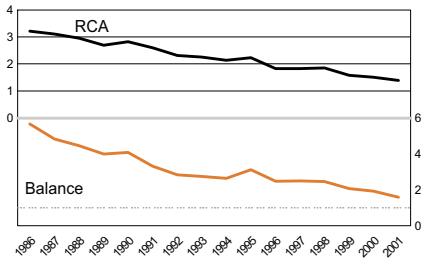
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-111.83	426.29	1,427.86	0.77	6.60		2,373.79	58.68
1991-1999	-123.91	438.10	1,666.16	0.69	8.64		2,362.67	59.11
2000-2001	-124.40	415.22	1,564.48	0.60	10.96		2,350.20	60.19

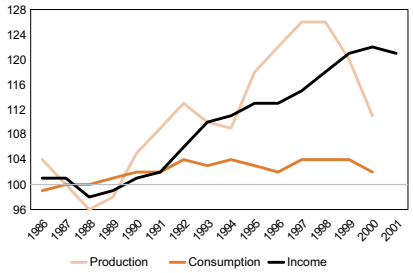
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	1.19	4.36	7.63	7.03
1991-1999	3.13	6.48	8.99	7.69
2000-2001	6.14	6.96	10.35	7.46
Meat				
1986-1990	2.71	0.57	21.42	19.14
1991-1999	2.30	1.34	24.13	22.91
2000-2001	1.97	2.66	25.71	25.90
Cereals				
1986-1990	1.05	44.94	135.61	135.79
1991-1999	4.16	73.92	115.72	132.62
2000-2001	6.65	80.83	95.64	116.47
Fruits				
1986-1990	128.42	6.24	225.56	65.26
1991-1999	145.91	9.46	233.52	67.64
2000-2001	144.01	14.17	198.21	58.95
Vegetables				
1986-1990	5.42	3.32	38.04	32.05
1991-1999	15.05	4.60	44.29	30.65
2000-2001	21.40	8.03	49.59	33.85
Oilcrops				
1986-1990	1.95	3.13	15.44	4.23
1991-1999	3.30	6.26	12.76	3.84
2000-2001	3.39	8.41	10.25	4.46
Dairy Products				
1986-1990	0.95	12.69	55.72	66.07
1991-1999	2.40	14.35	62.98	72.76
2000-2001	5.95	19.55	65.75	76.60

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)



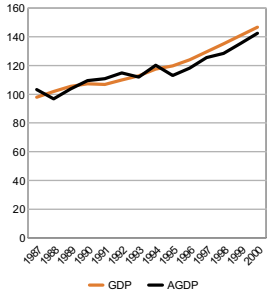
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	1,389.00	8.09	17.88		1.85	13.92	
1991-1999	1,558.00	4.94	15.16		1.99	18.24	8.63
2000-2001	1,682.00	2.84			2.10	20.27	

Northern Region

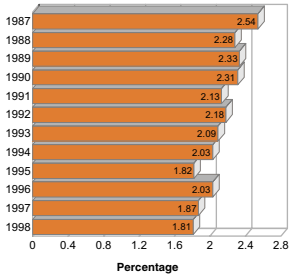
Growth of GDP and AGDP

Index 1986-1988=100

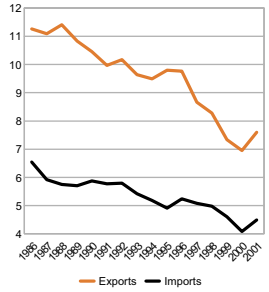


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	9,788.4	2.38			96.4
1991-1999	11,738.2	2.76			110.8
2000-2001	14,803.1	2.49			117.5

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	858.8	2.23	34.47	255,825	10.0
1991-1999	954.3	2.28	30.63	249,741	11.4
2000-2001	932.9			247,310	11.8

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	604,976	42.29	0.66	57.05	36.77
1991-1999	601,722	41.50	0.72	57.77	37.02
2000-2001	600,250	41.20	0.78	58.02	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	2.11	0.14	-	0.80
1991-1999	1.26	0.05	-	0.74
2000-2001	1.60	0.02	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	5.13	11.55	17.25	5.06
1991-1999	5.43	11.70	17.53	5.13
2000-2001	5.48	11.89	17.82	6.14

Rurality and gender

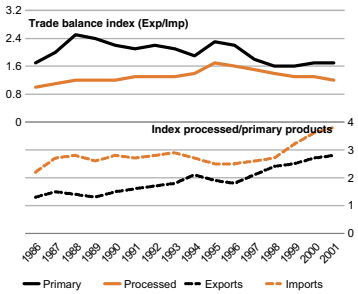
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	25.76	0.31	35.44		
1991-1999	24.37	0.53	37.57		
2000-2001	23.25	0.31	38.80		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990					
1991-1999					
2000-2001					

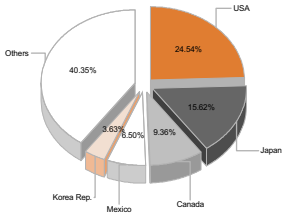
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

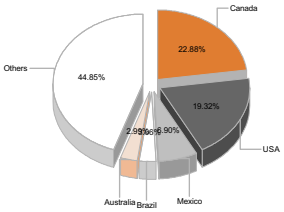
Main destinations



Anual average US$121,165 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$100,291 millions (1997-2001)

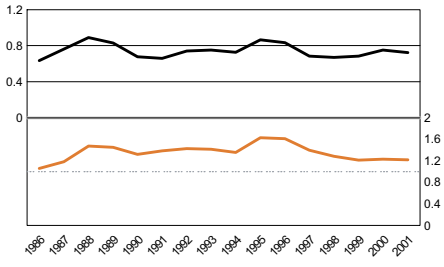
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-299.07	934.93	2,295.46	1.72	7.89		3,319.23	99.86
1991-1999	-274.10	954.38	2,390.84	1.56	9.13		3,464.50	104.07
2000-2001	-243.16	979.13	2,426.18	1.45	10.76		3,592.07	107.82

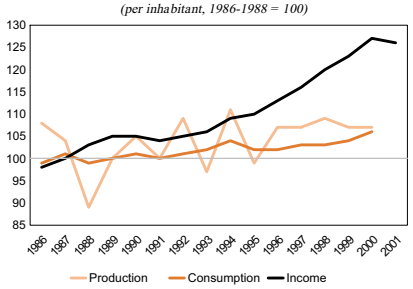
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	4.67	5.33	25.36	20.38
1991-1999	7.23	6.63	30.25	20.86
2000-2001	6.96	7.44	32.58	22.20
Meat				
1986-1990	3.85	5.51	94.66	95.43
1991-1999	9.73	6.40	104.44	100.40
2000-2001	15.11	8.92	112.17	105.12
Cereals				
1986-1990	323.17	25.44	995.43	120.46
1991-1999	296.65	43.91	1,027.81	129.45
2000-2001	277.92	59.28	1,018.35	131.49
Fruits				
1986-1990	15.41	45.87	100.43	116.63
1991-1999	22.16	43.24	106.45	113.11
2000-2001	24.23	49.89	114.48	123.68
Vegetables				
1986-1990	9.91	11.48	104.74	99.81
1991-1999	16.58	14.84	114.92	105.86
2000-2001	19.53	17.62	121.70	112.07
Oilcrops				
1986-1990	61.66	7.20	187.77	4.53
1991-1999	69.96	13.28	220.85	4.77
2000-2001	83.04	18.85	237.12	4.60
Dairy Products				
1986-1990	11.03	21.09	226.80	221.05
1991-1999	6.05	18.98	222.59	218.61
2000-2001	7.02	20.64	227.76	220.55

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)

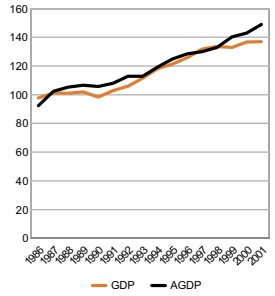


Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	19,671.20	0.12			3.46	5.49	6.08
1991-1999	21,585.44	0.17			4.66	4.33	5.67
2000-2001	24,396.50	0.09			4.25	4.12	4.40

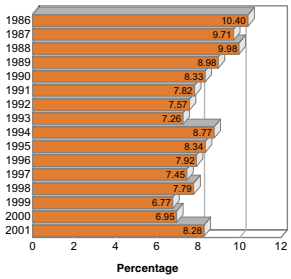
Growth of GDP and AGDP

Index 1986-1988=100

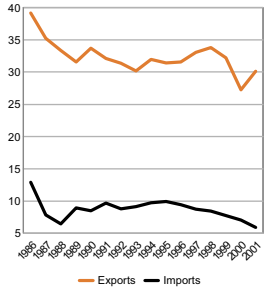


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	3,293.6	3.59			98.7
1991-1999	4,408.1	3.17			115.6
2000-2001	5,516.0	3.15			132.5

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	548.4	1.37	12.81	75,780	6.4
1991-1999	719.2	1.41	12.15	81,528	6.6
2000-2001	964.8			83,769	6.6

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	459,589	16.49	2.84	80.67	51.10
1991-1999	471,283	17.30	3.05	79.65	50.55
2000-2001	473,593	17.69	3.09	79.22	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	1.18	1.32	0.01	0.40
1991-1999	0.74	0.97	0.00	0.40
2000-2001	2.17	0.99	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	3.53	10.84	23.82	10.20
1991-1999	4.20	11.34	19.49	5.97
2000-2001	4.28	11.17	18.94	5.31

Rurality and gender

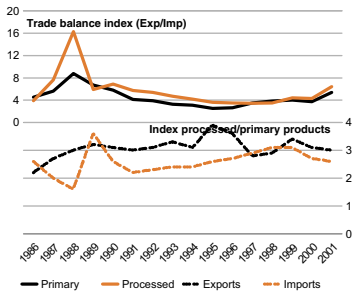
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	24.38	-0.88	62.48		
1991-1999	20.44	-1.12	54.24		
2000-2001	17.65	-1.39	49.30		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990					
1991-1999					
2000-2001					

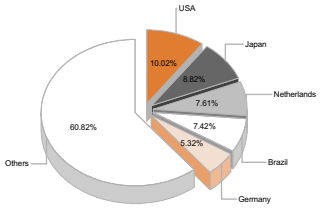
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

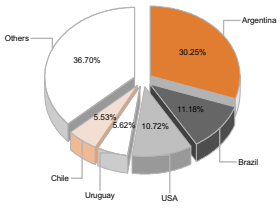
Main destinations



Anual average US$44,616 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$10,937 millions (1997-2001)

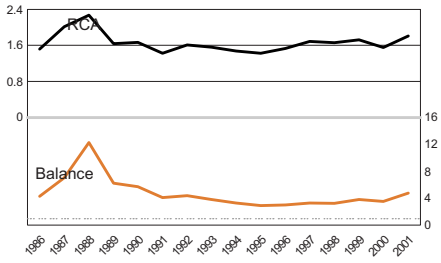
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-178.08	642.03	2,800.78	2.37	1.49		2,775.44	71.88
1991-1999	-196.30	706.13	3,005.73	2.18	3.09		2,913.47	79.07
2000-2001	-246.88	720.84	3,067.09	2.04	3.33		3,002.80	83.45

Food trade, production and consumption, by selected groups of products (in kg/inhab.)

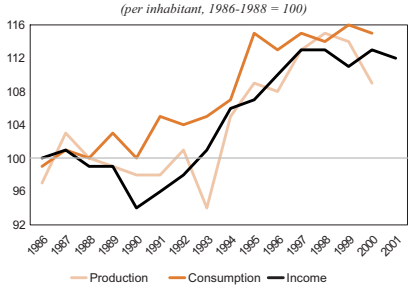
Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	16.00	0.87	30.30	13.57
1991-1999	21.79	2.53	37.33	13.64
2000-2001	25.77	2.28	43.83	12.58
Meat				
1986-1990	6.74	1.34	60.41	54.01
1991-1999	7.72	1.29	76.14	68.44
2000-2001	11.03	1.47	89.71	79.35
Cereals				
1986-1990	55.76	21.38	325.00	116.35
1991-1999	79.05	48.71	346.84	112.55
2000-2001	110.42	59.55	366.64	108.03
Fruits				
1986-1990	48.43	2.48	190.44	105.44
1991-1999	48.02	5.31	206.89	125.11
2000-2001	47.96	5.94	204.92	125.42
Vegetables				
1986-1990	1.51	0.37	52.14	44.82
1991-1999	4.54	2.61	56.95	48.00
2000-2001	4.03	2.43	56.36	47.74
Oilcrops				
1986-1990	34.17	1.54	182.79	3.96
1991-1999	47.97	5.08	224.51	6.56
2000-2001	70.43	5.68	275.98	10.49
Dairy Products				
1986-1990	2.87	6.59	116.58	105.47
1991-1999	5.60	9.81	136.98	125.80
2000-2001	8.64	8.14	148.92	132.31

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption

(per inhabitant, 1986-1988 = 100)



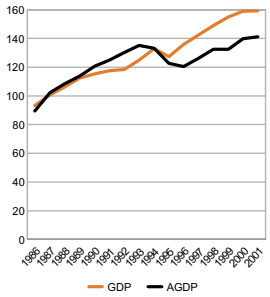
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	4,484.40	2.00	40.54		3.18	4.14	4.06
1991-1999	4,834.44	1.36	39.47		3.33	6.38	7.93
2000-2001	5,121.50	1.73	67.05		3.75	4.92	

Antigua and Barbuda

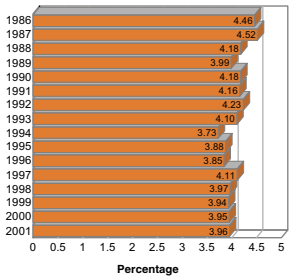
Growth of GDP and AGDP

Index 1986-1988=100

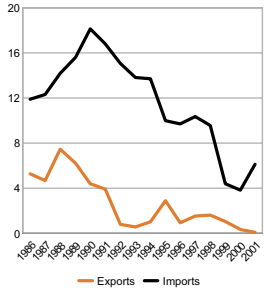


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	1,808.2	7.82	1,957.8	104.8	102.6
1991-1999	2,408.6	1.13	1,707.7	102.4	102.1
2000-2001	2,633.1	3.27	1,607.1	100.4	99.4

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990		2.96		8	
1991-1999		3.00		8	
2000-2001				8	

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	12	66.67		33.33	11.36
1991-1999	12	66.67		33.33	11.36
2000-2001	12	66.67		33.33	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	-	-	-	0.68
1991-1999	-	-	-	0.61
2000-2001	-	-	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	3.32	13.30	26.04	2.25
1991-1999	3.70	12.78	26.20	3.88
2000-2001	3.70	12.80	18.74	1.65

Rurality and gender

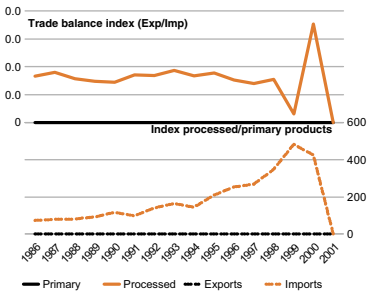
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	64.74	0.51	511.38		
1991-1999	64.04	0.37	524.57	4.00	2.50
2000-2001	63.03	0.38	537.06		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990					12.00
1991-1999					
2000-2001	0.800				

Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Anual average US$ millions (1997-2001)

Anual Average US$ millions (1997-2001)

Antigua and Barbuda

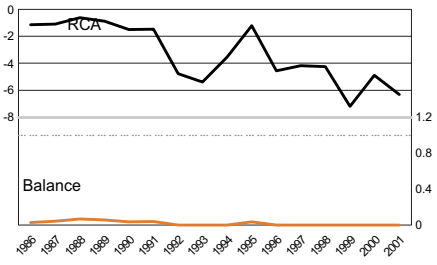
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	435.48	668.98	321.50	0.19	65.83	0.33	2,348.88	81.90
1991-1999	451.58	648.96	311.38	0.18	66.33	5.31	2,317.28	78.79
2000-2001	464.94	642.08	300.86	0.18	67.32	0.00	2,368.85	78.85

Food trade, production and consumption, by selected groups of products (in kg/inhab.)

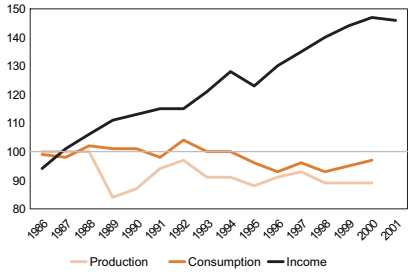
Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990		9.83	0.19	10.03
1991-1999		10.32	0.11	9.46
2000-2001		4.41	0.09	9.84
Meat				
1986-1990	0.00	77.31	13.89	80.13
1991-1999	0.85	73.44	14.09	75.93
2000-2001	0.35	64.82	14.28	75.07
Cereals				
1986-1990	0.00	93.26	0.81	78.46
1991-1999	0.00	99.41	0.75	82.57
2000-2001	0.00	104.26	0.71	83.62
Fruits				
1986-1990	15.82	41.83	143.90	158.18
1991-1999	1.58	29.83	132.60	142.50
2000-2001	0.59	44.19	124.93	151.93
Vegetables				
1986-1990	0.00	30.91	31.81	59.93
1991-1999	0.00	36.46	37.09	67.83
2000-2001	0.00	22.38	33.24	62.31
Oilcrops				
1986-1990		0.18	1.60	0.18
1991-1999		0.00	0.94	0.00
2000-2001		0.00	0.81	0.00
Dairy Products				
1986-1990		62.82	95.58	134.28
1991-1999		71.19	85.94	136.66
2000-2001		107.51	72.06	134.88

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption

(per inhabitant, 1986-1988 = 100)



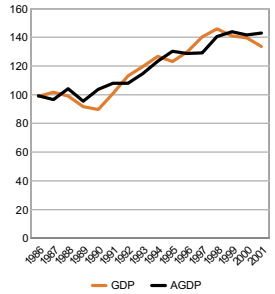
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	6,470.60	-7.14		4.89	0.94	85.53	
1991-1999	7,904.78	-5.21		3.98	1.26	65.05	6.00
2000-2001	9,038.50	-3.73			1.63	13.08	

Argentina

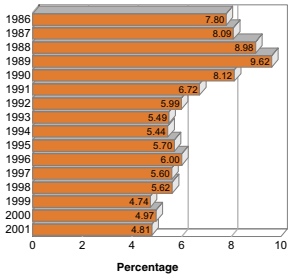
Growth of GDP and AGDP

Index 1986-1988=100

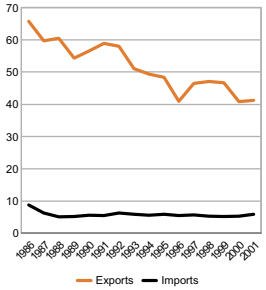


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	7,234.7	1.33	2,370.9	97.7	98.9
1991-1999	9,009.2	3.77	3,032.5	106.6	127.3
2000-2001	10,315.9	-0.36	3,420.4	110.9	155.7

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	64.0	1.02	21.46	25,000	5.7
1991-1999	220.4	1.12	20.68	25,000	5.7
2000-2001	345.2			25,000	5.7

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	169,600	14.74	1.30	83.96	18.31
1991-1999	169,211	14.77	1.30	83.93	18.31
2000-2001	169,200	14.78	1.30	83.92	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	1.78	0.18	-	0.55
1991-1999	0.88	0.02	-	0.49
2000-2001	2.70	0.10	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	1.16	11.48	20.57	4.70
1991-1999	3.18	12.02	16.74	3.40
2000-2001	3.20	12.00	15.47	1.10

Rurality and gender

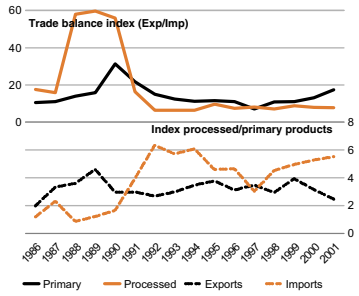
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	14.18	-1.00	17.94		
1991-1999	12.59	-0.04	17.49	0.59	0.24
2000-2001	11.73	-0.02	17.48		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.807				25.75
1991-1999	0.830				
2000-2001	0.844				17.60

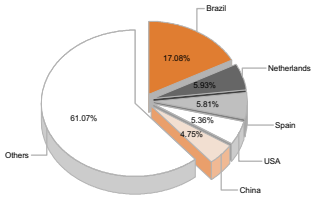
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

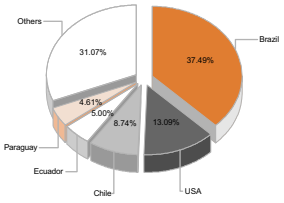
Main destinations



Anual average US$13,140 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$2,040 millions (1997-2001)

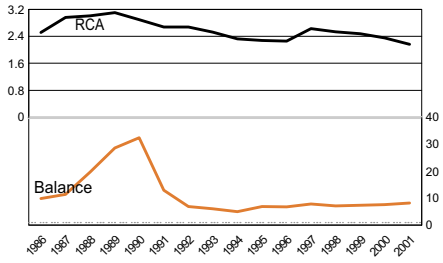
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-542.31	773.07	2,494.43	5.36	0.46		3,006.98	96.70
1991-1999	-727.90	841.00	2,910.99	4.87	2.06		3,134.91	99.82
2000-2001	-989.83	861.78	3,249.25	4.54	2.25		3,175.45	103.15

Food trade, production and consumption, by selected groups of products (in kg/inhab.)

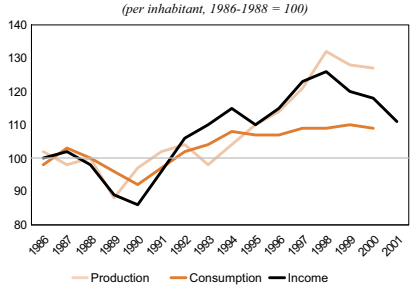
Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	64.96	0.20	77.24	12.76
1991-1999	93.39	0.66	111.67	14.71
2000-2001	127.47	1.02	146.58	11.43
Meat				
1986-1990	13.74	0.30	110.08	90.39
1991-1999	12.86	2.90	110.53	92.94
2000-2001	11.40	3.87	110.75	97.98
Cereals				
1986-1990	321.67	0.38	688.53	129.52
1991-1999	452.33	2.78	826.93	129.32
2000-2001	654.94	2.89	1,038.30	138.45
Fruits				
1986-1990	35.51	3.49	195.82	67.15
1991-1999	38.54	12.49	185.51	89.26
2000-2001	32.00	19.60	180.63	103.68
Vegetables				
1986-1990	2.08	0.38	86.53	75.24
1991-1999	8.10	4.06	88.15	74.83
2000-2001	5.42	6.06	83.20	74.90
Oilcrops				
1986-1990	72.82	0.22	402.20	0.77
1991-1999	97.53	5.42	554.20	0.74
2000-2001	127.72	7.33	733.04	1.43
Dairy Products				
1986-1990	10.85	1.18	195.89	174.92
1991-1999	21.37	6.00	242.45	212.30
2000-2001	36.25	2.42	273.31	221.98

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption

(per inhabitant, 1986-1988 = 100)



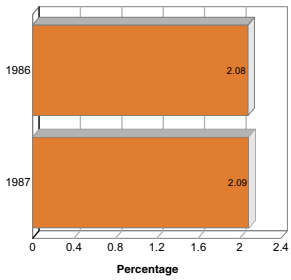
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	6,386.20	3.10	54.90	1,156.70	4.29	2.53	6.06
1991-1999	7,623.78	2.04	41.10	22.52	5.83	4.57	12.30
2000-2001	7,690.50	2.39	68.54	-2.28	5.28	3.57	

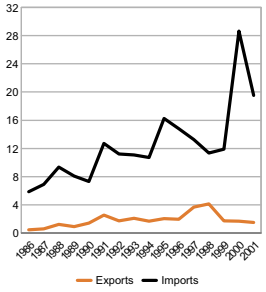
Bahamas

Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990			1,401.6	120.5	90.4
1991-1999			1,800.3	125.3	92.9
2000-2001			2,060.7	159.3	126.0

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	525.0	1.34	0.91	8	
1991-1999	425.9	1.75	0.79	7	
2000-2001	428.6			7	

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	12	66.67	16.67	16.67	23.34
1991-1999	12	55.56	27.78	16.67	23.34
2000-2001	13	53.85	30.77	15.38	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	-	-	-	0.48
1991-1999	-	-	-	0.49
2000-2001	-	-	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990		14.20	24.33	5.10
1991-1999		12.90		
2000-2001		13.10		

Rurality and gender

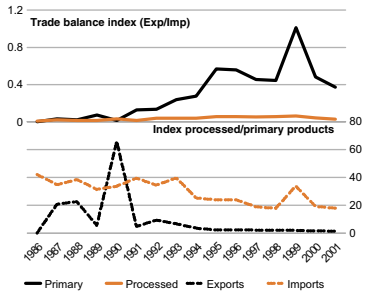
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	17.96	-2.31	549.83		
1991-1999	13.70	-1.79	577.27	4.73	1.48
2000-2001	11.33	-1.31	499.81		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.820				
1991-1999	0.816				
2000-2001	0.826				

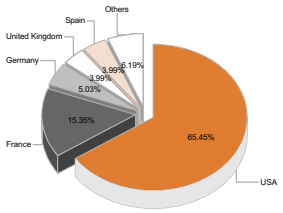
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

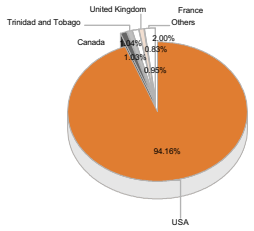
Main destinations



Anual average US$86 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$238 millions (1997-2001)

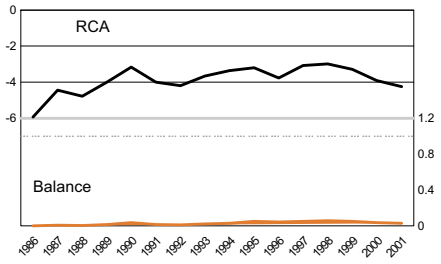
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	689.33	780.73	453.25	0.05	65.53		2,762.54	82.60
1991-1999	593.31	716.31	419.78	0.04	68.18		2,528.24	78.24
2000-2001	910.45	843.99	472.08	0.04	79.81		2,750.30	88.45

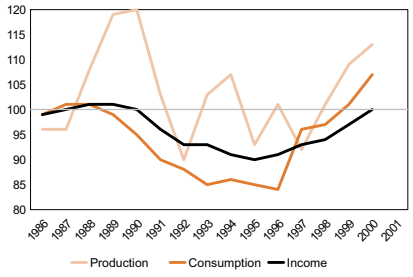
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990		6.60		2.81
1991-1999		7.51		4.63
2000-2001		20.53		6.31
Meat				
1986-1990	0.08	102.50	31.07	105.86
1991-1999	0.78	89.83	27.74	97.50
2000-2001	0.07	141.57	23.07	103.08
Cereals				
1986-1990	0.02	114.54	3.03	90.57
1991-1999	0.10	113.30	1.47	85.92
2000-2001	0.02	145.16	1.02	92.04
Fruits				
1986-1990	6.12	128.68	50.32	137.67
1991-1999	35.67	149.40	71.69	152.39
2000-2001	41.06	314.55	86.27	285.12
Vegetables				
1986-1990	0.73	57.81	110.15	147.68
1991-1999	0.68	59.19	80.99	122.41
2000-2001	0.45	68.50	70.65	126.90
Oilcrops				
1986-1990	0.00	0.70		0.70
1991-1999	0.00	1.32		1.31
2000-2001	0.00	4.51		3.61
Dairy Products				
1986-1990	1.93	135.81	7.13	120.76
1991-1999	0.01	115.77	5.80	101.77
2000-2001	0.00	123.86	5.00	86.36

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)



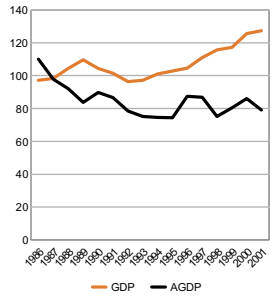
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	13,900.40	-6.15		7.42	1.21	6.94	11.63
1991-1999	12,918.22	-4.66		2.18	1.17	10.03	11.24
2000-2001	13,836.00	-6.45			1.23	11.41	

Barbados

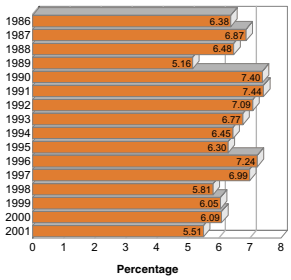
Growth of GDP and AGDP

Index 1986-1988=100

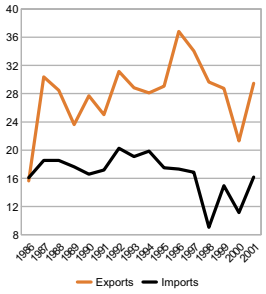


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	13,643.3	-4.70	2,606.9	90.1	117.8
1991-1999	14,604.8	-0.86	2,569.9	94.9	85.1
2000-2001	18,263.5	-0.59	2,500.0	99.5	84.7

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	1,962.5	3.55	4.54	16	5.9
1991-1999	1,833.3	3.64	4.26	16	5.9
2000-2001	1,875.0			16	5.9

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	19	84.21	5.26	10.53	11.63
1991-1999	19	84.21	5.26	10.53	11.63
2000-2001	19	84.21	5.26	10.53	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	0.46	-	-	0.52
1991-1999	0.32	-	-	0.60
2000-2001	0.10	-	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	6.00	12.34	17.64	4.28
1991-1999	6.40	12.10	17.52	4.98
2000-2001	6.40	12.40	14.38	0.60

Rurality and gender

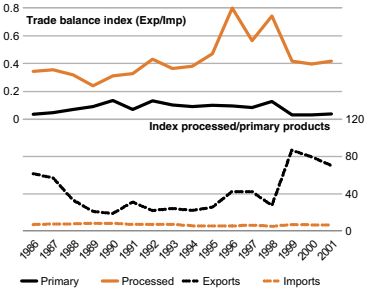
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	56.16	-0.43	896.38	7.38	6.58
1991-1999	52.68	-0.63	868.50	5.26	4.12
2000-2001	49.75	-0.70	834.69		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990					
1991-1999					
2000-2001	0.871				

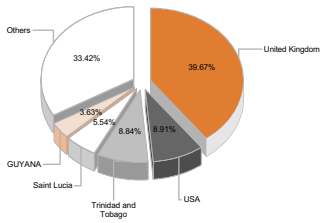
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

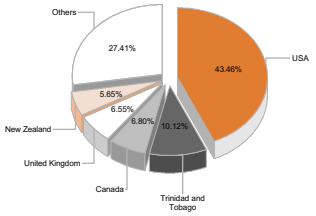
Main destinations



Anual average US$79 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$209 millions (1997-2001)

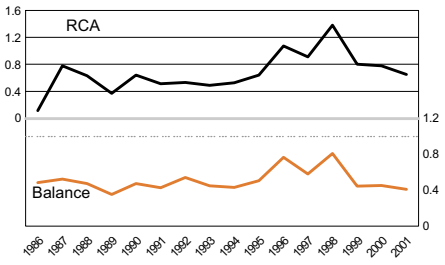
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	378.70	709.62	3,305.76	0.07	17.70	0.01	3,102.02	94.86
1991-1999	494.63	669.88	2,344.01	0.07	26.53	0.00	2,971.07	85.47
2000-2001	498.28	694.72	2,460.53	0.07	27.20	0.00	2,936.95	86.55

Food trade, production and consumption, by selected groups of products (in kg/inhab.)

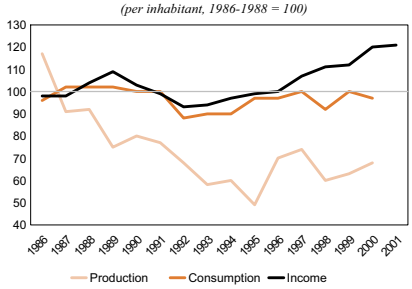
Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	1.64	19.67	0.03	11.26
1991-1999	6.45	16.10	8.48	11.00
2000-2001	9.01	15.98	16.67	10.85
Meat				
1986-1990	1.12	50.30	53.85	97.43
1991-1999	3.86	34.52	59.21	83.58
2000-2001	5.07	35.91	63.21	83.08
Cereals				
1986-1990	7.25	269.21	8.54	107.43
1991-1999	21.19	292.93	8.04	103.73
2000-2001	20.01	257.80	7.96	98.75
Fruits				
1986-1990	1.82	74.25	11.08	79.89
1991-1999	6.49	83.55	10.42	82.82
2000-2001	8.29	98.34	10.71	96.29
Vegetables				
1986-1990	0.75	16.10	28.50	42.06
1991-1999	1.94	17.51	43.47	57.12
2000-2001	0.48	20.22	46.84	64.41
Oilcrops				
1986-1990	0.09	8.12	6.21	9.54
1991-1999	0.22	57.86	5.92	11.45
2000-2001	0.33	102.75	6.05	9.74
Dairy Products				
1986-1990	0.33	95.38	47.90	129.70
1991-1999	0.87	88.80	33.62	107.93
2000-2001	0.20	100.41	30.34	100.52

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption

(per inhabitant, 1986-1988 = 100)



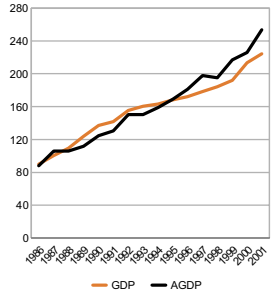
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	7,290.40	-2.92	12.34	5.32	1.97	43.73	16.34
1991-1999	7,225.56	-2.43	9.07	2.85	2.29	44.52	17.67
2000-2001	8,566.00	-2.36	4.06	3.90	3.40	42.25	9.30

Belize

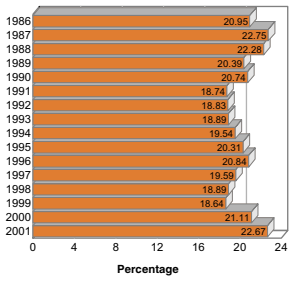
Growth of GDP and AGDP

Index 1986-1988=100

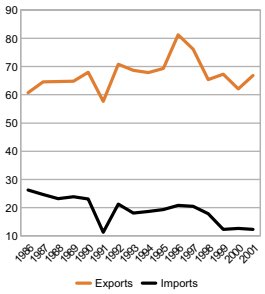


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	3,431.0	9.36	1,637.6	92.0	86.6
1991-1999	4,790.1	6.44	1,981.2	119.0	119.1
2000-2001	5,955.4	8.24	1,866.6	117.2	124.0

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	955.9	2.24	18.77	47	3.3
1991-1999	874.7	1.92	16.80	60	3.6
2000-2001	959.4			64	3.4

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	109	42.75	13.03	44.22	91.61
1991-1999	133	44.92	17.92	37.17	91.46
2000-2001	139	46.04	17.99	35.97	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	-	-	-	0.66
1991-1999	-	-	-	0.67
2000-2001	-	-	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	4.22	6.60	21.73	22.82
1991-1999	4.98	5.62	19.08	16.14
2000-2001	4.80	6.45	14.82	8.70

Rurality and gender

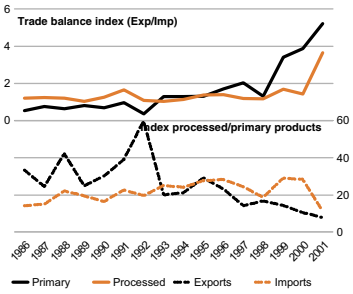
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	51.64	2.88	199.72		
1991-1999	51.98	2.32	180.98	26.50	5.41
2000-2001	51.94	3.06	195.00		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.734				35.00
1991-1999	0.772				
2000-2001	0.784				

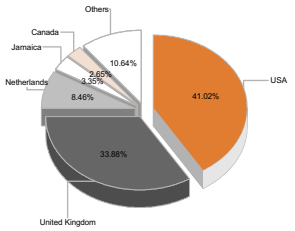
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

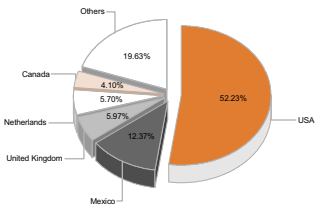
Main destinations



Anual average US$113 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$49 millions (1997-2001)

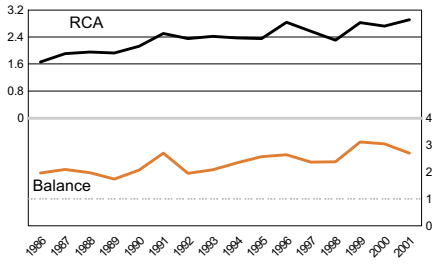
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-681.80	655.66	6,509.36	0.61	5.68	5.78	2,536.14	65.98
1991-1999	-929.95	697.71	7,683.46	0.64	4.38	0.00	2,779.78	66.19
2000-2001	-1,326.42	709.47	7,134.04	0.57	4.73	0.00	2,867.00	73.15

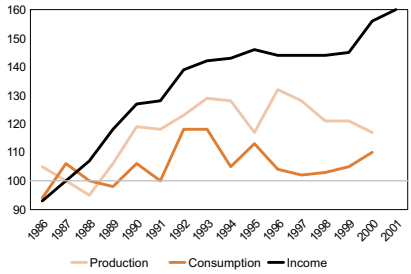
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	0.36	3.76	0.01	3.06
1991-1999	0.01	5.13	0.01	4.03
2000-2001	0.00	4.75	0.02	4.28
Meat				
1986-1990	4.42	16.57	36.20	41.93
1991-1999	1.08	11.85	45.26	39.39
2000-2001	0.53	8.55	44.39	39.36
Cereals				
1986-1990	0.48	79.26	144.01	105.99
1991-1999	0.27	94.81	214.78	115.37
2000-2001	0.00	85.53	185.87	114.48
Fruits				
1986-1990	440.19	5.68	702.43	212.56
1991-1999	717.41	10.33	1,122.05	250.91
2000-2001	1,136.83	12.07	1,589.25	268.93
Vegetables				
1986-1990	4.64	11.65	25.82	26.89
1991-1999	0.18	17.09	31.23	43.47
2000-2001	0.47	17.39	45.06	57.67
Oilcrops				
1986-1990	0.00	0.00	18.22	12.11
1991-1999	0.07	4.96	24.77	11.93
2000-2001	0.00	1.18	6.61	5.55
Dairy Products				
1986-1990	64.88	158.26	24.00	124.42
1991-1999	13.88	106.75	5.96	82.94
2000-2001	3.83	93.56	5.82	79.69

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)



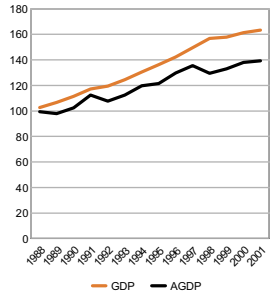
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	2,178.40	11.13	8.29	2.33	2.57	31.77	
1991-1999	2,835.56	10.43	10.00	1.56	1.59	27.63	12.43
2000-2001	3,157.00	10.06	21.90	0.54	2.41	21.98	

Bolivia

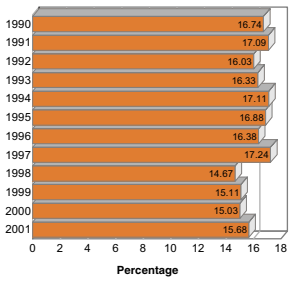
Growth of GDP and AGDP

Index 1986-1988=100

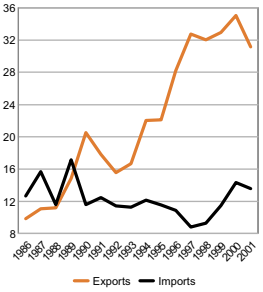


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	687.3		1,331.3	89.6	91.1
1991-1999	739.1	3.02	1,461.6	111.7	116.9
2000-2001	751.2	2.41	1,683.0	127.1	143.4

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	34.0	0.26	2.05	1,960	5.6
1991-1999	49.2	0.31	1.85	1,785	6.3
2000-2001	38.6			1,944	6.0

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	35,250	5.56	0.60	93.84	52.79
1991-1999	35,778	4.99	0.66	94.36	52.80
2000-2001	36,037	5.39	0.73	93.88	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	4.88	2.94	-	0.88
1991-1999	2.56	1.12	-	1.37
2000-2001	6.35	0.75	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	3.02	6.28	10.05	0.43
1991-1999	4.93	9.38	9.61	2.72
2000-2001	5.50	9.35	7.52	0.50

Rurality and gender

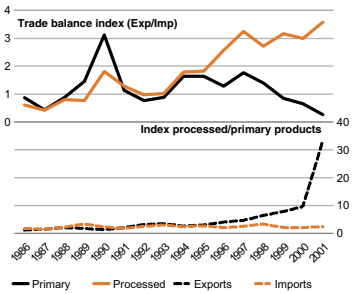
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	46.48	0.02	149.05	1.70	0.70
1991-1999	40.81	0.71	170.01	1.95	1.13
2000-2001	37.38	0.75	161.30		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.585		9.20		
1991-1999	0.630				
2000-2001	0.653	44.70	14.40	34.30	

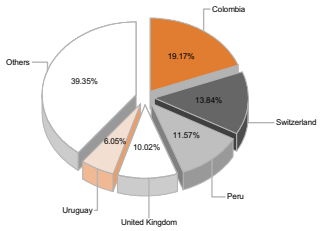
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

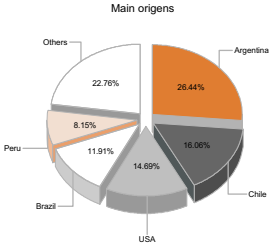
Main destinations



Anual average US$681 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$235 millions (1997-2001)

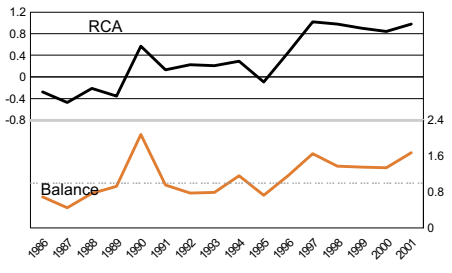
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	39.59	531.08	1,113.68	5.61	5.69	25.37	2,122.88	54.60
1991-1999	1.54	511.37	1,237.28	4.82	5.25	23.13	2,167.30	55.96
2000-2001	15.47	577.30	1,337.62	4.28	8.92	7.28	2,243.90	58.70

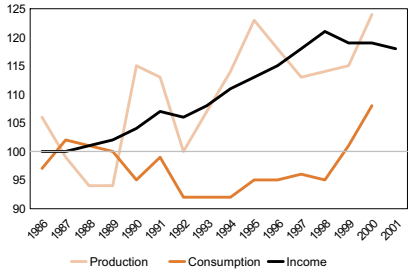
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	0.48	0.76	4.14	4.56
1991-1999	7.21	0.33	16.25	6.33
2000-2001	20.48	0.76	25.99	5.64
Meat				
1986-1990	0.00	0.10	38.28	38.38
1991-1999	0.24	0.17	44.19	44.13
2000-2001	0.07	0.34	48.15	48.43
Cereals				
1986-1990	9.60	51.32	123.16	103.19
1991-1999	7.89	46.17	128.00	116.10
2000-2001	1.36	61.26	138.39	112.97
Fruits				
1986-1990	0.04	0.91	121.68	99.10
1991-1999	0.78	1.99	120.08	98.78
2000-2001	1.52	3.86	160.86	132.22
Vegetables				
1986-1990	0.02	0.19	58.39	53.84
1991-1999	0.09	0.36	59.30	54.59
2000-2001	0.12	1.10	62.37	57.69
Oilcrops				
1986-1990	6.73	0.15	32.38	1.54
1991-1999	30.66	3.48	112.24	1.00
2000-2001	58.99	32.32	165.52	1.19
Dairy Products				
1986-1990	0.01	10.85	22.92	31.62
1991-1999	0.42	9.06	28.29	34.62
2000-2001	3.27	11.09	32.62	37.84

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)

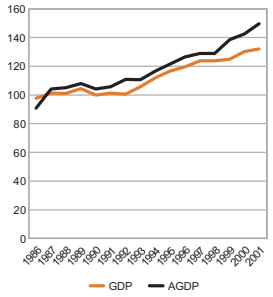


Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	811.00	-0.16	39.08	66.29	5.05	11.91	8.65
1991-1999	907.44	0.19	31.39	9.36	5.71	13.06	4.72
2000-2001	949.00	1.09	34.11	1.38	5.87	13.97	

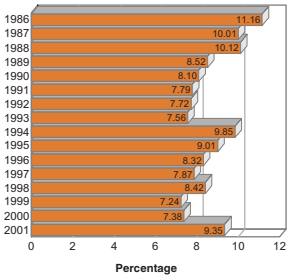
Growth of GDP and AGDP

Index 1986-1988=100

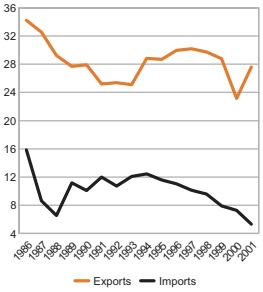


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	2,832.6	3.74	1,832.1	91.6	98.7
1991-1999	3,744.5	3.24	2,393.4	129.6	114.1
2000-2001	4,928.1	4.05	2,877.7	165.6	129.8

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	817.4	1.58	11.32	44,418	4.4
1991-1999	938.6	1.53	10.73	50,867	4.4
2000-2001	1,234.6			53,200	4.5

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	236,498	18.78	4.42	76.80	65.97
1991-1999	247,900	20.52	4.75	74.73	65.40
2000-2001	250,200	21.26	4.80	73.94	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	1.02	1.12	-	0.33
1991-1999	0.77	0.84	-	0.37
2000-2001	2.25	0.90	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	4.38	10.60	24.88	12.23
1991-1999	4.76	11.26	20.29	6.44
2000-2001	4.80	11.00	20.03	6.40

Rurality and gender

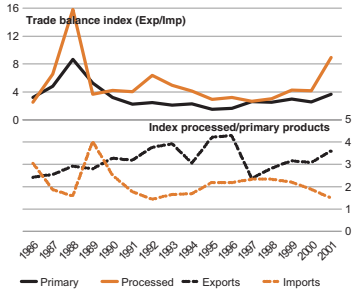
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	26.78	-1.01	86.17	24.14	14.44
1991-1999	21.99	-1.46	69.05	25.63	21.75
2000-2001	18.58	-1.79	60.26		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.703	57.00	16.90		17.20
1991-1999	0.737				
2000-2001	0.757	60.70	11.60	26.50	17.40

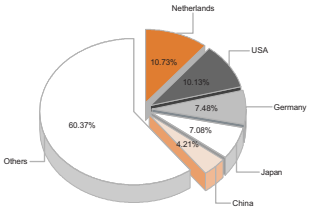
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

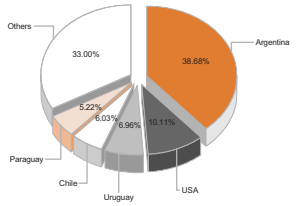
Main destinations



Anual average US$20,659 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$6,445 millions (1997-2001)

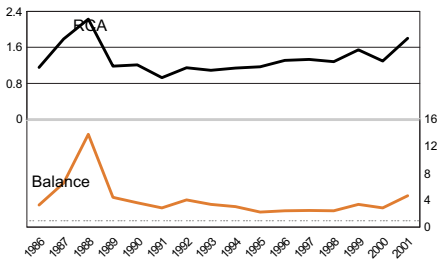
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-65.61	616.43	3,012.95	1.65	1.52	0.19	2,763.74	66.80
1991-1999	-53.10	681.44	3,190.79	1.56	2.83	0.06	2,900.13	74.84
2000-2001	-88.87	707.88	3,284.64	1.46	2.87	0.00	3,002.25	79.95

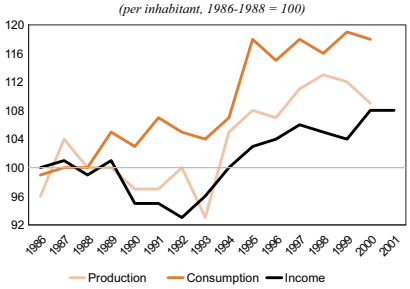
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	7.06	0.66	22.85	14.60
1991-1999	8.39	2.11	24.88	13.96
2000-2001	7.14	1.75	27.27	13.47
Meat				
1986-1990	4.39	1.73	49.72	47.06
1991-1999	6.01	0.65	69.11	63.73
2000-2001	10.06	0.40	86.32	76.67
Cereals				
1986-1990	0.18	25.93	257.11	111.25
1991-1999	0.87	55.78	256.76	107.38
2000-2001	0.67	66.21	248.11	101.31
Fruits				
1986-1990	49.86	1.89	193.20	120.15
1991-1999	43.86	2.85	212.52	141.19
2000-2001	44.01	1.99	213.40	141.21
Vegetables				
1986-1990	0.29	0.38	37.44	33.48
1991-1999	0.81	2.34	39.87	37.11
2000-2001	1.03	1.58	42.50	38.48
Oilcrops				
1986-1990	21.75	1.91	145.15	5.07
1991-1999	34.27	5.32	166.71	8.58
2000-2001	67.73	5.46	214.44	13.83
Dairy Products				
1986-1990	0.06	8.00	98.45	91.81
1991-1999	0.22	10.45	111.42	107.99
2000-2001	0.21	9.05	120.64	115.42

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)

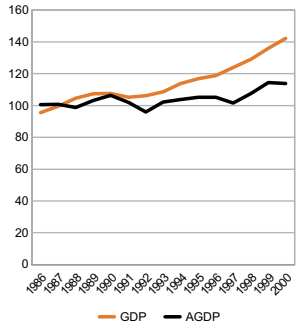


Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	4,263.20	1.63	38.40	990.49	2.81	4.96	3.30
1991-1999	4,322.67	1.01	48.36	367.45	6.67	7.17	7.46
2000-2001	4,629.50	1.39	84.54	5.93	4.35	4.92	

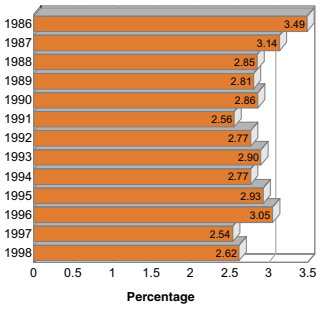
Growth of GDP and AGDP

Index 1986-1988=100

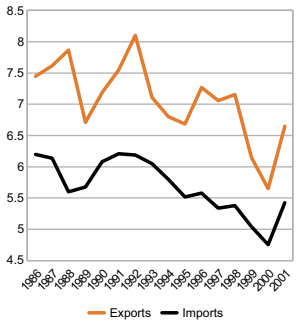


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	27,324.2	1.45	2,310.3	97.7	94.9
1991-1999	35,754.1	0.93	2,700.6	113.7	106.7
2000-2001	43,767.8	-0.71	2,608.9	129.4	103.4

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	469.0	1.64	53.20	45,848	1.6
1991-1999	550.1	1.58	45.97	45,472	1.6
2000-2001	536.7			45,560	1.6

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	74,958	61.16	0.17	38.66	45.46
1991-1999	74,608	60.95	0.18	38.87	45.46
2000-2001	74,700	60.99	0.19	38.82	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	2.68	0.76	-	0.80
1991-1999	2.74	0.32	-	0.78
2000-2001	5.10	0.15	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	6.78	12.14	22.91	8.00
1991-1999	7.18	13.17	21.00	5.06
2000-2001	7.00	13.00	25.36	10.90

Rurality and gender

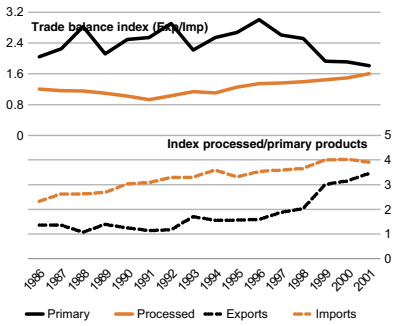
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	23.51	1.19	13.83	4.54	2.72
1991-1999	22.34	0.09	14.42	4.08	2.46
2000-2001	21.20	-0.02	14.39	3.30	

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.916				
1991-1999	0.932				
2000-2001	0.940	31.50			

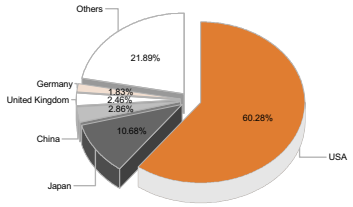
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

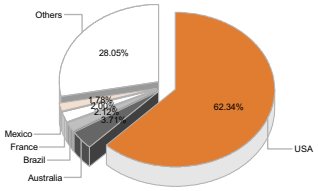
Main destinations



Anual average US$37,130 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$17,437 millions (1997-2001)

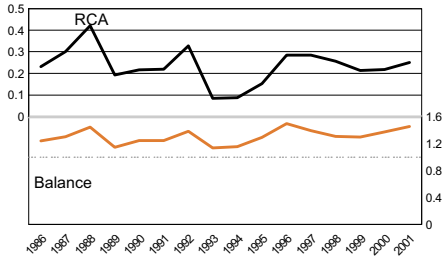
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-852.38	922.68	2,968.72	2.78	15.37		3,029.96	95.30
1991-1999	-844.50	930.83	3,017.36	2.54	18.10		3,089.19	97.87
2000-2001	-833.44	951.84	3,055.23	2.42	21.40		3,168.85	102.75

Food trade, production and consumption, by selected groups of products (in kg/inhab.)

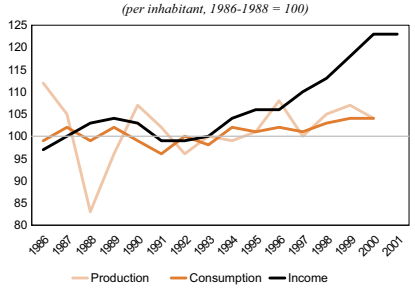
Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	9.86	4.99	29.91	17.93
1991-1999	20.58	7.94	47.24	18.11
2000-2001	24.77	12.23	55.76	16.93
Meat				
1986-1990	14.64	8.08	104.49	94.37
1991-1999	23.69	13.54	107.93	93.97
2000-2001	41.23	16.67	129.99	100.24
Cereals				
1986-1990	875.41	38.41	1,846.80	89.54
1991-1999	848.33	59.79	1,753.71	97.43
2000-2001	791.49	87.90	1,648.83	103.92
Fruits				
1986-1990	8.05	100.19	27.31	114.85
1991-1999	11.46	107.50	26.60	118.82
2000-2001	13.96	119.31	26.15	126.03
Vegetables				
1986-1990	7.41	51.55	73.58	111.58
1991-1999	11.85	63.28	74.18	118.55
2000-2001	18.56	70.93	74.54	120.05
Oilcrops				
1986-1990	103.90	12.93	214.38	6.64
1991-1999	148.33	14.98	315.42	6.73
2000-2001	179.65	25.08	355.00	6.78
Dairy Products				
1986-1990	35.10	14.73	288.45	220.29
1991-1999	23.02	12.15	268.34	205.08
2000-2001	20.21	21.59	262.92	209.89

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption

(per inhabitant, 1986-1988 = 100)

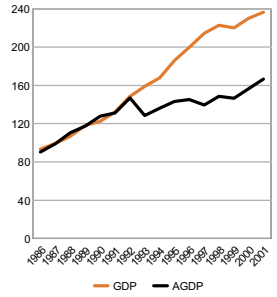


Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	18,976.40	0.27		3.97	1.46	4.37	8.36
1991-1999	19,876.00	0.37		1.63	0.97	4.08	9.70
2000-2001	23,031.00	0.54		2.92	1.25	3.42	6.80

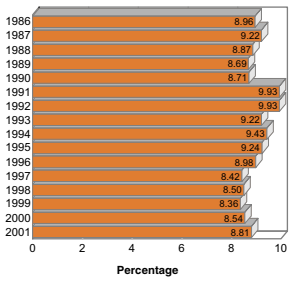
Growth of GDP and AGDP

Index 1986-1988=100

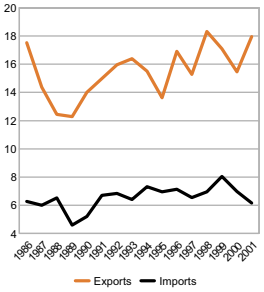


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	4,529.6	9.10	3,528.8	88.8	94.5
1991-1999	5,517.1	1.75	4,369.0	127.5	116.6
2000-2001	6,225.6	6.62	4,648.9	150.2	125.5

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	948.6	1.23	7.99	3,072	45.5
1991-1999	1,878.5	2.12	8.11	2,194	71.6
2000-2001	2,435.6			1,979	78.4

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	16,164	19.01	1.50	79.50	21.83
1991-1999	15,389	14.26	1.88	83.86	21.81
2000-2001	15,232	12.99	2.09	84.92	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	1.34	11.14	-	0.73
1991-1999	0.28	6.71	-	0.72
2000-2001	0.30	5.35	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	3.08	11.12	26.99	10.06
1991-1999	2.94	9.76	24.91	12.76
2000-2001	3.40	9.95	23.09	11.00

Rurality and gender

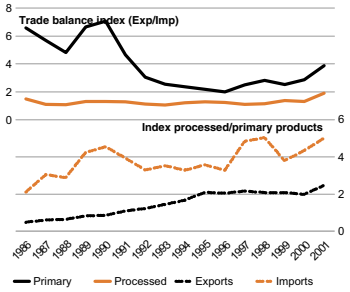
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	16.99	0.92	70.29	20.10	5.66
1991-1999	15.56	-0.07	101.55	16.23	5.41
2000-2001	14.09	-0.63	109.25		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.768	46.00	9.60		20.50
1991-1999	0.811				
2000-2001	0.831	56.60	2.00	8.70	21.20

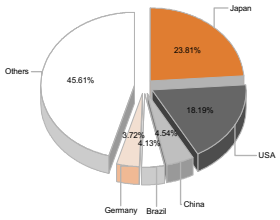
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

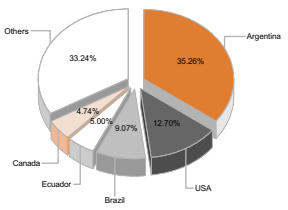
Main destinations



Anual average US$8,597 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$1,478 millions (1997-2001)

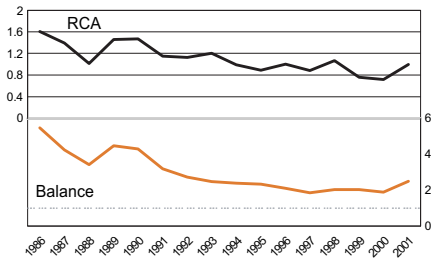
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-459.61	587.57	1,509.81	1.28	4.58	1.12	2,504.26	67.62
1991-1999	-408.15	655.31	1,652.95	1.08	13.00	0.19	2,743.42	76.80
2000-2001	-262.46	660.33	1,541.28	1.00	17.50	0.00	2,867.50	78.40

Food trade, production and consumption, by selected groups of products (in kg/inhab.)

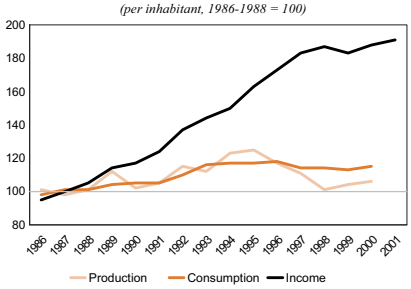
Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	0.03	4.77	4.41	7.53
1991-1999	1.29	11.52	1.77	10.33
2000-2001	0.92	11.00	2.10	11.24
Meat				
1986-1990	0.70	0.27	34.39	33.62
1991-1999	1.75	4.65	50.70	53.41
2000-2001	3.30	7.59	58.64	62.98
Cereals				
1986-1990	8.15	23.44	223.76	145.84
1991-1999	12.51	90.76	190.71	137.28
2000-2001	12.40	132.30	167.30	139.29
Fruits				
1986-1990	83.75	4.54	177.23	42.24
1991-1999	131.60	11.35	240.62	54.70
2000-2001	150.55	15.10	255.18	55.53
Vegetables				
1986-1990	13.97	0.07	129.16	94.25
1991-1999	39.83	0.63	175.20	103.79
2000-2001	36.42	0.97	168.21	100.75
Oilcrops				
1986-1990	0.14	0.43	11.53	0.41
1991-1999	0.38	2.47	4.51	0.75
2000-2001	0.79	6.06	4.52	0.75
Dairy Products				
1986-1990	0.90	7.07	95.40	85.60
1991-1999	4.59	14.46	128.98	114.65
2000-2001	7.16	14.65	131.49	114.40

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption

(per inhabitant, 1986-1988 = 100)



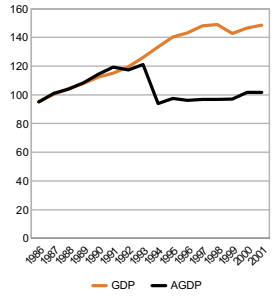
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	2,990.60	2.49	31.14	21.59	5.65	2.77	6.80
1991-1999	4,512.00	1.64	21.78	9.99	8.12	5.44	5.84
2000-2001	5,344.50	1.65	26.62	1.09	6.89	5.43	9.85

Colombia

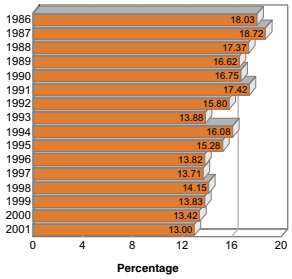
Growth of GDP and AGDP

Index 1986-1988=100

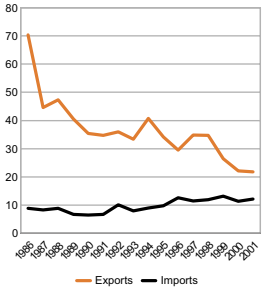


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	3,710.0	4.81	2,539.2	88.4	93.3
1991-1999	3,719.3	-1.49	2,716.5	112.2	112.7
2000-2001	3,649.3	2.41	3,282.7	124.3	118.8

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	1,438.5	0.93	2.57	3,609	10.7
1991-1999	2,007.4	0.90	1.51	2,697	17.9
2000-2001	2,335.7			2,818	18.7

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	45,269	7.97	3.48	88.55	47.82
1991-1999	45,015	5.99	4.03	89.98	46.86
2000-2001	45,465	6.20	3.80	90.00	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	6.54	0.50	-	0.76
1991-1999	4.52	0.12	-	0.73
2000-2001	7.55	0.25	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	2.56	9.18	23.59	13.25
1991-1999	2.92	10.54	17.87	3.84
2000-2001	3.10	10.35	14.49	3.45

Rurality and gender

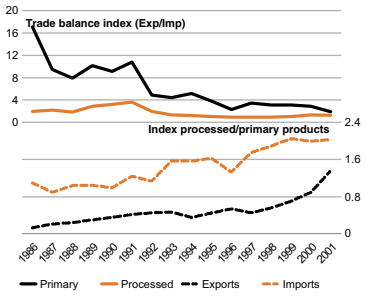
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	32.72	-0.16	305.57	1.36	0.66
1991-1999	28.06	-0.30	403.35	1.16	0.66
2000-2001	24.78	-0.41	375.70	1.10	0.50

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.714	45.00	9.20		18.35
1991-1999	0.750				
2000-2001	0.772	57.10	19.70	36.00	17.70

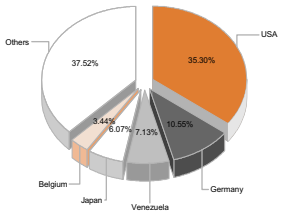
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

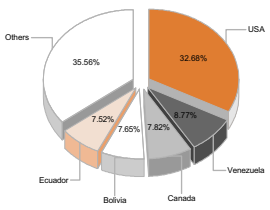
Main destinations



Anual average US$3,566 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$1,909 millions (1997-2001)

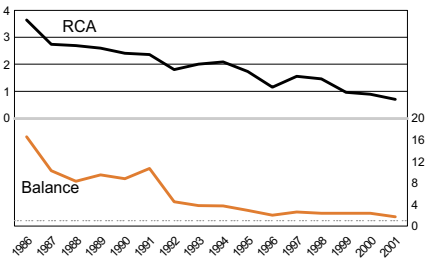
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-18.78	729.04	1,476.87	1.35	3.07	0.61	4,315.26	79.94
1991-1999	14.74	796.59	1,568.50	1.17	6.33	0.32	4,620.39	90.19
2000-2001	25.15	858.24	1,483.10	1.07	7.90	0.36	4,744.10	91.95

Food trade, production and consumption, by selected groups of products (in kg/inhab.)

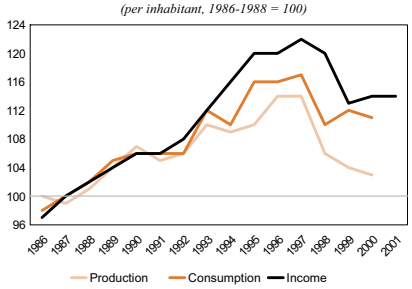
Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	0.09	1.72	9.27	8.06
1991-1999	1.19	3.29	13.45	10.08
2000-2001	3.90	5.39	15.96	11.27
Meat				
1986-1990	0.30	0.06	30.96	30.34
1991-1999	0.15	0.64	33.68	33.79
2000-2001	0.06	0.98	31.78	32.38
Cereals				
1986-1990	0.74	27.02	91.69	80.99
1991-1999	1.45	65.39	73.58	92.10
2000-2001	2.02	78.40	70.42	97.46
Fruits				
1986-1990	30.79	1.10	134.40	84.76
1991-1999	40.06	3.96	164.15	106.63
2000-2001	40.77	6.54	158.99	104.55
Vegetables				
1986-1990	0.06	0.10	44.82	39.37
1991-1999	0.27	0.93	39.47	35.08
2000-2001	0.80	1.88	44.78	39.89
Oilcrops				
1986-1990	0.04	3.21	14.79	2.61
1991-1999	0.05	6.96	9.91	4.83
2000-2001	0.01	9.03	7.62	4.25
Dairy Products				
1986-1990	0.01	1.03	104.69	83.45
1991-1999	0.34	2.43	130.44	107.90
2000-2001	2.02	2.62	133.08	108.10

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption

(per inhabitant, 1986-1988 = 100)



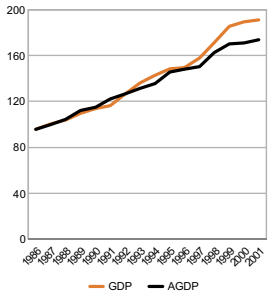
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	2,039.80	5.60	40.49	26.00	5.63	4.02	10.66
1991-1999	2,308.67	2.42	35.97	19.56	6.67	8.73	11.37
2000-2001	2,281.00	1.29	32.20	9.04	6.19	8.09	20.50

Costa Rica

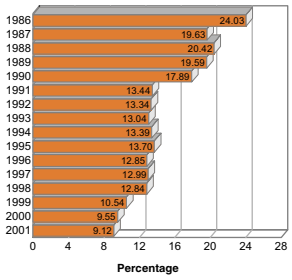
Growth of GDP and AGDP

Index 1986-1988=100

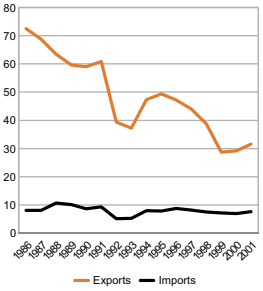


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	3,573.4	4.69	2,477.2	93.9	89.6
1991-1999	4,536.6	4.46	3,482.8	114.6	130.0
2000-2001	5,288.3	1.10	3,998.7	132.5	153.1

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	3,642.1	2.32	5.89	274	14.5
1991-1999	6,359.5	2.99	5.19	233	18.1
2000-2001	7,422.2			225	21.4

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	2,831	9.68	8.65	81.67	30.41
1991-1999	2,848	8.17	9.71	82.11	30.72
2000-2001	2,845	7.91	9.84	82.25	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	-	-	0.82	0.34
1991-1999	-	-	0.52	0.40
2000-2001	-	-	0.40	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	4.26	2.70	22.94	19.44
1991-1999	4.68	5.46	15.74	8.71
2000-2001	5.10	6.00	17.45	7.85

Rurality and gender

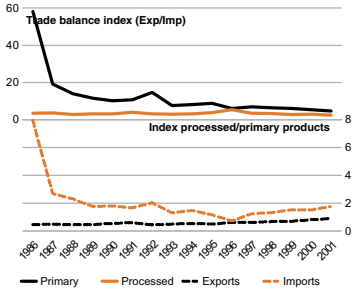
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	47.41	1.75	500.13	27.04	6.22
1991-1999	43.66	1.03	644.64	21.91	5.71
2000-2001	40.74	0.60	694.18	18.00	3.80

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.779	42.00	14.25		11.00
1991-1999	0.805				
2000-2001	0.820	45.90	12.60	26.00	22.00

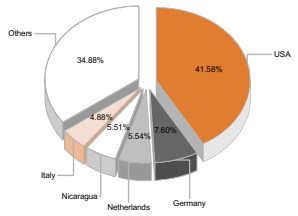
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

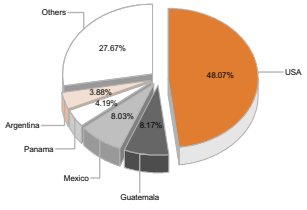
Main destinations



Anual average US$2,001 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$522 millions (1997-2001)

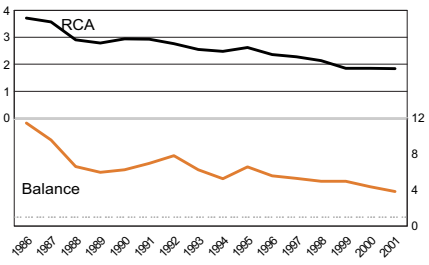
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-407.04	550.56	2,063.26	0.98	8.53	31.33	2,701.38	65.74
1991-1999	-649.45	590.55	2,480.94	0.83	14.87	3.45	2,707.81	67.87
2000-2001	-683.82	644.15	2,567.07	0.74	18.90	0.00	2,751.25	70.05

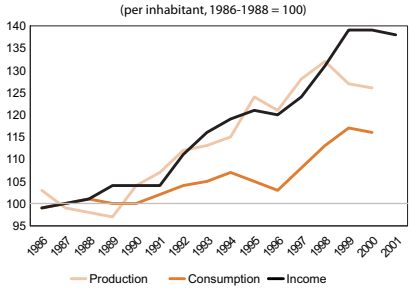
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	2.82	1.23	26.11	12.16
1991-1999	16.51	1.41	37.04	13.35
2000-2001	28.43	2.56	48.25	12.71
Meat				
1986-1990	8.92	0.08	45.87	37.03
1991-1999	6.58	0.34	49.41	43.25
2000-2001	6.14	1.04	48.90	43.78
Cereals				
1986-1990	2.80	97.39	81.69	114.04
1991-1999	8.42	171.80	55.87	114.39
2000-2001	16.67	217.98	56.68	122.38
Fruits				
1986-1990	431.93	6.15	581.73	83.56
1991-1999	698.36	13.00	844.78	92.75
2000-2001	773.41	22.03	915.24	92.45
Vegetables				
1986-1990	9.16	1.95	32.51	23.41
1991-1999	38.84	5.33	55.42	22.07
2000-2001	59.73	9.91	94.01	42.23
Oilcrops				
1986-1990	0.97	17.21	14.05	2.21
1991-1999	1.65	43.67	11.74	3.54
2000-2001	2.96	62.04	11.10	3.70
Dairy Products				
1986-1990	1.50	4.15	142.14	137.42
1991-1999	8.60	5.62	166.66	153.98
2000-2001	12.22	8.20	195.38	173.74

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)



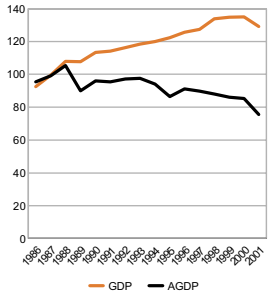
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	2,865.80	13.44	24.60	16.59	3.36	7.88	5.14
1991-1999	3,399.56	9.68	13.39	9.21	2.79	6.57	5.18
2000-2001	3,914.00	6.69	8.53	9.77	1.86	6.45	5.65

Dominica

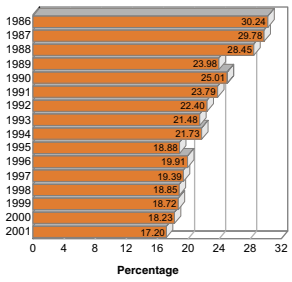
Growth of GDP and AGDP

Index 1986-1988=100

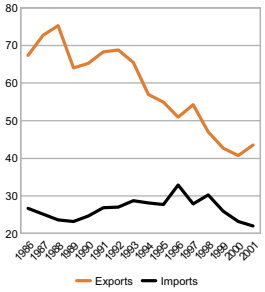


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	4,484.5	0.58	1,323.0	94.7	103.7
1991-1999	4,649.2	-1.15	1,314.4	103.0	86.7
2000-2001	4,340.6	-6.26	1,307.7	105.5	76.8

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	6,286.7	1.68		5	
1991-1999	10,704.1	2.67		3	
2000-2001	10,000.0			3	

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	18	29.35	59.78	10.87	66.67
1991-1999	17	19.75	68.79	11.46	66.67
2000-2001	17	17.65	70.59	11.76	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	-	-	-	0.28
1991-1999	-	-	-	0.32
2000-2001	-	-	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	5.18	10.08	14.65	6.53
1991-1999	5.00	11.52	16.60	5.40
2000-2001	5.00	12.20	13.34	-2.45

Rurality and gender

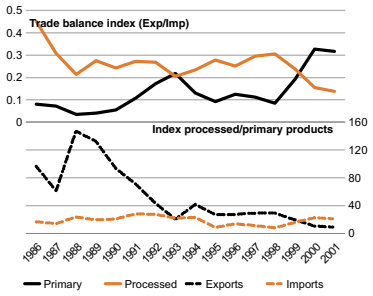
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	32.95	-1.36	447.02		
1991-1999	30.65	-1.07	655.44	27.25	13.50
2000-2001	28.82	-1.37	695.64		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990					33.00
1991-1999					
2000-2001	0.779				

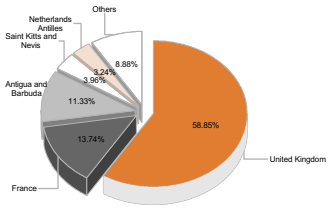
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

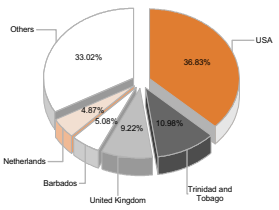
Main destinations



Anual average US$18 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$27 millions (1997-2001)

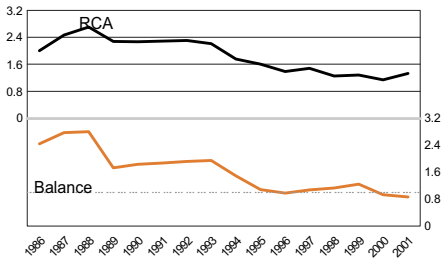
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-433.19	950.12	2,280.07	0.25	26.69	29.86	2,912.34	72.98
1991-1999	-89.25	980.20	1,949.22	0.24	35.56	18.29	2,947.98	82.51
2000-2001	124.82	1,041.59	1,794.88	0.24	37.03	0.00	2,982.00	87.35

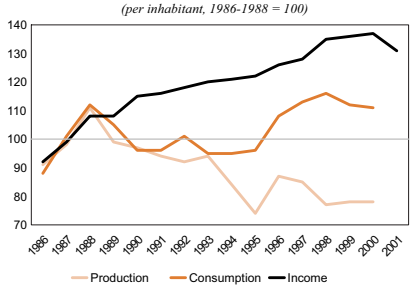
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	10.50	8.90	18.21	9.20
1991-1999	15.30	13.13	17.46	8.79
2000-2001	0.01	16.58	14.58	8.10
Meat				
1986-1990	0.00	40.54	15.03	49.53
1991-1999	0.14	49.71	17.54	61.19
2000-2001	0.00	63.81	18.94	66.53
Cereals				
1986-1990	0.13	117.54	2.28	100.07
1991-1999	1.54	114.57	2.26	91.65
2000-2001	0.00	136.25	2.36	82.97
Fruits				
1986-1990	892.71	4.69	1,394.76	347.47
1991-1999	670.58	19.44	1,122.63	331.12
2000-2001	485.81	22.35	965.28	372.64
Vegetables				
1986-1990	2.66	6.83	89.94	80.81
1991-1999	5.56	10.76	85.52	78.10
2000-2001	3.92	13.74	90.00	87.43
Oilcrops				
1986-1990	1.82	3.21	192.66	20.21
1991-1999	5.34	12.61	180.11	19.41
2000-2001	5.96	1.18	158.33	17.85
Dairy Products				
1986-1990	0.00	83.47	82.75	136.25
1991-1999	0.35	101.04	84.90	148.50
2000-2001	0.44	134.78	84.72	140.53

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)



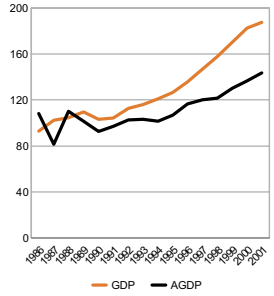
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	2,621.40	13.44	7.53	3.98	1.65	29.55	
1991-1999	3,126.89	3.78	6.56	2.73	1.61	39.32	23.10
2000-2001	3,361.50	-0.83	10.00		1.79	45.55	

Dominican Republic

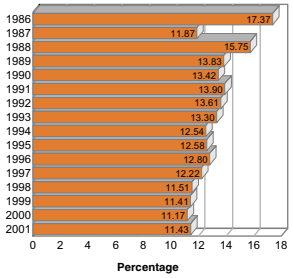
Growth of GDP and AGDP

Index 1986-1988=100

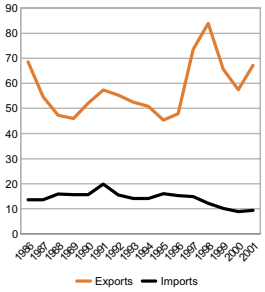


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	1,997.3	-1.45	3,736.4	88.1	106.5
1991-1999	2,419.8	3.87	3,886.4	118.9	88.7
2000-2001	3,280.9	5.04	4,159.0	145.9	74.4

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	716.9	0.22	0.85	1,022	15.5
1991-1999	887.6	0.22	0.72	1,045	16.3
2000-2001	836.6			1,096	17.2

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	3,544	28.84	12.13	59.02	12.70
1991-1999	3,625	28.81	13.52	57.67	12.43
2000-2001	3,696	29.65	13.53	56.82	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	-	3.20	-	0.98
1991-1999	-	0.84	-	1.18
2000-2001	-	0.40	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	1.14	5.88	14.31	9.94
1991-1999	1.40	5.70	15.22	13.63
2000-2001	1.70	5.40	14.82	14.85

Rurality and gender

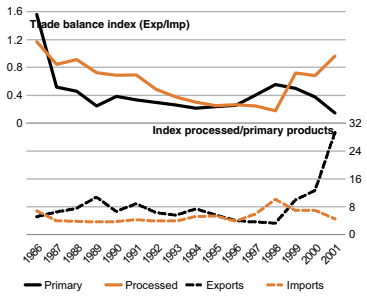
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	43.08	0.12	287.72		
1991-1999	38.02	-0.11	279.80	17.10	2.40
2000-2001	34.33	-0.21	264.44		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.672	31.00	11.55		20.80
1991-1999	0.698				
2000-2001	0.727	46.20	3.20	16.00	20.60

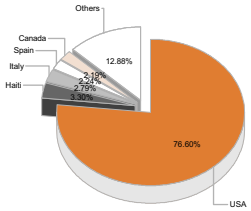
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

Main destinations



Anual average US$106 millions (1997-2001)

Anual Average US$ millions (1997-2001)

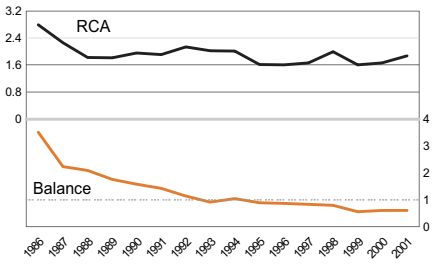
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	34.27	542.81	1,794.71	0.52	8.42	16.76	2,302.10	50.10
1991-1999	119.52	521.44	1,353.95	0.47	14.27	2.88	2,289.56	49.96
2000-2001	148.99	489.25	1,033.71	0.44	19.87	4.75	2,322.10	50.10

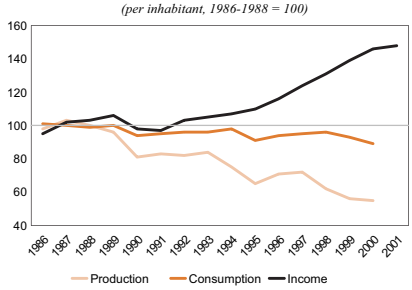
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	0.63	11.30	5.13	12.95
1991-1999	0.31	13.76	5.28	15.53
2000-2001	0.25	15.55	4.87	18.27
Meat				
1986-1990	1.59	0.46	28.36	27.22
1991-1999	0.57	0.91	36.29	36.63
2000-2001	0.00	0.52	40.87	41.39
Cereals				
1986-1990	0.46	92.97	57.76	82.97
1991-1999	0.58	133.48	49.05	77.67
2000-2001	1.11	167.29	49.75	85.00
Fruits				
1986-1990	7.64	1.04	229.11	195.78
1991-1999	17.16	1.91	177.90	141.71
2000-2001	30.67	4.43	125.55	84.25
Vegetables				
1986-1990	6.06	0.34	41.17	31.32
1991-1999	3.83	1.41	39.08	32.79
2000-2001	8.09	1.13	53.17	42.17
Oilcrops				
1986-1990	6.36	5.62	21.46	1.41
1991-1999	7.55	1.66	23.22	7.88
2000-2001	3.97	0.17	17.63	14.34
Dairy Products				
1986-1990	0.00	24.04	48.52	70.12
1991-1999	0.00	31.60	49.11	78.02
2000-2001	0.00	15.37	47.50	60.43

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)



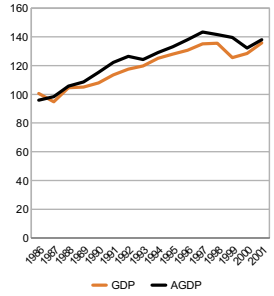
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	1,415.80	3.30	15.73	37.28	1.17	22.64	
1991-1999	1,611.44	-0.14	7.39	10.84	1.00	46.83	17.25
2000-2001	2,065.50	-0.81	5.36	0.38	0.89	48.27	

Ecuador

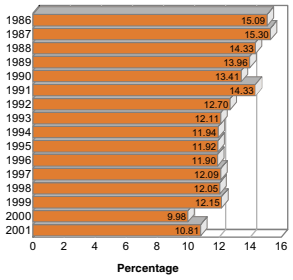
Growth of GDP and AGDP

Index 1986-1988=100

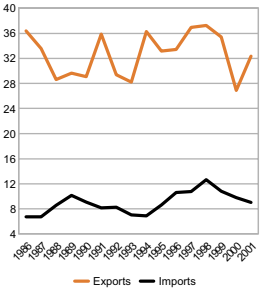


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	1,439.3	4.76	1,617.5	92.5	90.6
1991-1999	1,711.2	2.18	1,913.1	131.5	121.9
2000-2001	1,694.8	-0.40	2,256.7	154.6	123.9

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	444.2	0.52	2.47	1,607	27.4
1991-1999	760.1	0.56	2.09	1,593	28.5
2000-2001	1,044.5			1,574	28.8

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	7,725	20.80	16.09	63.12	54.72
1991-1999	8,057	19.77	17.50	62.72	55.01
2000-2001	8,108	19.41	17.60	62.99	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	15.78	0.22	-	1.16
1991-1999	13.03	0.03	-	1.23
2000-2001	24.65	-	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	2.94	19.14	19.73	-7.88
1991-1999	2.86	12.93	22.22	6.29
2000-2001	3.20	10.45	25.20	16.70

Rurality and gender

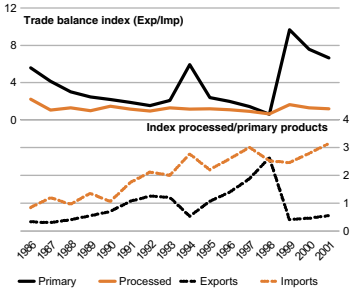
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	46.48	0.76	283.29	6.73	2.50
1991-1999	40.30	0.13	289.13	6.90	2.14
2000-2001	36.79	0.52	297.26		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.700		25.30		35.00
1991-1999	0.719				
2000-2001	0.732	43.70	20.20	52.30	35.00

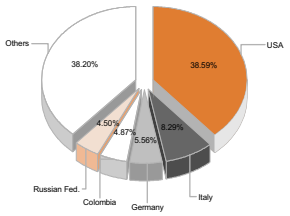
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

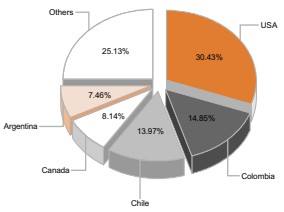
Main destinations



Anual average US$2,555 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$564 millions (1997-2001)

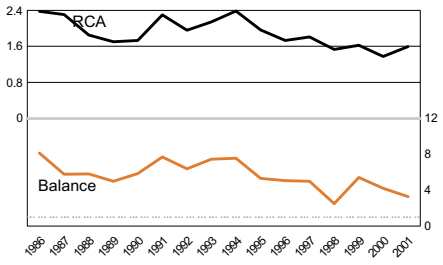
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-199.95	548.74	1,536.79	0.79	4.17	5.13	2,473.30	50.22
1991-1999	-315.07	545.01	1,709.33	0.70	5.19	1.80	2,615.90	54.46
2000-2001	-353.76	596.39	1,712.27	0.64	5.23	8.46	2,758.60	57.25

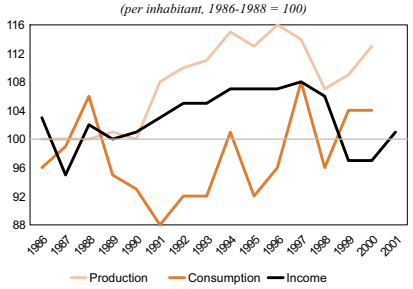
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	0.65	2.23	18.81	17.22
1991-1999	2.65	4.65	20.89	20.58
2000-2001	3.52	6.33	22.86	18.82
Meat				
1986-1990	0.00	0.02	23.84	23.87
1991-1999	0.12	0.18	31.51	31.64
2000-2001	0.41	0.14	35.32	35.06
Cereals				
1986-1990	1.58	45.11	109.33	106.78
1991-1999	7.94	46.93	121.57	106.05
2000-2001	8.90	52.20	124.42	106.92
Fruits				
1986-1990	172.68	0.18	403.05	171.44
1991-1999	316.79	3.21	575.05	146.79
2000-2001	351.41	3.44	642.62	167.97
Vegetables				
1986-1990	0.45	0.17	36.49	31.41
1991-1999	1.92	0.71	31.38	25.18
2000-2001	1.60	1.42	32.11	26.17
Oilcrops				
1986-1990	0.11	0.02	23.47	1.43
1991-1999	0.63	1.11	16.58	1.12
2000-2001	2.21	0.75	15.57	1.76
Dairy Products				
1986-1990	0.00	1.19	144.45	82.28
1991-1999	0.33	2.08	161.11	96.81
2000-2001	0.59	0.50	159.41	94.03

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)



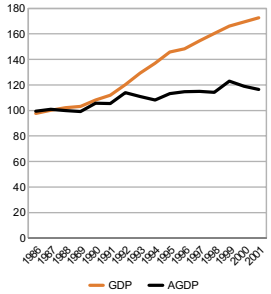
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	1,467.00	5.47	36.96	50.35	2.52	5.06	7.05
1991-1999	1,537.22	6.25	25.61	36.28	3.48	5.98	8.84
2000-2001	1,451.50	5.50	19.37	120.31	1.88	6.66	

El Salvador

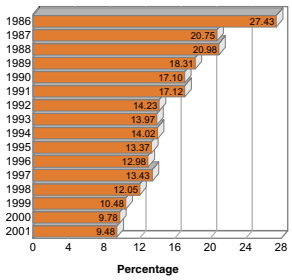
Growth of GDP and AGDP

Index 1986-1988=100

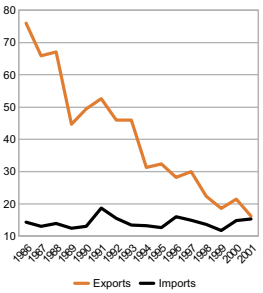


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	1,619.5	1.57	1,798.8	92.1	95.9
1991-1999	1,698.0	1.77	1,923.7	108.7	126.6
2000-2001	1,678.9	-2.61	2,022.2	121.5	137.9

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	1,531.8	0.64	1.86	534	4.3
1991-1999	1,381.0	0.60	1.49	573	4.4
2000-2001	1,388.9			560	4.9

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	1,420	37.62	18.15	44.24	4.99
1991-1999	1,566	36.57	16.57	46.86	4.99
2000-2001	1,604	34.91	15.59	49.50	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	-	-	1.40	0.36
1991-1999	-	-	0.98	0.49
2000-2001	-	-	0.65	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	3.00	4.78	5.30	10.15
1991-1999	2.56	10.08	3.64	5.74
2000-2001	2.20	10.30	1.85	4.05

Rurality and gender

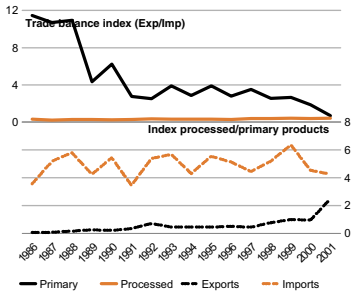
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	51.82	0.39	482.52	6.83	2.55
1991-1999	45.72	-0.31	451.31	25.83	8.16
2000-2001	39.18	-0.99	444.82		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.625	40.00	25.30		43.15
1991-1999	0.682				
2000-2001	0.706	52.20	21.00	44.50	48.30

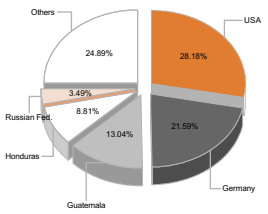
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

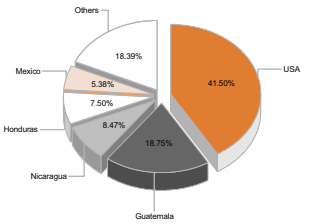
Main destinations



Anual average US$575 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$668 millions (1997-2001)

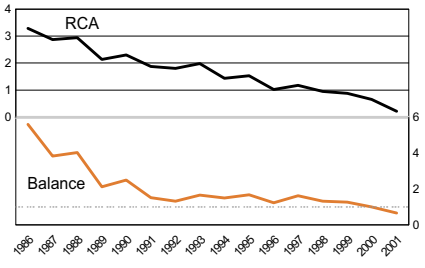
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	66.62	423.28	1,051.94	0.29	9.99	39.26	2,367.36	56.48
1991-1999	92.14	441.12	1,228.14	0.28	12.25	10.99	2,452.73	60.57
2000-2001	159.05	473.56	1,242.31	0.25	18.75	7.07	2,485.90	61.65

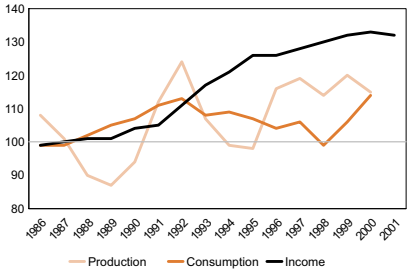
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	0.05	6.02	1.15	5.06
1991-1999	1.10	11.25	0.93	5.01
2000-2001	2.31	15.20	0.96	5.37
Meat				
1986-1990	0.20	0.37	13.74	13.92
1991-1999	0.17	1.43	13.90	15.22
2000-2001	0.83	3.00	14.18	16.37
Cereals				
1986-1990	0.56	40.34	145.77	144.10
1991-1999	4.62	68.33	144.02	148.50
2000-2001	13.38	116.86	121.59	137.36
Fruits				
1986-1990	0.07	21.66	52.19	62.33
1991-1999	1.03	19.99	47.87	56.92
2000-2001	4.27	31.32	43.42	59.50
Vegetables				
1986-1990	2.96	13.36	32.12	37.91
1991-1999	2.12	10.82	22.36	27.71
2000-2001	0.82	26.68	24.20	45.28
Oilcrops				
1986-1990	1.97	3.04	21.45	13.40
1991-1999	1.58	3.76	16.19	9.69
2000-2001	0.65	8.63	13.99	14.56
Dairy Products				
1986-1990	0.04	12.75	50.18	60.38
1991-1999	0.17	23.87	59.58	80.01
2000-2001	1.13	29.98	62.33	87.94

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)



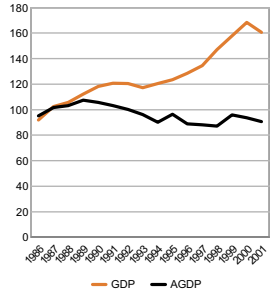
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	1,338.80	6.62	18.94	27.88	3.39	17.00	8.93
1991-1999	1,619.00	1.50	11.13	10.81	3.69	21.60	7.96
2000-2001	1,758.00	-0.70	6.54	1.95	3.82	20.56	

Grenada

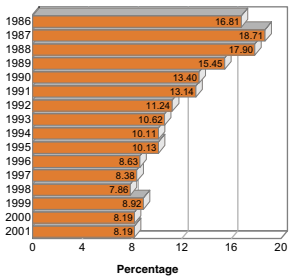
Growth of GDP and AGDP

Index 1986-1988=100

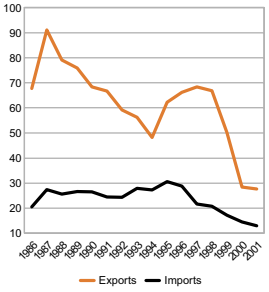


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	2,286.8	2.66	996.8	99.0	101.0
1991-1999	2,230.3	-0.93	1,011.0	101.0	90.7
2000-2001	2,259.4	-2.73	1,000.0	97.8	81.8

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990		0.83		2	
1991-1999		0.71		2	
2000-2001				1	

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	13	16.67	75.76	7.58	8.82
1991-1999	12	15.74	75.93	8.33	8.82
2000-2001	12	8.33	83.33	8.33	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	-	-	-	0.41
1991-1999	-	-	-	0.57
2000-2001	-	-	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990		10.23	13.89	7.80
1991-1999		11.30	17.13	8.78
2000-2001		11.80	23.15	12.20

Rurality and gender

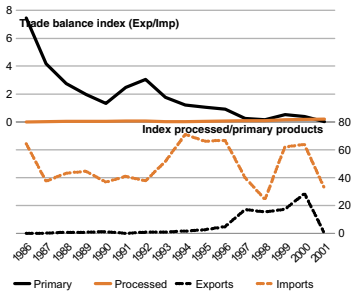
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	66.13	0.50	2,845.68		
1991-1999	64.09	-0.10	3,378.65	15.85	11.13
2000-2001	61.82	0.70	6,146.81		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990					20.00
1991-1999					
2000-2001	0.747				

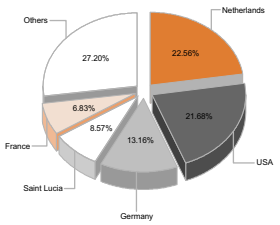
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

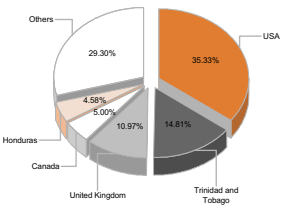
Main destinations



Anual average US$24 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$46 millions (1997-2001)

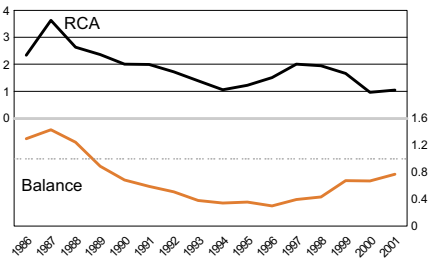
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	282.08	639.09	643.62	0.14	51.11	15.06	2,557.76	69.96
1991-1999	441.25	662.92	573.01	0.13	60.01	5.59	2,691.31	71.22
2000-2001	484.95	650.18	504.42	0.12	70.65	0.00	2,738.65	71.10

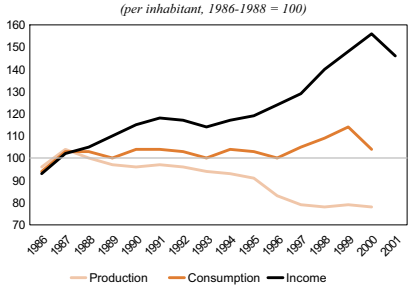
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990		6.64	3.66	9.83
1991-1999		8.71	3.72	10.49
2000-2001		11.90	3.59	12.12
Meat				
1986-1990	0.04	47.98	8.90	42.40
1991-1999	0.01	59.38	10.38	51.13
2000-2001	0.00	72.97	11.29	61.87
Cereals				
1986-1990	24.14	135.32	2.74	75.68
1991-1999	60.37	252.29	3.45	90.32
2000-2001	143.00	298.26	3.03	83.86
Fruits				
1986-1990	122.06	19.71	289.89	156.44
1991-1999	51.21	47.80	223.24	188.52
2000-2001	9.90	55.78	171.11	192.18
Vegetables				
1986-1990	0.04	7.11	24.93	27.40
1991-1999	0.31	7.61	26.97	29.53
2000-2001	0.91	6.47	26.77	27.71
Oilcrops				
1986-1990	2.93	1.18	84.19	28.51
1991-1999	0.85	0.75	77.65	25.70
2000-2001	0.00	0.60	68.90	20.77
Dairy Products				
1986-1990	0.00	153.98	5.33	138.17
1991-1999	0.00	114.43	5.40	108.16
2000-2001	0.00	108.79	5.25	103.19

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)



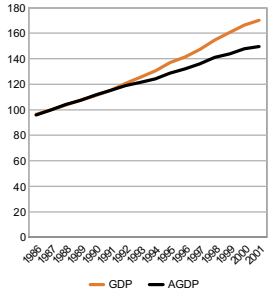
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	2,573.80	1.23	5.48	3.89	1.73	72.64	
1991-1999	3,062.89	-6.23	5.98	3.05	2.01	137.35	18.20
2000-2001	3,694.00	-2.10	5.77		2.03	38.53	

Guatemala

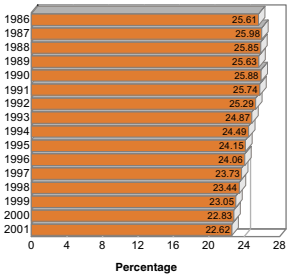
Growth of GDP and AGDP

Index 1986-1988=100

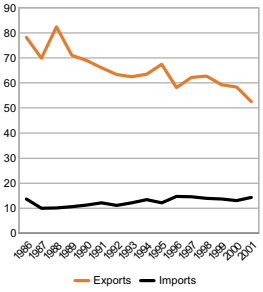


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	1,900.1	3.89	1,862.6	92.6	84.9
1991-1999	2,045.1	2.84	1,773.2	115.8	140.7
2000-2001	2,115.6	1.89	1,799.2	135.1	164.3

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	926.3	0.32	1.45	1,300	6.2
1991-1999	1,314.9	0.32	1.20	1,342	6.8
2000-2001	1,555.9			1,360	6.8

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	4,085	31.82	11.87	56.30	44.47
1991-1999	4,457	30.10	12.02	57.88	47.86
2000-2001	4,507	30.18	12.09	57.73	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	0.30	-	1.70	0.38
1991-1999	0.44	-	1.44	0.48
2000-2001	0.95	-	1.05	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	1.38	8.60	9.05	0.40
1991-1999	1.53	9.88	8.91	1.28
2000-2001	1.60	9.90	7.06	1.15

Rurality and gender

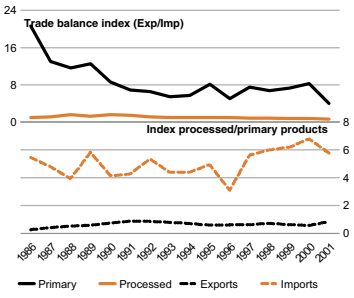
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	62.03	2.38	397.97		
1991-1999	61.28	2.42	456.25	30.43	17.00
2000-2001	60.18	2.19	505.14	27.80	13.80

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.567		46.55		58.00
1991-1999	0.609				
2000-2001	0.631		10.00	33.80	57.90

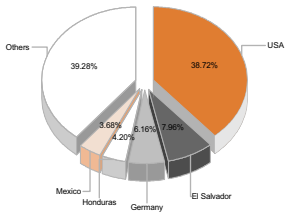
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

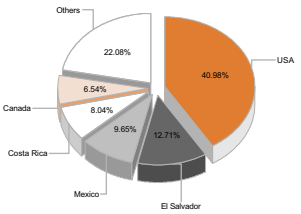
Main destinations



Anual average US$1,547 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$691 millions (1997-2001)

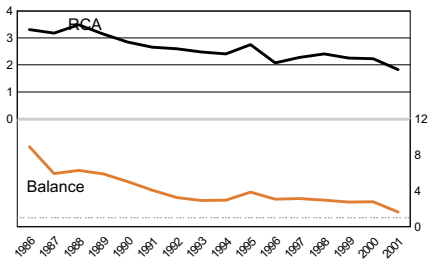
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-77.24	393.90	1,497.41	0.49	3.92	22.92	2,364.98	60.92
1991-1999	-123.31	396.94	2,051.50	0.45	5.02	11.10	2,265.84	57.79
2000-2001	-206.89	391.73	2,061.71	0.39	6.32	12.16	2,172.65	54.90

Food trade, production and consumption, by selected groups of products (in kg/inhab.)

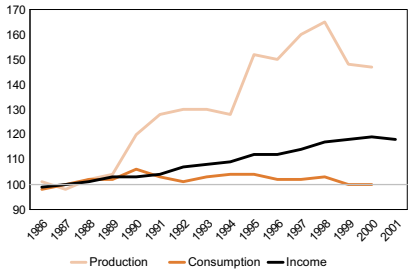
Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	0.22	4.76	2.70	5.05
1991-1999	1.91	5.35	4.67	4.88
2000-2001	5.07	7.22	5.52	6.38
Meat				
1986-1990	1.61	0.13	16.12	14.62
1991-1999	1.00	1.40	18.15	18.54
2000-2001	0.52	2.75	20.24	22.49
Cereals				
1986-1990	1.07	30.37	166.45	152.06
1991-1999	5.78	57.73	123.16	143.25
2000-2001	6.63	64.78	100.63	125.53
Fruits				
1986-1990	50.31	0.32	117.54	48.80
1991-1999	68.98	5.28	149.52	60.69
2000-2001	121.16	10.78	158.51	63.76
Vegetables				
1986-1990	7.73	0.49	60.88	47.83
1991-1999	18.94	2.00	65.32	43.63
2000-2001	40.55	3.09	83.17	42.13
Oilcrops				
1986-1990	3.73	0.14	15.63	0.98
1991-1999	4.37	0.66	13.14	1.51
2000-2001	4.73	0.52	10.60	2.31
Dairy Products				
1986-1990	0.11	11.04	29.71	40.51
1991-1999	0.15	12.97	28.33	41.15
2000-2001	0.11	17.81	22.80	40.44

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption

(per inhabitant, 1986-1988 = 100)



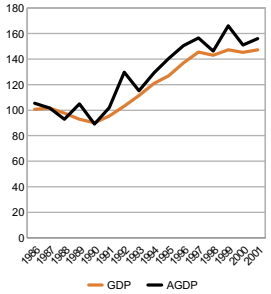
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	1,329.60	7.68	24.34	25.32	3.32	10.43	
1991-1999	1,460.89	4.87	12.90	11.56	3.27	17.16	
2000-2001	1,558.00	3.39	8.90	4.34	4.00	22.51	

Guyana

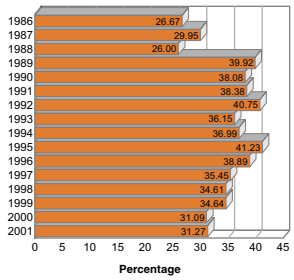
Growth of GDP and AGDP

Index 1986-1988=100

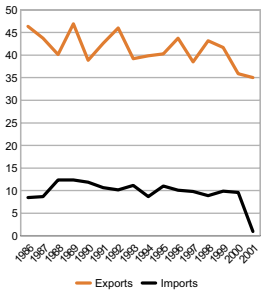


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods

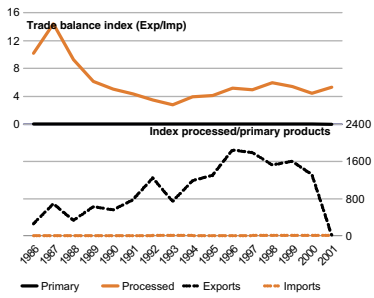


Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	2,520.6	-3.54	3,152.6	101.3	107.7
1991-1999	3,683.0	7.71	3,757.8	179.4	118.8
2000-2001	4,197.2	-2.84	3,896.1	219.1	121.2

Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	322.5	0.75	12.61	480	26.3
1991-1999	297.9	0.76	11.70	480	29.1
2000-2001	262.2			480	30.2

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	1,725	27.83	0.87	71.30	76.15
1991-1999	1,726	27.81	0.93	71.26	76.45
2000-2001	1,726	27.81	0.93	71.26	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	-	15.26	-	2.56
1991-1999	-	9.34	-	2.24
2000-2001	-	7.10	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	5.70	4.46	19.80	
1991-1999	4.09	9.90	18.69	14.40
2000-2001	3.30	9.85	6.80	-6.50

Anual average US$ millions (1997-2001)

Rurality and gender

Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	67.37	-1.01	103.89		
1991-1999	65.39	-0.09	101.31	29.40	17.10
2000-2001	63.50	0.04	101.01		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.676	55.80			43.00
1991-1999	0.703				
2000-2001	0.708				43.20

Anual Average US$ millions (1997-2001)

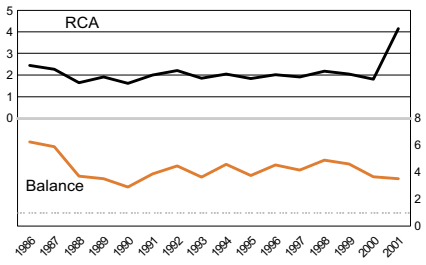
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-215.99	442.64	4,757.78	2.33	2.28	62.17	2,431.62	56.58
1991-1999	-455.95	497.20	5,222.53	2.32	3.26	53.75	2,475.88	68.13
2000-2001	-464.71	637.41	5,253.97	2.26	4.18	61.79	2,569.95	74.10

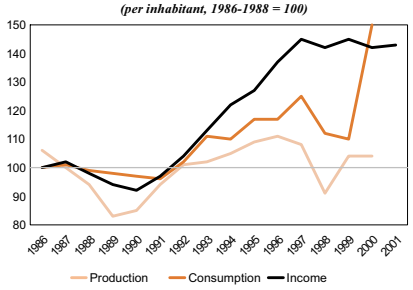
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	0.00	1.33	3.43	3.50
1991-1999	0.00	1.45	3.71	4.14
2000-2001	0.00	0.84	2.95	3.19
Meat				
1986-1990	0.00	0.50	9.19	9.69
1991-1999	0.00	8.50	16.42	24.92
2000-2001	0.00	11.92	19.68	31.60
Cereals				
1986-1990	76.66	68.14	208.81	142.82
1991-1999	272.79	78.35	403.26	139.39
2000-2001	270.60	97.67	398.73	130.32
Fruits				
1986-1990	1.07	0.00	75.90	66.94
1991-1999	0.47	0.00	59.77	53.06
2000-2001	0.03	0.00	99.90	89.72
Vegetables				
1986-1990	0.00	0.12	13.86	12.60
1991-1999	0.00	0.42	13.88	12.92
2000-2001	0.00	0.99	120.14	109.11
Oilcrops				
1986-1990	0.00	0.15	52.80	17.45
1991-1999	4.94	0.23	94.81	26.75
2000-2001	4.60	0.12	106.32	27.98
Dairy Products				
1986-1990		9.86	22.55	32.42
1991-1999		36.80	30.98	67.78
2000-2001		57.65	39.42	97.07

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption (per inhabitant, 1986-1988 = 100)



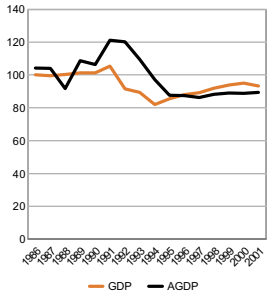
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	638.80	18.75		18.88		9.61	
1991-1999	825.78	25.94	17.10	14.90	3.81	9.40	11.70
2000-2001	938.00	17.21	8.46	25.37	3.83	9.40	

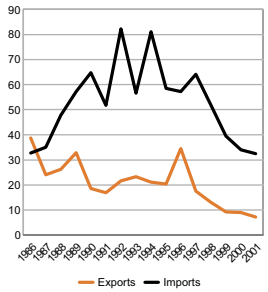
Haiti

Growth of GDP and AGDP

Index 1986-1988=100



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	518.7	1.08	983.5	105.5	106.6
1991-1999	458.8	-1.70	953.6	115.0	88.9
2000-2001		0.21	879.2	154.0	81.6

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	40.8	0.04	0.07	554	8.0
1991-1999	125.1	0.03	0.05	559	8.2
2000-2001	257.7			560	8.2

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	1,403	39.46	24.94	35.60	5.04
1991-1999	1,402	39.91	24.97	35.12	5.05
2000-2001	1,400	40.00	25.00	35.00	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	-	-	1.10	0.31
1991-1999	-	-	1.37	0.35
2000-2001	-	-	0.90	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	1.70	2.22	6.38	
1991-1999	1.50	1.68	2.82	5.96
2000-2001	1.50	1.80	8.26	21.55

Rurality and gender

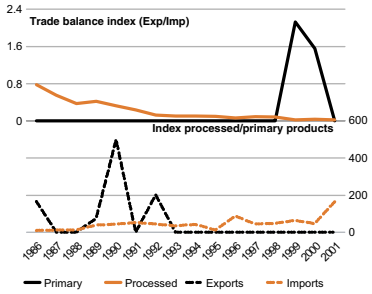
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	71.83	1.11	806.41	66.20	49.60
1991-1999	67.44	1.17	864.49		
2000-2001	64.00	1.08	913.98		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.446				65.00
1991-1999	0.457				
2000-2001	0.471	40.20			65.00

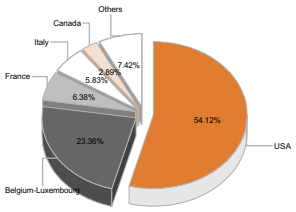
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

Main destinations



Anual average US$2 millions (1997-2001)

Anual Average US$ millions (1997-2001)

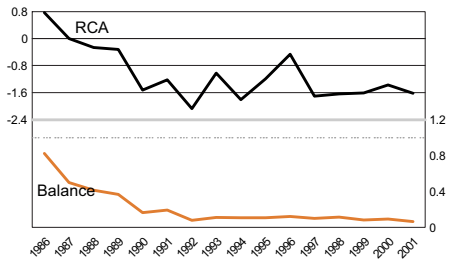
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	73.69	453.71	756.51	0.23	9.61	12.64	1,814.06	46.46
1991-1999	104.83	390.06	550.86	0.20	16.69	18.60	1,853.04	43.53
2000-2001	117.55	391.15	453.01	0.17	21.03	14.49	2,043.40	45.05

Food trade, production and consumption, by selected groups of products (in kg/inhab.)

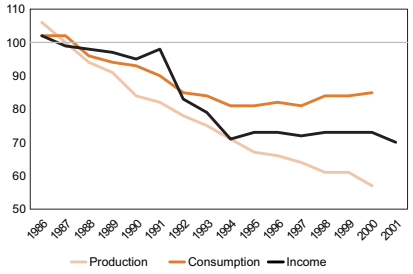
Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	0.00	7.42	0.21	3.13
1991-1999	0.00	10.46	0.20	5.47
2000-2001	0.00	11.29	0.14	8.88
Meat				
1986-1990	0.00	0.37	10.18	10.40
1991-1999	0.00	1.62	9.69	11.17
2000-2001	0.00	2.53	11.60	13.99
Cereals				
1986-1990	0.00	37.64	64.66	93.96
1991-1999	0.00	59.75	54.62	99.04
2000-2001	0.00	69.29	48.65	104.99
Fruits				
1986-1990	1.87	0.17	168.02	123.13
1991-1999	1.67	0.90	128.10	89.78
2000-2001	1.82	3.13	130.28	93.47
Vegetables				
1986-1990	0.00	1.72	47.69	44.66
1991-1999	0.00	1.24	31.14	29.27
2000-2001	0.01	1.54	28.38	27.03
Oilcrops				
1986-1990	0.00	0.00	11.63	9.60
1991-1999	0.00	0.15	7.34	6.03
2000-2001	0.00	0.01	6.01	4.91
Dairy Products				
1986-1990		13.07	8.20	20.91
1991-1999		9.07	8.20	16.91
2000-2001		7.88	8.20	15.73

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption

(per inhabitant, 1986-1988 = 100)



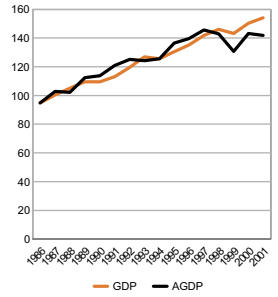
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	498.20	-2.75		4.27		66.93	
1991-1999	391.00	-8.12	11.24	17.71	2.35	167.70	
2000-2001	361.00	-6.51	6.47		1.54	92.31	

Honduras

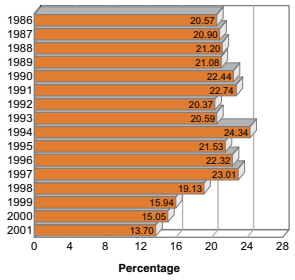
Growth of GDP and AGDP

Index 1986-1988=100

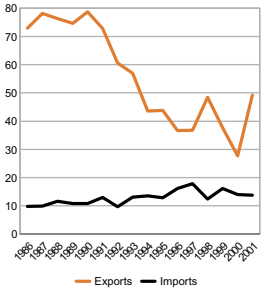


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	821.1	4.73	1,421.7	88.7	97.6
1991-1999	982.4	1.67	1,359.7	130.9	112.9
2000-2001	1,014.8	4.31	1,404.4	150.6	123.6

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	204.3	0.30	2.72	1,446	4.1
1991-1999	562.9	0.32	2.46	1,561	3.9
2000-2001	1,690.1			1,068	5.6

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	3,309	43.70	10.60	45.70	53.62
1991-1999	3,428	45.53	10.15	44.32	53.53
2000-2001	2,935	36.39	12.23	51.38	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	-	1.76	-	0.75
1991-1999	-	0.22	-	0.94
2000-2001	-	0.10	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	4.36	7.12	15.01	8.76
1991-1999	3.59	6.26	23.36	20.37
2000-2001	3.50	5.60	16.33	21.70

Rurality and gender

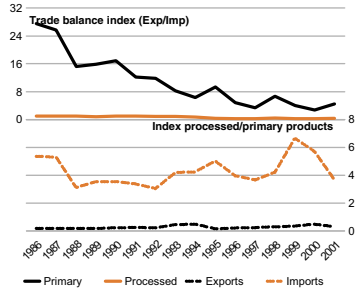
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	59.85	1.70	189.78	18.93	2.37
1991-1999	52.66	0.72	189.61	36.91	7.33
2000-2001	46.82	0.50	283.96		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.606		43.50		51.50
1991-1999	0.628				
2000-2001	0.638		24.30	45.10	53.00

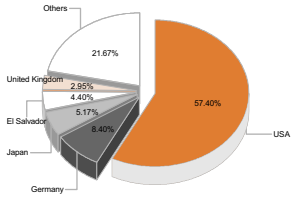
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

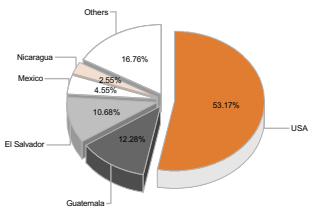
Main destinations



Anual average US$554 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$383 millions (1997-2001)

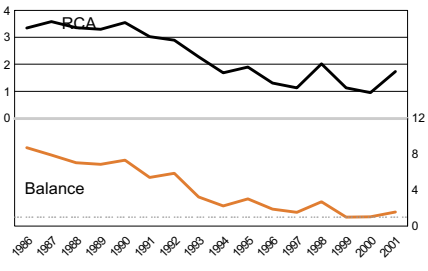
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-199.39	413.10	1,302.25	0.72	4.97	26.44	2,255.76	53.22
1991-1999	-83.95	459.42	1,237.83	0.61	7.72	16.06	2,355.68	57.33
2000-2001	-6.88	469.46	1,165.70	0.45	9.40	9.59	2,395.80	60.90

Food trade, production and consumption, by selected groups of products (in kg/inhab.)

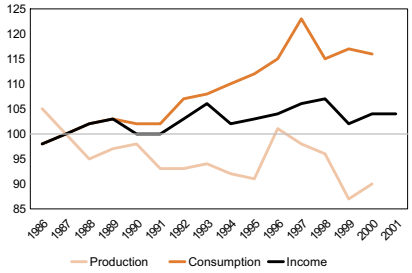
Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	4.72	0.63	18.56	9.29
1991-1999	2.78	1.22	16.73	9.68
2000-2001	6.33	1.74	16.61	10.49
Meat				
1986-1990	2.78	0.31	16.30	13.72
1991-1999	1.82	0.80	20.79	19.73
2000-2001	0.20	2.79	21.97	24.47
Cereals				
1986-1990	0.55	34.60	127.31	128.48
1991-1999	1.11	53.03	120.38	124.65
2000-2001	1.47	54.46	94.14	121.26
Fruits				
1986-1990	203.29	2.41	317.28	83.08
1991-1999	121.38	5.04	237.16	86.25
2000-2001	79.87	11.29	153.38	68.72
Vegetables				
1986-1990	6.37	0.45	34.90	24.74
1991-1999	17.29	2.06	55.63	34.17
2000-2001	8.09	3.00	44.98	36.71
Oilcrops				
1986-1990	1.15	1.92	7.90	2.06
1991-1999	1.49	2.38	9.16	2.67
2000-2001	0.11	0.57	7.72	3.16
Dairy Products				
1986-1990	0.05	9.18	66.10	75.23
1991-1999	0.59	13.06	83.70	96.19
2000-2001	0.97	19.10	89.00	107.04

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption

(per inhabitant, 1986-1988 = 100)



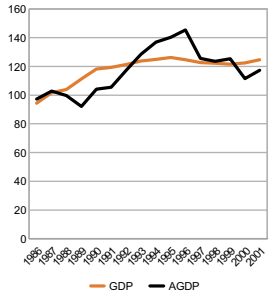
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	686.40	14.73	29.14	10.14	0.65	9.75	9.43
1991-1999	707.56	7.54	27.43	20.26	1.95	17.76	3.71
2000-2001	711.00	1.70	12.05	7.60	4.54	25.78	

Jamaica

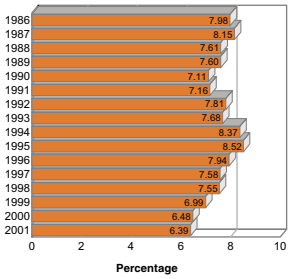
Growth of GDP and AGDP

Index 1986-1988=100

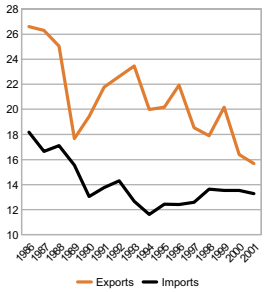


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	1,204.1	2.07	1,345.9	87.9	96.9
1991-1999	1,628.9	2.30	1,336.1	108.7	108.7
2000-2001	1,497.4	-2.90	1,163.2	122.3	99.0

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	2,077.0	2.60	2.66	117	11.4
1991-1999	1,465.8	1.90	2.43	164	9.5
2000-2001	1,287.4			174	9.1

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	477	24.50	21.60	53.90	17.02
1991-1999	497	33.09	20.12	46.79	16.79
2000-2001	503	34.59	19.88	45.53	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	-	5.74	-	1.21
1991-1999	-	3.66	-	1.71
2000-2001	-	1.70	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	4.84	8.45	20.05	12.93
1991-1999	5.09	10.78	19.90	13.30
2000-2001	5.80	11.10	15.81	11.60

Rurality and gender

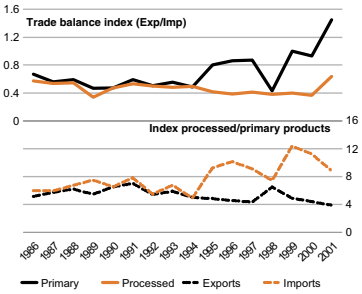
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	49.46	-0.24	1,000.37	26.10	15.40
1991-1999	46.27	-0.25	707.92	23.89	12.41
2000-2001	43.67	-0.43	649.27		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.706	62.00	3.95		33.10
1991-1999	0.736				
2000-2001	0.742	56.30	3.20	25.20	18.70

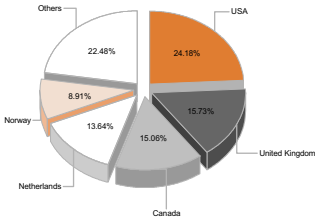
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

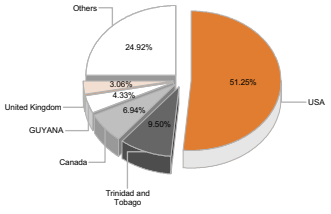
Main destinations



Anual average US$814 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$455 millions (1997-2001)

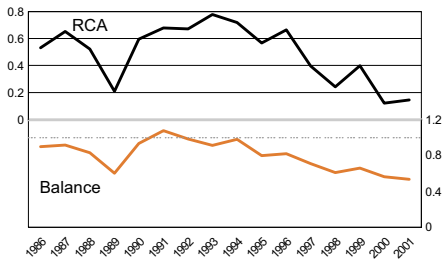
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	227.67	624.75	1,553.37	0.20	18.96	99.47	2,570.42	65.78
1991-1999	189.23	639.15	1,641.98	0.20	17.45	39.72	2,590.82	65.31
2000-2001	231.33	650.49	1,366.71	0.19	22.34	6.58	2,693.15	68.40

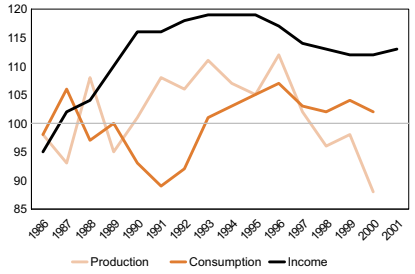
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	0.12	6.14	5.97	9.98
1991-1999	0.37	8.24	4.27	9.89
2000-2001	0.05	15.92	1.89	14.87
Meat				
1986-1990	0.11	14.59	26.09	40.48
1991-1999	0.27	17.53	31.55	48.77
2000-2001	0.14	16.42	38.69	54.90
Cereals				
1986-1990	0.56	165.04	1.73	102.03
1991-1999	1.91	172.61	1.36	95.22
2000-2001	1.80	189.71	0.69	105.31
Fruits				
1986-1990	28.51	2.76	154.18	117.21
1991-1999	42.86	6.01	179.24	128.55
2000-2001	24.78	7.96	183.65	152.47
Vegetables				
1986-1990	2.31	1.67	50.58	45.04
1991-1999	1.41	4.55	75.61	71.29
2000-2001	2.03	8.58	67.94	68.43
Oilcrops				
1986-1990	0.04	22.42	63.28	19.92
1991-1999	0.05	13.78	64.83	15.40
2000-2001	0.11	0.57	66.82	14.88
Dairy Products				
1986-1990	1.62	64.72	20.69	82.75
1991-1999	2.37	37.31	14.55	48.54
2000-2001	4.58	42.23	11.08	47.76

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)

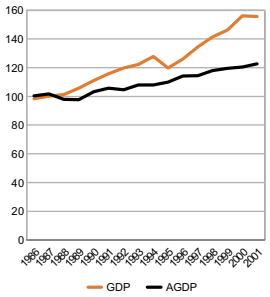


Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	2,024.20	-0.84	37.49	15.32	0.75	22.15	19.22
1991-1999	2,238.44	-0.79	18.63	28.16	1.75	20.58	15.86
2000-2001	2,160.00	-1.98	14.15	5.23	3.44	22.67	

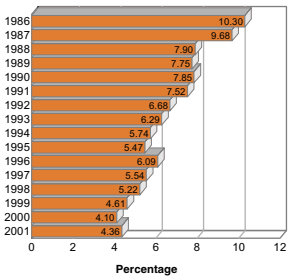
Growth of GDP and AGDP

Index 1986-1988=100

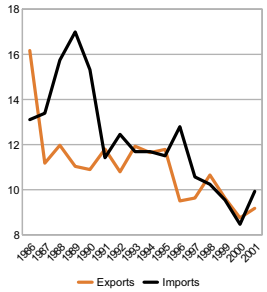


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	1,536.0	0.77	2,291.6	100.5	101.4
1991-1999	1,669.0	1.66	2,600.3	120.7	110.6
2000-2001	1,811.5	1.27	2,788.9	148.4	120.1

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	753.8	0.69	5.72	23,830	20.6
1991-1999	656.3	0.69	4.84	24,767	23.4
2000-2001	738.7			24,800	23.8

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	102,180	23.32	1.81	74.87	24.48
1991-1999	106,322	23.29	2.04	74.67	24.87
2000-2001	107,300	23.11	2.33	74.56	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	9.68	0.88	-	1.14
1991-1999	5.01	0.18	-	1.13
2000-2001	5.75	0.10	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	2.42	12.14	23.34	9.06
1991-1999	4.06	10.23	21.13	9.47
2000-2001	4.60	10.60	19.95	8.80

Rurality and gender

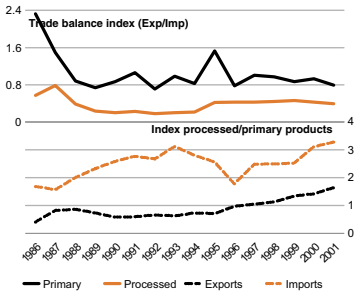
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	28.71	-0.05	96.46	23.05	3.40
1991-1999	26.58	0.94	97.46	23.74	10.57
2000-2001	25.52	0.68	101.25	17.50	6.90

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.757	66.00	16.40		22.05
1991-1999	0.774				
2000-2001	0.796	37.90	15.90	37.70	10.10

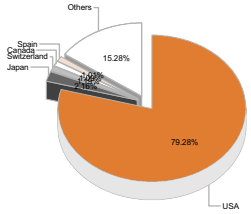
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

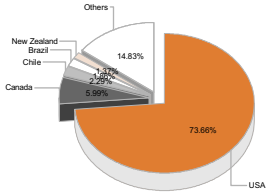
Main destinations



Anual average US$9,264 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$11,549 millions (1997-2001)

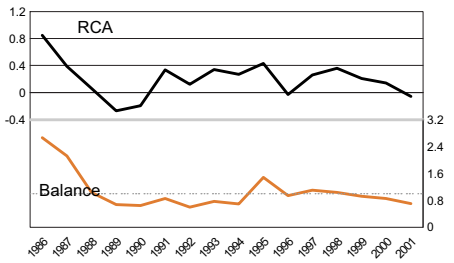
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	96.24	625.16	1,345.52	1.28	9.84	2.10	3,092.82	81.64
1991-1999	137.00	655.93	1,326.59	1.17	13.98	0.33	3,126.90	84.34
2000-2001	197.78	702.90	1,314.89	1.09	19.02	0.00	3,156.20	89.75

Food trade, production and consumption, by selected groups of products (in kg/inhab.)

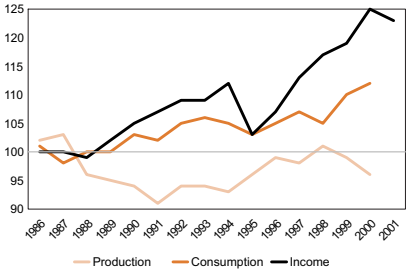
Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	0.24	4.77	9.23	10.82
1991-1999	0.63	7.22	9.75	11.23
2000-2001	0.56	7.70	9.04	9.44
Meat				
1986-1990	0.13	1.62	36.23	37.71
1991-1999	0.41	6.04	40.17	45.79
2000-2001	0.91	11.55	45.49	56.18
Cereals				
1986-1990	1.73	70.56	283.60	179.82
1991-1999	4.65	100.00	296.08	176.66
2000-2001	8.49	152.00	284.53	178.76
Fruits				
1986-1990	7.59	1.00	118.03	96.53
1991-1999	13.01	3.97	125.42	102.24
2000-2001	15.36	7.77	135.66	113.93
Vegetables				
1986-1990	22.58	0.57	75.77	49.52
1991-1999	27.92	2.16	82.57	52.17
2000-2001	35.57	3.35	95.13	57.41
Oilcrops				
1986-1990	0.59	19.26	29.76	1.83
1991-1999	0.51	39.45	22.14	2.54
2000-2001	0.65	55.49	16.44	2.68
Dairy Products				
1986-1990	0.02	30.46	80.53	97.85
1991-1999	0.56	25.72	87.08	101.79
2000-2001	1.22	27.32	96.39	112.35

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption

(per inhabitant, 1986-1988 = 100)



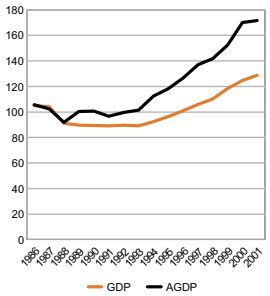
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	3,079.80	0.18	33.37	74.40	2.53	9.03	2.50
1991-1999	3,364.56	-0.07	28.54	19.46	2.32	9.99	3.53
2000-2001	3,772.50	-0.26	28.41	5.84	2.34	8.42	

Nicaragua

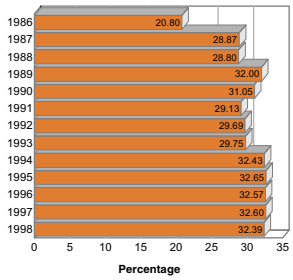
Growth of GDP and AGDP

Index 1986-1988=100

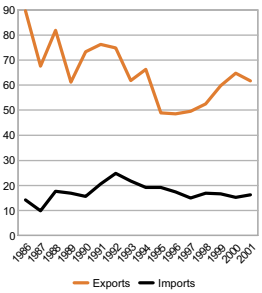


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	1,278.3	-1.00	1,681.7	93.8	97.0
1991-1999	1,493.3	4.82	1,652.4	113.9	120.9
2000-2001		7.27	1,759.7	147.9	135.7

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	305.0	0.14	1.92	1,800	4.2
1991-1999	141.5	0.12	1.58	2,328	3.4
2000-2001	117.6			2,457	3.2

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	6,852	26.27	3.46	70.27	27.69
1991-1999	7,423	31.37	3.77	64.86	24.75
2000-2001	7,561	32.50	3.82	63.68	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	-	0.22	0.34	1.21
1991-1999	-	0.15	1.40	1.45
2000-2001				

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	4.74	8.43	0.36	-10.33
1991-1999	3.71	9.55	-9.16	-11.95
2000-2001	3.60			

Rurality and gender

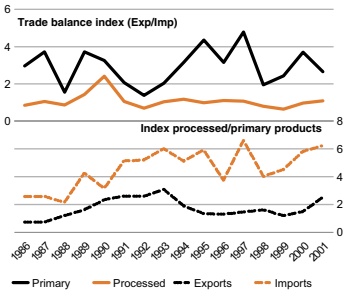
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	47.50	1.76	96.71	39.30	
1991-1999	45.49	2.21	86.57	40.46	
2000-2001	43.67	1.79	90.53		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.588	50.00	36.90		50.15
1991-1999	0.615				
2000-2001	0.635	53.10			50.30

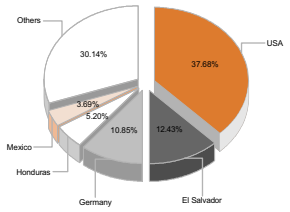
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

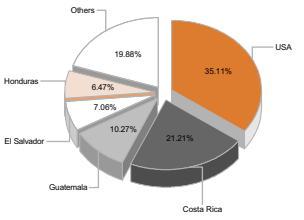
Main destinations



Anual average US$474 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$290 millions (1997-2001)

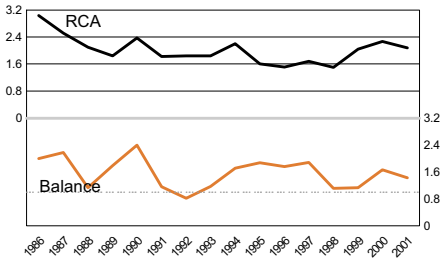
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	26.30	373.25	1,066.14	1.87	8.03	37.77	2,299.38	56.84
1991-1999	17.59	339.17	1,098.97	1.68	8.24	21.98	2,194.49	53.23
2000-2001	-24.93	331.09	1,114.96	1.47	8.98	13.12	2,232.15	59.65

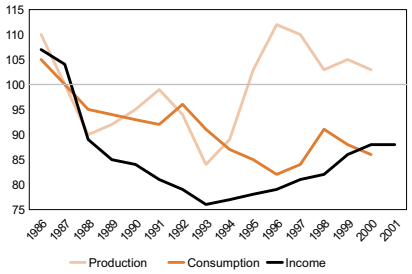
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	0.00	4.68	4.43	5.39
1991-1999	0.23	10.94	3.10	9.37
2000-2001	0.03	10.09	2.76	9.00
Meat				
1986-1990	5.00	0.34	17.84	13.18
1991-1999	5.81	0.76	18.80	13.86
2000-2001	5.71	0.82	21.25	16.46
Cereals				
1986-1990	1.58	47.53	121.32	132.24
1991-1999	2.63	44.36	111.92	124.78
2000-2001	1.47	47.87	133.06	125.43
Fruits				
1986-1990	23.62	0.31	80.59	45.72
1991-1999	15.60	6.19	57.70	40.48
2000-2001	10.62	6.38	42.67	33.17
Vegetables				
1986-1990	0.02	0.39	9.82	9.06
1991-1999	2.93	3.57	6.76	8.63
2000-2001	4.96	5.07	6.20	9.08
Oilcrops				
1986-1990	0.92	1.67	21.46	1.64
1991-1999	6.47	1.29	15.83	2.29
2000-2001	10.31	0.51	13.34	1.50
Dairy Products				
1986-1990	0.41	20.21	45.93	64.71
1991-1999	5.86	10.55	43.64	46.57
2000-2001	26.48	14.05	45.75	34.77

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)



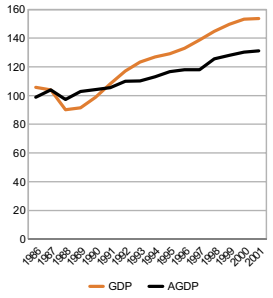
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	501.20	4.73	8.36	2,604.42	1.85	31.87	7.20
1991-1999	426.22	3.24	44.78	316.16	1.78	38.25	14.48
2000-2001	471.00		24.07	6.83	2.35	35.55	

Panama

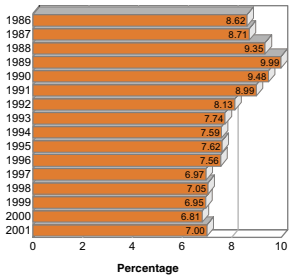
Growth of GDP and AGDP

Index 1986-1988=100

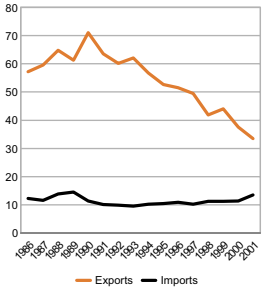


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	2,239.2	1.46	1,783.9	94.8	104.7
1991-1999	2,440.7	2.33	1,957.0	116.9	103.9
2000-2001	2,757.8	1.20	2,920.8	127.1	101.8

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	760.7	1.07	5.89	483	4.8
1991-1999	679.1	1.00	4.69	500	5.1
2000-2001	623.7			500	5.3

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	2,072	23.30	7.00	69.70	45.23
1991-1999	2,137	23.40	7.36	69.24	43.17
2000-2001	2,132	23.45	7.27	69.28	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	-	-	-	0.48
1991-1999	-	-	-	0.67
2000-2001	-	-	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	4.86	7.42	20.65	12.72
1991-1999	4.78	7.31	25.23	16.20
2000-2001	4.80	7.95	25.10	14.55

Rurality and gender

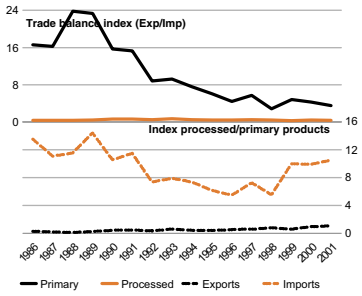
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	46.92	1.34	223.90	28.40	4.70
1991-1999	45.01	1.22	236.54	21.12	2.59
2000-2001	43.59	0.87	249.71	17.10	

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.746		17.95		
1991-1999	0.770				
2000-2001	0.787	60.30	14.00	29.00	37.30

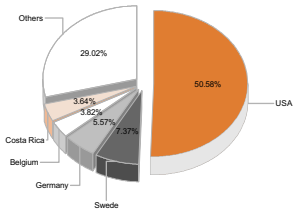
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

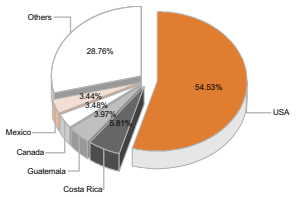
Main destinations



Anual average US$559 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$393 millions (1997-2001)

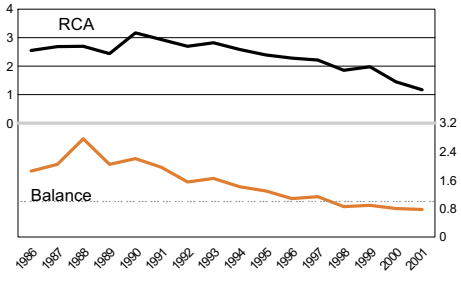
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-252.85	486.97	1,618.84	0.90	8.93	0.31	2,350.24	60.22
1991-1999	-166.75	489.71	1,478.78	0.81	14.09	1.46	2,350.41	62.82
2000-2001	-12.60	385.13	173.72	0.74	25.37	0.00	2,291.70	63.50

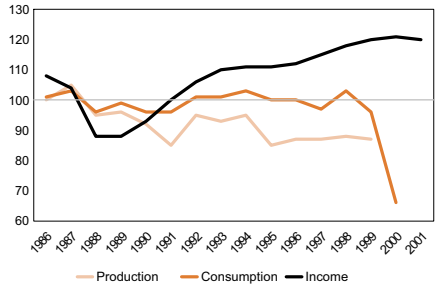
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	0.12	10.23	0.21	10.34
1991-1999	0.54	10.95	0.15	10.04
2000-2001	0.00	0.00	0.00	
Meat				
1986-1990	0.34	2.81	41.00	42.66
1991-1999	1.41	3.64	50.24	50.17
2000-2001	2.13	6.22	56.74	55.49
Cereals				
1986-1990	0.10	55.13	107.89	108.32
1991-1999	0.57	111.59	93.17	112.76
2000-2001	0.00	0.00	0.00	
Fruits				
1986-1990	298.89	11.38	551.55	91.64
1991-1999	254.72	12.89	371.64	75.64
2000-2001	0.00	0.00	0.00	
Vegetables				
1986-1990	4.20	3.34	26.42	24.09
1991-1999	13.77	6.31	36.93	27.47
2000-2001	0.00	0.00	0.00	
Oilcrops				
1986-1990	0.01	1.31	8.76	6.43
1991-1999	3.90	0.69	6.92	5.08
2000-2001	0.00	0.00	0.00	
Dairy Products				
1986-1990	2.88	12.78	50.74	60.49
1991-1999	4.73	12.42	59.40	64.30
2000-2001	6.35	23.28	59.78	71.89

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)



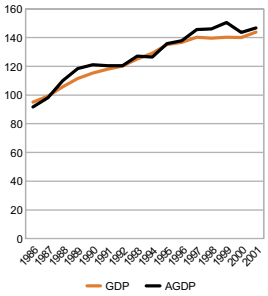
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	2,609.40	2.65	4.59	0.46	0.35	28.45	13.73
1991-1999	3,021.22	0.79	7.95	1.13	0.98	39.91	13.92
2000-2001	3,263.00	-0.71	11.41	0.01	1.09	38.24	13.30

Paraguay

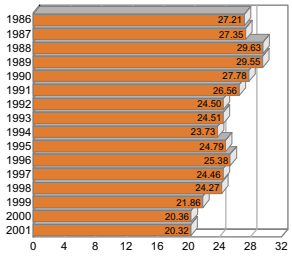
Growth of GDP and AGDP

Index 1986-1988=100

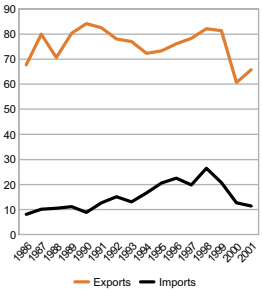


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	3,061.9	7.23	1,869.8	81.9	97.7
1991-1999	3,376.1	2.50	2,054.8	116.1	101.6
2000-2001	3,317.7	-1.23	1,994.6	134.5	109.8

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	71.8	0.67	9.36	2,030	3.1
1991-1999	170.0	0.75	9.21	2,199	2.9
2000-2001	284.7			2,290	2.8

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	22,497	9.02	0.42	90.55	36.85
1991-1999	23,951	9.18	0.36	90.46	31.84
2000-2001	24,078	9.51	0.37	90.12	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	-	-	-	0.30
1991-1999	-	-	-	0.40
2000-2001	-	-	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	1.06	10.74	20.41	10.16
1991-1999	3.26	8.76	9.26	2.32
2000-2001	3.90	9.50	10.71	3.55

Rurality and gender

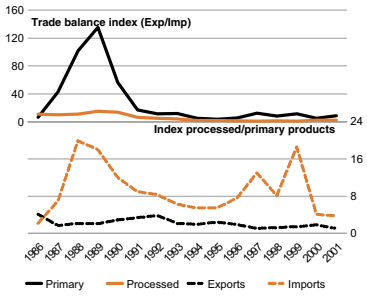
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	52.81	1.74	103.14	2.48	0.82
1991-1999	47.64	1.15	104.55	2.76	0.98
2000-2001	43.70	0.96	105.66		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.711	57.00	19.40		21.90
1991-1999	0.735				
2000-2001	0.740	48.50	19.50	49.30	21.80

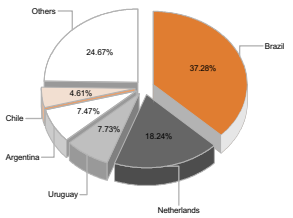
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

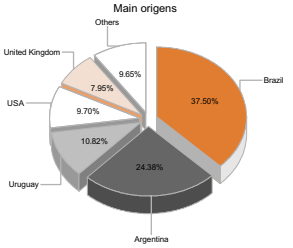
Main destinations



Anual average US$800 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$480 millions (1997-2001)

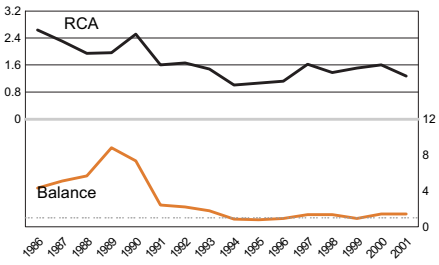
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-328.11	686.50	2,709.24	5.67	0.81	0.45	2,524.98	68.48
1991-1999	-323.08	672.54	2,425.15	4.95	2.86	0.16	2,491.20	73.89
2000-2001	-4.37	484.93	171.39	4.33	3.49	0.00	2,557.45	72.00

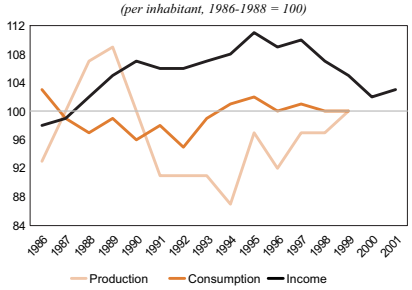
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	9.44	0.17	24.87	8.12
1991-1999	21.52	0.68	36.72	9.15
2000-2001	0.00	0.00	0.00	
Meat				
1986-1990	12.71	0.02	70.76	58.08
1991-1999	6.67	0.41	79.51	73.26
2000-2001	9.42	0.35	81.73	72.66
Cereals				
1986-1990	16.69	6.98	182.92	88.51
1991-1999	37.70	20.89	222.80	76.77
2000-2001	0.00	0.00	0.00	
Fruits				
1986-1990	0.43	0.83	139.79	117.94
1991-1999	1.77	6.21	107.02	94.28
2000-2001	0.00	0.00	0.00	
Vegetables				
1986-1990	2.27	0.30	70.18	60.01
1991-1999	0.75	2.57	56.58	51.51
2000-2001	0.00	0.00	0.00	
Oilcrops				
1986-1990	298.34	1.27	449.24	2.42
1991-1999	307.36	2.38	524.15	2.38
2000-2001	0.00	0.00	0.00	
Dairy Products				
1986-1990	0.19	2.46	51.09	50.95
1991-1999	0.03	7.71	72.57	76.59
2000-2001	0.01	4.25	60.01	61.24

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)



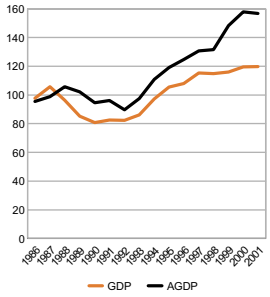
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	1,777.20	2.32	20.68	31.59	3.85	3.02	5.80
1991-1999	1,868.67	0.36	8.91	12.46	2.79	14.84	5.62
2000-2001	1,776.50	0.77	10.77	6.08	2.51	11.85	

Peru

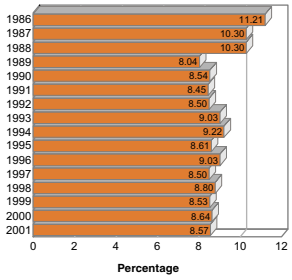
Growth of GDP and AGDP

Index 1986-1988=100

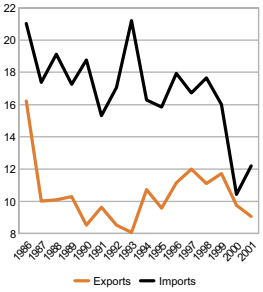


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	1,370.6	-0.07	2,491.7	99.4	103.5
1991-1999	1,464.0	5.31	2,678.5	122.7	112.4
2000-2001	1,859.3	2.90	2,989.8	163.2	152.1

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	524.5	0.37	1.82	3,417	30.9
1991-1999	458.6	0.33	1.38	3,622	29.2
2000-2001	687.2			3,700	28.4

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	30,937	11.05	1.29	87.66	66.02
1991-1999	31,198	11.61	1.50	86.89	65.98
2000-2001	31,310	11.82	1.63	86.55	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	2.92	9.56	-	0.49
1991-1999	0.94	1.42	-	0.49
2000-2001	1.15	1.35	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	3.00	8.92	21.76	7.14
1991-1999	2.60	8.57	17.53	7.61
2000-2001	2.60	10.30	17.59	7.05

Rurality and gender

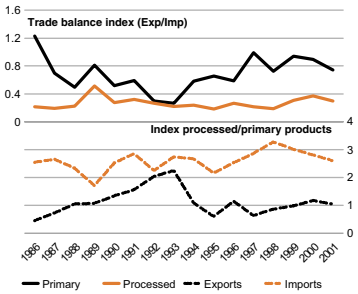
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	31.92	0.76	193.64	1.40	
1991-1999	29.15	0.57	191.28	3.44	2.00
2000-2001	27.05	0.15	190.91		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.698		32.45		40.50
1991-1999	0.730				
2000-2001	0.747	57.70	15.50	41.40	49.00

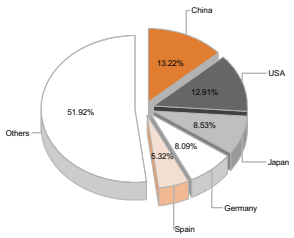
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

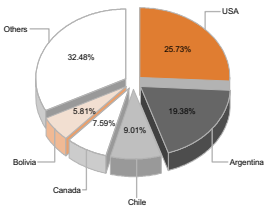
Main destinations



Anual average US$2,607 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$1,239 millions (1997-2001)

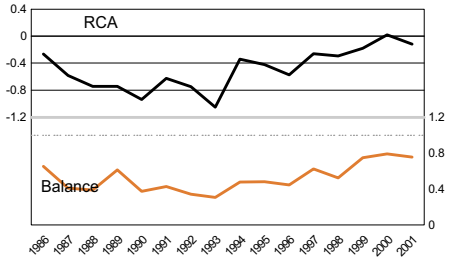
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-121.97	466.08	1,143.14	1.49	11.25	13.29	2,202.12	54.86
1991-1999	-170.89	485.72	1,157.20	1.31	15.30	12.35	2,300.38	57.12
2000-2001	-252.94	404.89	428.19	1.20	7.28	6.24	2,603.35	64.10

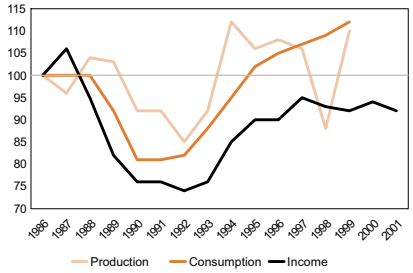
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	0.63	3.14	2.62	5.27
1991-1999	0.36	5.45	2.22	5.70
2000-2001	0.00	0.00	0.00	
Meat				
1986-1990	0.00	1.75	23.76	17.57
1991-1999	0.00	0.57	27.53	18.74
2000-2001	0.01	0.53	35.10	21.75
Cereals				
1986-1990	0.21	79.60	88.20	103.10
1991-1999	0.68	106.26	80.23	113.65
2000-2001	0.00	0.00	0.00	
Fruits				
1986-1990	0.78	0.85	89.62	51.85
1991-1999	1.20	2.62	105.49	61.98
2000-2001	0.00	0.00	0.00	
Vegetables				
1986-1990	1.26	0.01	44.45	29.11
1991-1999	4.24	0.15	56.56	36.78
2000-2001	0.00	0.00	0.00	
Oilcrops				
1986-1990	0.04	0.44	9.74	1.39
1991-1999	0.19	1.57	5.87	2.02
2000-2001	0.00	0.00	0.00	
Dairy Products				
1986-1990	0.04	16.83	40.25	56.55
1991-1999	0.11	13.72	37.71	50.25
2000-2001	0.28	10.37	41.90	50.48

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)



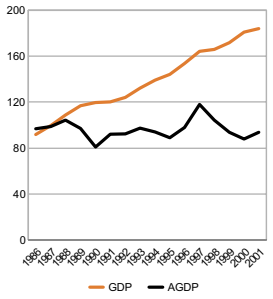
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	2,291.60	-1.46	12.70	2,020.09	3.65	18.56	6.00
1991-1999	2,145.33	-1.07	28.66	58.17	8.40	18.86	8.06
2000-2001	2,327.00	-0.32	23.72	0.64	9.13	10.68	

Saint Kitts and Nevis

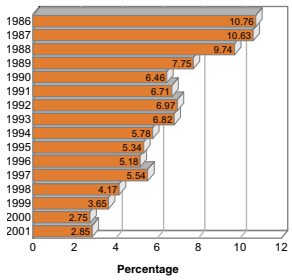
Growth of GDP and AGDP

Index 1986-1988=100

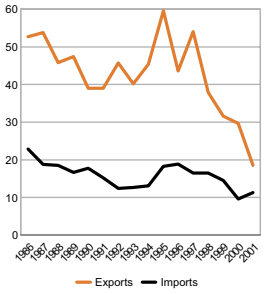


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	2,233.9	-4.02		103.3	116.6
1991-1999	2,550.6	2.22		102.1	108.2
2000-2001	2,654.2	0.19		102.4	92.2

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	2,376.5	1.44		8	
1991-1999	2,066.6	1.74		7	
2000-2001	2,428.6			7	

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	12	66.67	23.33	10.00	30.56
1991-1999	10	67.74	12.90	19.35	30.56
2000-2001	10	70.00	10.00	20.00	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	-	-	-	0.36
1991-1999	-	-	-	0.39
2000-2001	-	-	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	3.50	10.85	21.94	15.73
1991-1999	3.33	12.60	24.73	9.68
2000-2001	3.50	12.90	8.44	-0.25

Rurality and gender

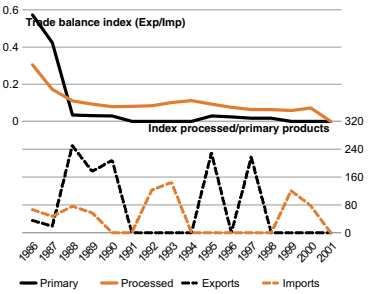
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	65.14	-0.15	344.53		
1991-1999	65.85	0.31	396.64	13.80	8.50
2000-2001	65.79	2.37	414.07		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990					17.00
1991-1999					
2000-2001	0.814	47.40			

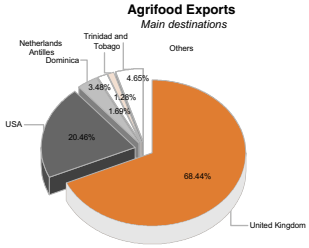
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

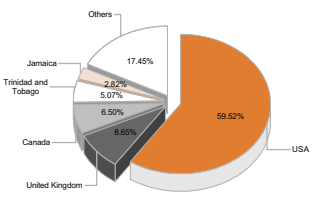
Main destinations



Anual average US$9 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$29 millions (1997-2001)

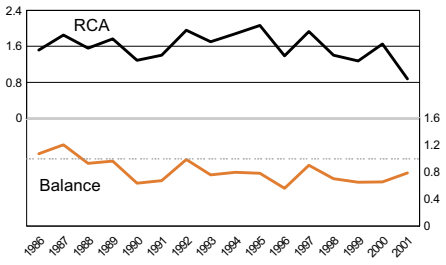
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-70.70	530.76	6,494.26	0.28	7.20	1.22	2,533.14	67.40
1991-1999	0.99	567.08	6,144.90	0.25	8.86	10.00	2,601.17	71.13
2000-2001	315.98	510.04	33.73	0.22	114.14	0.00	2,960.10	89.90

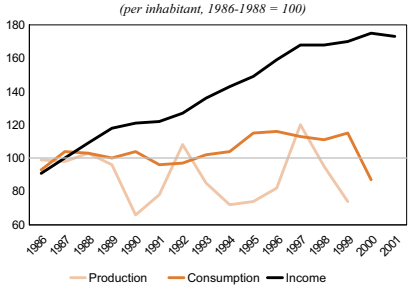
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	1.47	17.73	2.41	15.07
1991-1999	1.81	13.18	2.37	11.55
2000-2001	0.00	0.00	0.00	
Meat				
1986-1990	0.00	69.49	11.89	63.79
1991-1999	0.00	78.93	13.17	70.88
2000-2001	0.70	134.82	15.95	81.82
Cereals				
1986-1990	0.00	140.17		97.32
1991-1999	0.41	145.51		88.63
2000-2001	0.00	0.00		
Fruits				
1986-1990	0.15	39.31	31.41	59.57
1991-1999	0.00	61.74	32.61	82.94
2000-2001	0.00	0.00	0.00	
Vegetables				
1986-1990	0.07	24.65	10.37	31.43
1991-1999	0.00	24.81	19.08	40.52
2000-2001	0.00	0.00	0.00	
Oilcrops				
1986-1990	2.55	0.00	37.15	16.43
1991-1999	0.00	0.65	38.16	17.30
2000-2001	0.00	0.00	0.00	
Dairy Products				
1986-1990	0.00	99.69		80.15
1991-1999	0.00	114.96		85.03
2000-2001	0.16	121.27		90.61

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)



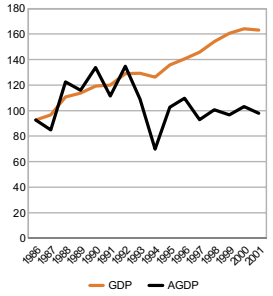
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	4,061.00	-0.31	1.95	2.05	1.38	46.96	
1991-1999	5,620.67	-1.85	5.53	3.53	2.13	54.99	
2000-2001	6,557.00	-1.14	13.18		2.14	32.36	

Saint Vincent and The Grenadines

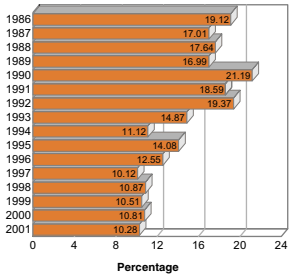
Growth of GDP and AGDP

Index 1986-1988=100

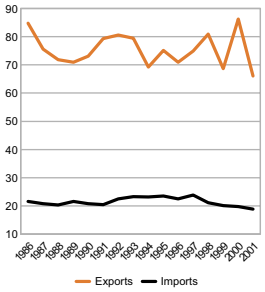


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	2,593.0	11.48	3,244.7	101.2	103.3
1991-1999	2,579.5	-0.87	3,333.3	100.0	83.7
2000-2001	2,570.5	0.82	3,333.3	101.0	77.7

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	8,500.0	1.94		4	9.1
1991-1999	7,611.1	1.99		4	9.1
2000-2001	9,750.0			4	9.1

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	13	30.77	53.85	15.38	35.90
1991-1999	13	30.77	53.85	15.38	35.90
2000-2001	13	30.77	53.85	15.38	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	-	-	-	0.36
1991-1999	-	-	-	0.45
2000-2001	-	-	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	5.24	9.73	18.42	9.63
1991-1999	4.80	10.82	8.54	-1.44
2000-2001	4.80	11.25	15.61	10.00

Rurality and gender

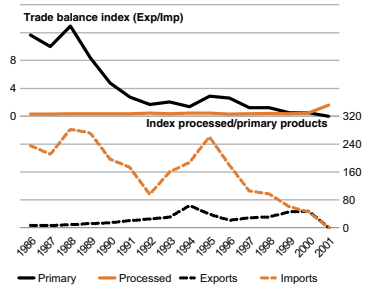
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	62.30	-1.33	1,637.04		
1991-1999	52.16	-1.96	1,446.17	24.80	13.90
2000-2001	44.67	-1.93	1,299.73		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990					15.00
1991-1999					
2000-2001		0.733			

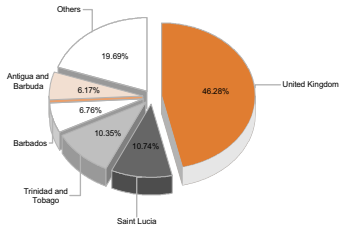
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

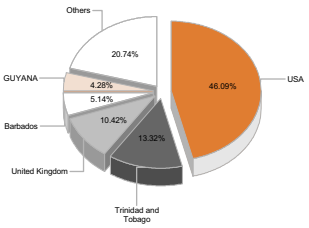
Main destinations



Anual average US$31 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$42 millions (1997-2001)

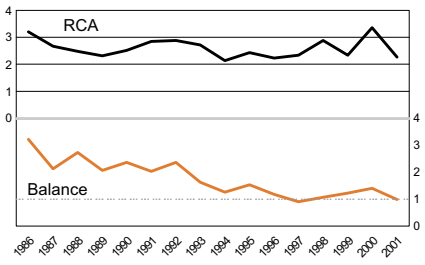
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-523.39	532.31	1,568.13	0.12	51.49	1.18	2,420.78	59.94
1991-1999	-195.43	524.61	1,261.61	0.12	65.55	4.97	2,488.67	65.33
2000-2001	124.11	411.63	269.57	0.11	87.92	0.00	2,620.75	67.45

Food trade, production and consumption, by selected groups of products (in kg/inhab.)

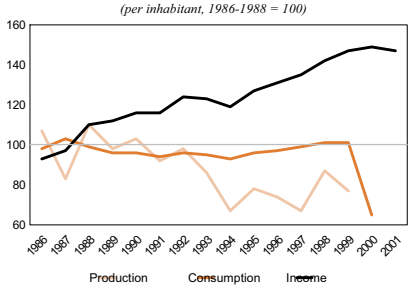
Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	2.16	5.26	7.51	6.99
1991-1999	0.75	5.89	8.63	8.60
2000-2001	0.00	0.00	0.00	
Meat				
1986-1990		46.79	12.08	50.88
1991-1999		58.34	11.56	62.89
2000-2001		50.67	11.32	58.51
Cereals				
1986-1990	231.76	330.89	14.79	92.58
1991-1999	281.10	417.28	16.02	100.89
2000-2001	0.00	0.00	0.00	
Fruits				
1986-1990	567.64	4.72	625.87	72.01
1991-1999	477.72	7.64	542.57	70.68
2000-2001	0.00	0.00	0.00	
Vegetables				
1986-1990	1.82	3.49	27.00	26.26
1991-1999	0.35	2.52	32.15	31.41
2000-2001	0.00	0.00	0.00	
Oilcrops				
1986-1990	19.09	18.61	211.08	28.81
1991-1999	13.20	11.43	210.63	27.67
2000-2001	0.00	0.00	0.00	
Dairy Products				
1986-1990	0.59	59.02	13.28	69.58
1991-1999	0.00	62.76	12.01	74.91
2000-2001	0.00	63.33	11.91	74.53

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption

(per inhabitant, 1986-1988 = 100)



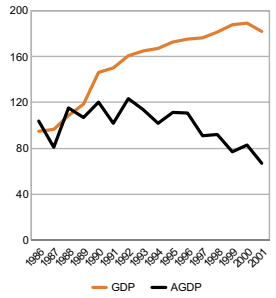
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	1,969.60	19.67	2.87	2.68	2.01	30.23	
1991-1999	2,412.89	5.35	6.60	2.55	1.88	55.09	19.80
2000-2001	2,755.50	1.51	7.60	-0.03	2.96	63.13	

Saint Lucia

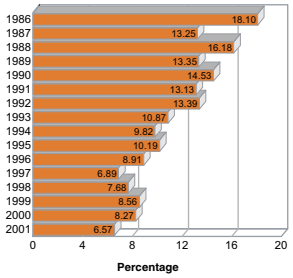
Growth of GDP and AGDP

Index 1986-1988=100

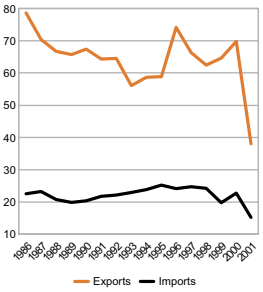


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	3,277.4	6.35		101.0	100.3
1991-1999	3,054.5	-4.04		105.0	87.2
2000-2001	2,175.9	-5.89		104.4	72.8

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	7,563.6	2.02		5	11.2
1991-1999	23,925.7	3.94		4	14.7
2000-2001	17,666.7			3	17.6

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	21	24.04	61.54	14.42	12.90
1991-1999	20	20.00	67.78	12.22	12.90
2000-2001	19	15.79	73.68	10.53	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	-	-	-	0.42
1991-1999	-	-	-	0.39
2000-2001	-	-	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	4.98	10.23	15.78	7.43
1991-1999	6.12	11.64	16.55	2.78
2000-2001	6.50	11.60	8.26	-5.65

Rurality and gender

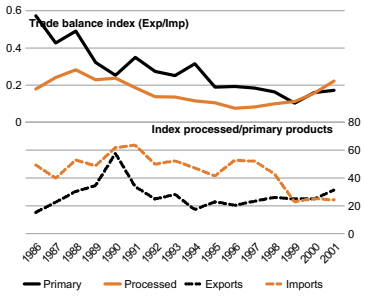
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	62.77	1.46	1,636.90		
1991-1999	62.69	1.45	2,544.65	23.50	16.47
2000-2001	62.09	0.66	3,220.92		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990					25.00
1991-1999					
2000-2001	0.772				

Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Anual average US$ millions (1997-2001)

Anual Average US$ millions (1997-2001)

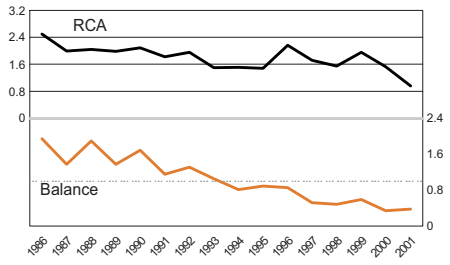
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-484.57	685.89	1,766.96	0.16	38.80	1.65	2,584.72	76.72
1991-1999	-167.87	766.80	1,416.20	0.14	44.68	6.94	2,810.88	87.81
2000-2001	231.52	603.21	35.79	0.12	101.70	0.00	2,886.75	94.00

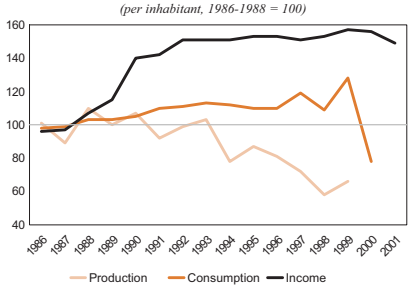
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	26.28	12.68	22.56	3.62
1991-1999	8.87	6.48	13.78	4.41
2000-2001	0.00	0.00	0.00	
Meat				
1986-1990	0.00	58.55	14.55	69.29
1991-1999	0.03	75.32	13.82	85.57
2000-2001	0.00	65.93	13.54	83.44
Cereals				
1986-1990	0.00	161.07	0.00	107.81
1991-1999	0.09	152.93	0.00	105.82
2000-2001	0.00	0.00	0.00	
Fruits				
1986-1990	920.11	45.44	1,359.63	198.23
1991-1999	672.67	67.39	1,078.96	223.82
2000-2001	0.00	0.00	0.00	
Vegetables				
1986-1990	0.25	12.84	6.98	19.18
1991-1999	0.23	19.47	6.47	25.32
2000-2001	0.00	0.00	0.00	
Oilcrops				
1986-1990	0.16	0.99	202.49	5.26
1991-1999	1.54	1.31	133.09	4.45
2000-2001	0.00	0.00	0.00	
Dairy Products				
1986-1990	0.22	89.63	7.84	94.39
1991-1999	0.06	97.48	7.34	100.91
2000-2001	0.00	115.99	5.15	105.76

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)



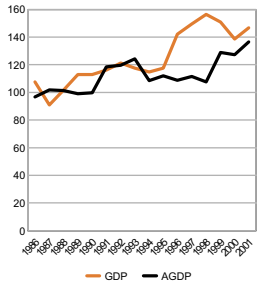
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	2,806.40	8.63	1.54	4.45	1.54	37.83	
1991-1999	3,822.78	-1.51	3.50	3.32	1.70	73.83	18.34
2000-2001	3,861.00	-5.96	7.57	1.34	2.25	109.82	

Suriname

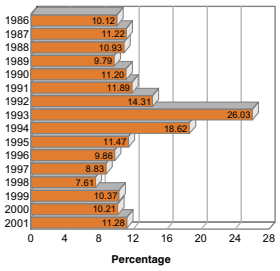
Growth of GDP and AGDP

Index 1986-1988=100

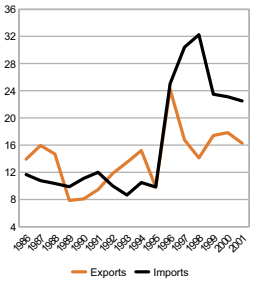


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	1,780.5	0.84	3,821.2	89.5	105.1
1991-1999	1,947.9	3.34	3,760.8	75.0	103.7
2000-2001	2,166.3	2.99	3,866.5	65.3	96.4

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	986.1	2.22	9.66	56	67.6
1991-1999	840.0	2.32	9.06	57	72.4
2000-2001	1,017.5			57	76.1

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	87	64.68	12.39	22.94	91.28
1991-1999	89	64.29	12.03	23.68	91.87
2000-2001	88	64.77	11.36	23.86	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	3.54	9.96	-	5.84
1991-1999	1.91	8.19	-	5.52
2000-2001	-	2.75	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990		11.04	25.55	15.48
1991-1999		12.33	15.27	1.09
2000-2001		9.55	0.96	-13.65

Rurality and gender

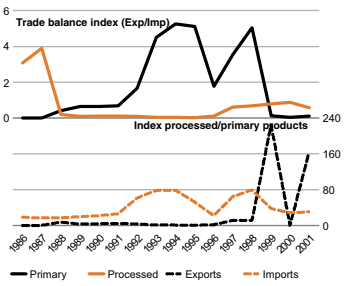
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	36.64	-1.82	257.46	3.70	2.20
1991-1999	30.02	-2.50	215.31	5.49	2.73
2000-2001	25.60	-2.07	189.47		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990					
1991-1999					
2000-2001	0.756	42.60			

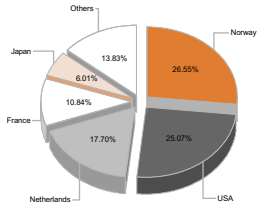
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

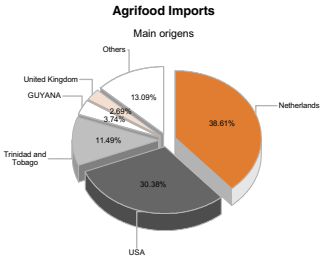
Main destinations



Anual average US$229 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$68 millions (1997-2001)

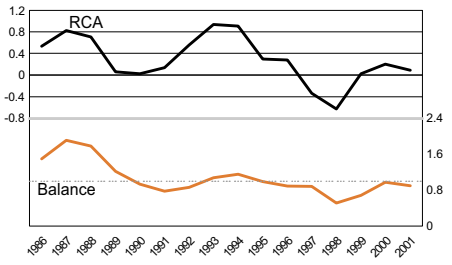
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-58.51	495.85	1,001.64	0.22	26.33	1.77	2,433.46	61.02
1991-1999	12.15	589.37	1,035.94	0.22	25.26	37.56	2,608.40	64.09
2000-2001	10.42	556.68	958.65	0.21	24.13	0.00	2,626.15	61.20

Food trade, production and consumption, by selected groups of products (in kg/inhab.)

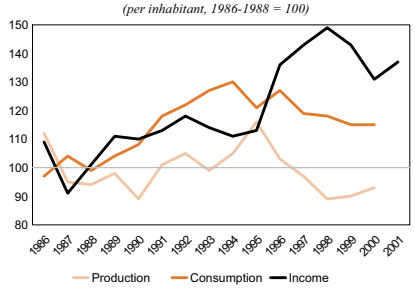
Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	0.84	9.85	11.84	7.48
1991-1999	0.00	13.71	4.97	9.35
2000-2001	0.00	9.89	2.66	13.15
Meat				
1986-1990		3.05	34.34	37.40
1991-1999		16.10	21.78	36.86
2000-2001		17.47	17.50	42.46
Cereals				
1986-1990	208.83	131.46	435.50	154.56
1991-1999	157.58	98.19	357.34	138.21
2000-2001	132.14	106.24	261.94	127.66
Fruits				
1986-1990	82.85	0.66	172.30	57.35
1991-1999	73.39	2.53	197.93	87.02
2000-2001	81.70	3.62	178.32	76.29
Vegetables				
1986-1990	3.60	6.55	43.49	41.79
1991-1999	4.16	12.97	70.32	71.78
2000-2001	3.64	17.24	49.93	57.80
Oilcrops				
1986-1990	0.04	0.41	28.08	5.92
1991-1999	0.17	1.15	26.44	6.38
2000-2001	0.00	1.51	20.96	5.77
Dairy Products				
1986-1990		45.45	36.88	79.07
1991-1999		42.46	39.32	73.37
2000-2001		13.07	31.18	66.75

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption

(per inhabitant, 1986-1988 = 100)



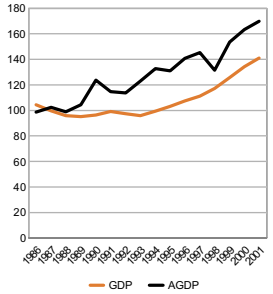
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	786.20	1.22		28.19	0.66	8.16	15.80
1991-1999	954.44	-1.57		109.87	2.39	17.65	12.16
2000-2001	1,010.50	-0.53		43.91	3.68	17.91	

Trinidad and Tobago

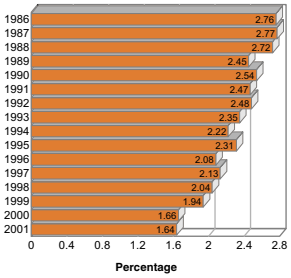
Growth of GDP and AGDP

Index 1986-1988=100

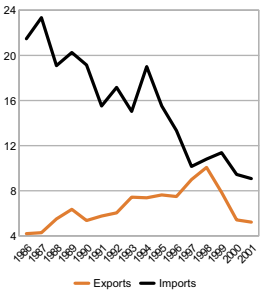


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	1,934.1	6.07	2,616.9	96.8	93.4
1991-1999	2,408.7	2.74	3,304.5	104.5	97.6
2000-2001	3,136.3	5.17	2,928.1	100.8	89.9

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	664.4	3.56	5.54	74	2.5
1991-1999	1,030.2	3.56	5.05	75	2.5
2000-2001	1,227.2			75	2.5

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	131	56.36	35.22	8.42	43.86
1991-1999	133	56.40	35.31	8.28	45.81
2000-2001	133	56.39	35.34	8.27	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	22.54	-	-	3.30
1991-1999	17.20	-	-	3.86
2000-2001	26.05	-	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	4.40	11.54	21.90	3.80
1991-1999	3.66	12.06	28.08	10.19
2000-2001	3.40	12.30	31.67	15.20

Rurality and gender

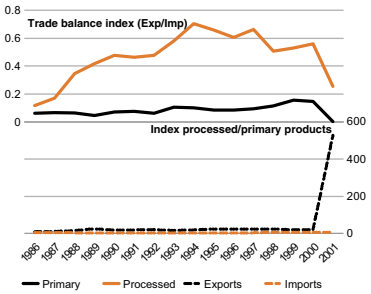
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	32.09	-1.19	525.19	13.03	7.60
1991-1999	28.33	-1.06	476.76	10.59	5.06
2000-2001	25.72	-1.03	449.63		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.778		12.40		21.00
1991-1999	0.787				
2000-2001	0.805		12.40	39.00	21.00

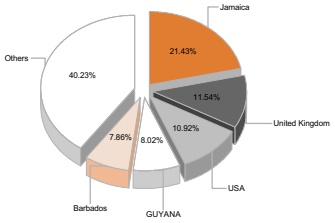
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

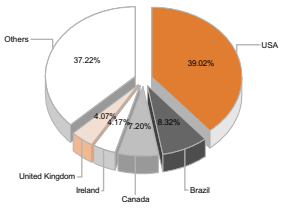
Main destinations



Anual average US$252 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$392 millions (1997-2001)

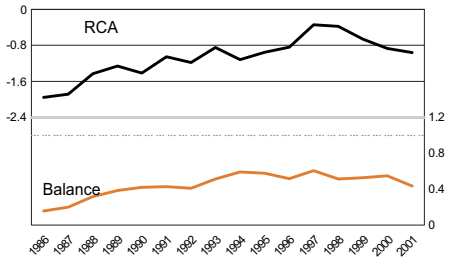
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	468.16	574.61	1,319.03	0.11	30.96		2,811.30	68.98
1991-1999	368.22	509.55	1,324.10	0.11	29.89		2,611.22	60.36
2000-2001	394.15	528.24	1,349.30	0.10	33.66		2,727.05	62.25

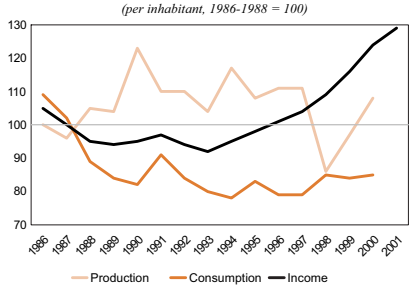
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	1.02	7.85	9.22	12.45
1991-1999	4.04	7.07	12.58	12.67
2000-2001	3.52	8.31	10.56	13.63
Meat				
1986-1990	0.49	11.14	23.10	33.94
1991-1999	0.93	9.28	24.44	32.79
2000-2001	1.51	12.76	27.61	37.34
Cereals				
1986-1990	6.76	233.64	7.37	131.57
1991-1999	14.24	199.80	10.72	118.78
2000-2001	20.59	180.16	7.24	118.00
Fruits				
1986-1990	3.16	24.26	47.30	66.43
1991-1999	12.69	26.37	53.00	67.47
2000-2001	20.49	33.75	47.24	63.99
Vegetables				
1986-1990	1.29	16.31	13.58	27.06
1991-1999	3.72	16.43	16.08	27.56
2000-2001	7.74	19.61	21.38	32.38
Oilcrops				
1986-1990	0.43	42.10	32.55	7.84
1991-1999	0.97	67.71	24.76	7.04
2000-2001	2.72	71.03	17.83	7.90
Dairy Products				
1986-1990	2.39	111.19	8.92	123.50
1991-1999	7.67	95.09	7.94	95.51
2000-2001	9.19	114.36	8.05	98.44

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)



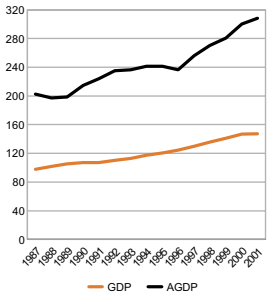
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	4,209.80	-3.31	19.19	16.46	2.03	14.12	20.70
1991-1999	4,343.00	-1.87	19.57	12.43	2.16	9.83	16.89
2000-2001	5,438.50	-1.57	7.58	11.13	4.55	6.40	

United States

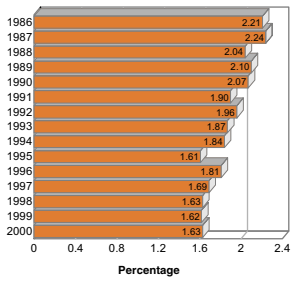
Growth of GDP and AGDP

Index 1986-1988=100

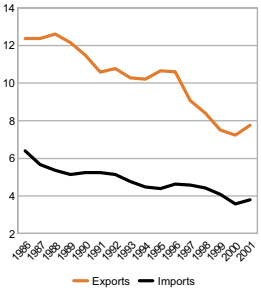


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	32,483.4	2.38	4,474.0	98.1	95.8
1991-1999	41,252.9	2.76	5,137.8	111.0	111.4
2000-2001	58,063.8	2.49	5,869.7	122.7	119.0

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	968.2	2.57	39.09	186,147	10.6
1991-1999	1,098.0	2.67	35.66	179,502	12.0
2000-2001	1,062.2			176,950	12.5

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	427,838	43.51	0.48	56.02	30.27
1991-1999	420,792	42.66	0.49	56.85	30.74
2000-2001	418,250	42.31	0.49	57.20	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	1.76	0.06	-	0.77
1991-1999	0.99	0.02	-	0.70
2000-2001	1.15	-	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	5.10	11.48	16.54	4.66
1991-1999	5.36	11.64	17.11	4.96
2000-2001	5.40	11.85	17.02	5.65

Rurality and gender

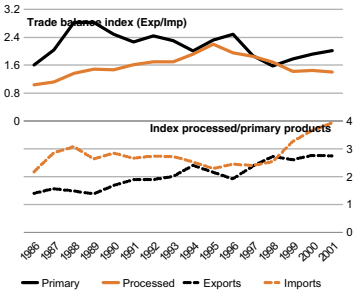
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	25.06	0.36	32.93	2.96	1.38
1991-1999	23.82	0.41	35.17	2.79	1.42
2000-2001	22.67	0.20	36.35	2.60	1.40

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.906				
1991-1999	0.925				
2000-2001	0.939	40.80			

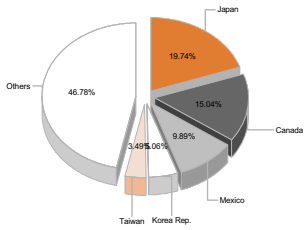
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

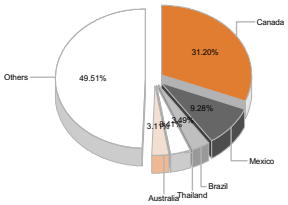
Main destinations



Anual average US$74,771 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$71,306 millions (1997-2001)

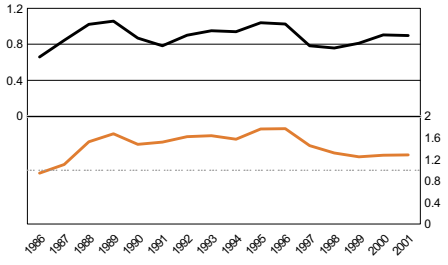
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-367.55	1,037.74	2,532.36	1.75	6.73		3,425.58	106.36
1991-1999	-351.86	1,059.34	2,686.37	1.59	7.17		3,622.18	111.52
2000-2001	-332.19	1,077.79	2,744.13	1.47	7.88		3,789.95	114.65

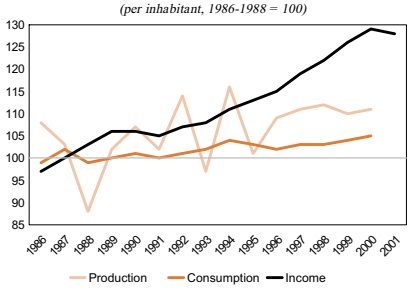
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	5.55	5.55	30.14	23.78
1991-1999	8.01	6.29	35.40	24.46
2000-2001	7.24	6.83	38.22	27.21
Meat				
1986-1990	3.88	6.50	112.71	114.45
1991-1999	11.38	5.73	126.10	119.84
2000-2001	17.20	7.16	133.37	122.65
Cereals				
1986-1990	367.57	9.24	1,134.68	104.44
1991-1999	335.64	22.91	1,198.29	116.80
2000-2001	315.46	23.98	1,204.33	118.08
Fruits				
1986-1990	18.78	54.57	102.73	123.41
1991-1999	26.48	49.59	108.80	116.21
2000-2001	28.43	56.94	116.76	126.81
Vegetables				
1986-1990	6.03	10.64	117.66	114.99
1991-1999	13.21	13.82	130.54	122.86
2000-2001	14.07	16.76	136.07	130.18
Oilcrops				
1986-1990	77.01	2.62	236.58	5.18
1991-1999	85.09	4.12	278.51	5.32
2000-2001	101.11	5.45	300.87	5.03
Dairy Products				
1986-1990	11.98	18.70	267.92	261.46
1991-1999	6.05	17.43	263.99	260.17
2000-2001	7.59	18.22	269.53	259.28

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)

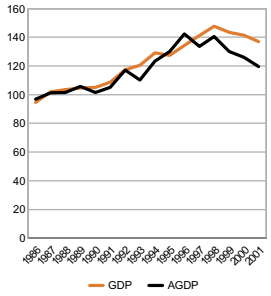


Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	25,183.00	0.11		4.58	2.92	5.67	5.92
1991-1999	28,025.22	0.17		2.48	1.85	3.99	5.77
2000-2001	31,717.50	0.08		2.70	0.92	3.89	4.10

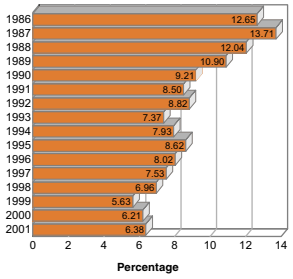
Growth of GDP and AGDP

Index 1986-1988=100

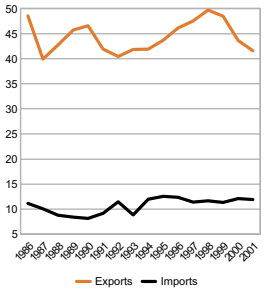


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	6,410.5	1.21	2,265.0	95.5	100.3
1991-1999	8,003.9	3.04	3,044.6	111.3	108.5
2000-2001	7,858.3	-4.04	3,833.6	119.3	103.2

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	516.8	2.70	25.85	1,260	8.5
1991-1999	786.7	2.60	22.84	1,267	12.3
2000-2001	800.9			1,300	13.4

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	14,830	8.50	0.30	91.21	5.28
1991-1999	14,831	8.54	0.30	91.16	5.28
2000-2001	14,883	8.73	0.27	91.00	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	-	-	0.42	0.27
1991-1999	-	-	0.23	0.27
2000-2001	-	-	0.20	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	2.96	10.78	17.67	3.43
1991-1999	2.73	11.64	15.47	2.38
2000-2001	3.00	11.55	12.60	-0.15

Rurality and gender

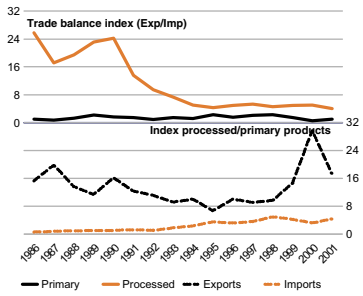
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	11.74	-2.34	28.53	0.00	0.00
1991-1999	9.50	-2.32	24.12	3.61	1.10
2000-2001	7.99	-2.23	20.77		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.791		6.60		
1991-1999	0.815				
2000-2001	0.831	40.30	2.00	6.60	

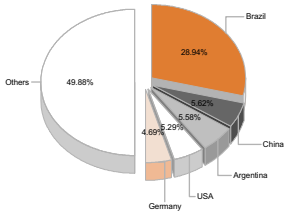
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

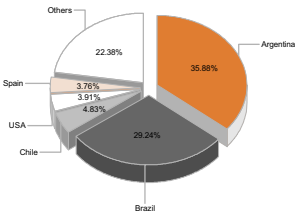
Main destinations



Anual average US$1,421 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$495 millions (1997-2001)

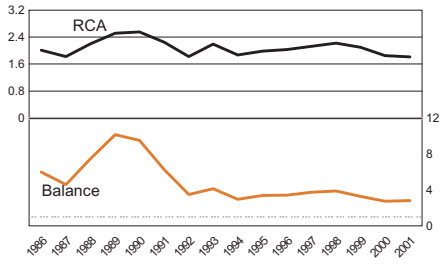
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	-303.39	647.27	1,507.92	4.84	5.95	1.34	2,566.52	79.10
1991-1999	-411.50	716.42	1,573.71	4.61	13.28	0.02	2,782.81	87.43
2000-2001	-374.81	746.51	1,486.61	4.44	21.92	0.00	2,834.05	90.70

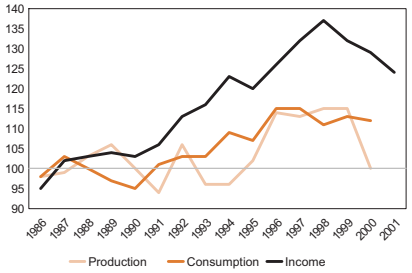
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	1.60	2.50	6.63	5.57
1991-1999	1.19	6.06	5.88	6.86
2000-2001	0.88	7.19	7.01	5.85
Meat				
1986-1990	61.56	0.11	140.41	81.19
1991-1999	64.84	1.60	159.09	94.54
2000-2001	93.13	3.08	177.55	89.72
Cereals				
1986-1990	149.42	35.88	337.85	132.04
1991-1999	255.50	49.91	464.72	128.13
2000-2001	283.04	111.48	442.57	141.21
Fruits				
1986-1990	31.23	12.84	125.19	59.21
1991-1999	54.88	20.87	153.92	69.36
2000-2001	35.02	23.40	136.35	78.16
Vegetables				
1986-1990	0.25	0.92	40.72	35.60
1991-1999	0.65	8.83	43.48	44.87
2000-2001	0.58	15.77	44.17	51.97
Oilcrops				
1986-1990	12.75	2.43	33.87	1.66
1991-1999	13.88	4.12	35.56	2.44
2000-2001	1.21	5.77	14.08	1.87
Dairy Products				
1986-1990	63.16	0.15	315.09	177.59
1991-1999	113.59	1.76	386.94	189.38
2000-2001	152.64	1.55	426.06	187.68

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)



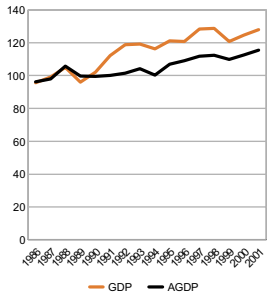
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	4,795.80	4.94	35.53	82.08	9.98	4.53	8.98
1991-1999	5,810.67	3.40	20.88	37.23	5.30	10.45	9.59
2000-2001	5,987.00	2.63	32.93	4.36	7.30	13.20	

Venezuela

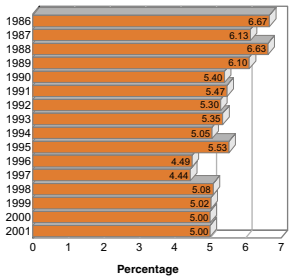
Growth of GDP and AGDP

Index 1986-1988=100

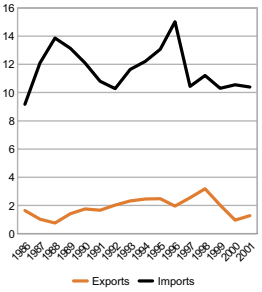


Agricultural Value Added

Percentage of Gross Domestic Product



Agrifood Trade as a Share of Total Trade in Goods



Productivity and growth of production

Period	AGDP per Worker US$ 1995	% Annual Growth of AGDP	Cereals Yield kg/ha	Production Index 1989-91=100	
				Livestock	Crops
1986-1990	4,433.4	0.98	2,178.9	101.7	102.5
1991-1999	4,761.1	1.15	2,915.5	110.9	104.4
2000-2001	5,398.6	2.52	3,334.4	119.0	122.0

Agricultural inputs

Period	Fertilizer arable land 100g/ha	Tractors per each 100 ha.	Tractors per 1000 Workers	Arable Land 1000 ha.	Irrigated land % of Land under Crops
1986-1990	1,911.7	1.64	6.88	2,850	12.7
1991-1999	1,149.6	1.98	5.74	2,474	15.8
2000-2001	1,155.7			2,440	16.9

Soil Use

Period	Agricultural Land 1000 ha	% of Agricultural Land used for			Forested Land % Total Surface Area
		Arable Land	Permanent Crops	Meadows & Pastures	
1986-1990	21,898	13.01	4.15	82.84	47.41
1991-1999	21,649	11.43	4.31	84.26	49.61
2000-2001	21,640	11.28	4.44	84.29	

Sustainability of natural resources

Period	Degradation of resources: (% of GDP)			Emissions CO2 (Kg / US$ of 1995 of GDP)
	Energy	Minerals	Forest	
1986-1990	25.08	0.64	-	1.69
1991-1999	24.57	0.58	-	1.86
2000-2001	25.20	0.30	-	

Sustainable development indicators

Period	Spending on Education % of GDP	Consumption of Fixed Capital % of GDP	Domestic Savings % of GDP	
			Gross	Net
1986-1990	3.54	7.90	24.26	14.90
1991-1999	4.34	7.42	23.68	14.08
2000-2001	4.40	7.20	26.59	18.25

Rurality and gender

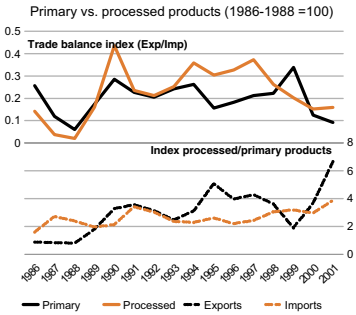
Period	Rural Population:			Employment in Agriculture % Total	Women Employed in Agriculture
	% of total	% Annual Growth	Density Per/km2		
1986-1990	16.84	0.18	109.23	14.02	2.08
1991-1999	14.51	0.15	127.84	12.47	1.81
2000-2001	12.96	-0.07	129.51		

Poverty and quality of life

Period	Human Development Index	Gini Index	% of Population Living:		
			Less than 1$	Less than 2$	Below Poverty Line
1986-1990	0.748		13.25		31.15
1991-1999	0.766				
2000-2001	0.770	42.30	23.00	47.00	31.30

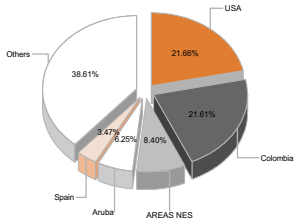
Agrifood Trade

Primary vs. processed products (1986-1988 =100)



Agrifood Exports

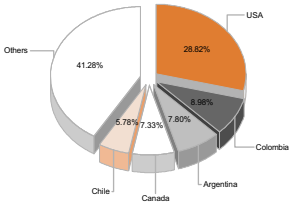
Main destinations



Anual average US$852 millions (1997-2001)

Agrifood Imports

Main origens



Anual Average US$2,026 millions (1997-2001)

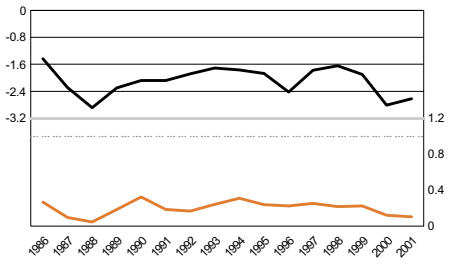
Indicadors on consumption and domestic supply of food

Period	Net Imports kg/inhab	Consumption kg/inhab.	Production kg/inhab	Agricultural Land ha/inhab	Index of Dependence (%)	Food Aid kg/inhab.	Calories daily units/inhab.	Proteins daily grams/inhab
1986-1990	184.23	600.17	1,012.65	1.19	16.09		2,511.10	61.36
1991-1999	171.00	600.54	881.43	0.99	18.54		2,393.74	60.70
2000-2001	197.97	607.26	897.07	0.89	20.11		2,366.20	62.90

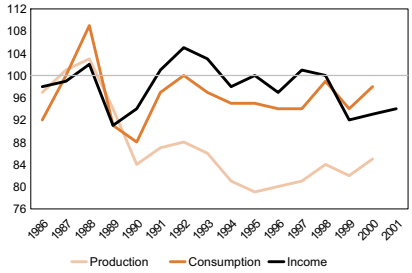
Food trade, production and consumption, by selected groups of products (in kg/inhab.)

Product/Period	Exports	Imports	Production	Consumption
Vegetable Oils				
1986-1990	0.26	12.41	6.48	16.08
1991-1999	0.32	10.81	5.65	13.35
2000-2001	0.43	11.89	6.82	11.83
Meat				
1986-1990	0.48	0.38	42.93	41.90
1991-1999	0.49	0.20	42.80	41.62
2000-2001	0.02	0.31	49.17	48.51
Cereals				
1986-1990	0.29	124.34	111.49	123.70
1991-1999	7.01	110.53	91.15	119.69
2000-2001	5.05	123.44	113.01	117.20
Fruits				
1986-1990	3.31	1.24	129.00	108.81
1991-1999	5.45	3.38	122.91	103.90
2000-2001	2.78	6.06	114.79	101.85
Vegetables				
1986-1990	1.38	0.29	24.11	19.81
1991-1999	0.89	3.11	44.90	39.60
2000-2001	0.47	6.57	49.71	47.24
Oilcrops				
1986-1990	0.27	7.17	19.10	0.67
1991-1999	4.02	7.55	10.76	0.42
2000-2001	3.88	8.54	7.32	0.36
Dairy Products				
1986-1990	0.03	29.20	89.12	115.72
1991-1999	0.59	27.21	67.42	92.87
2000-2001	0.22	29.50	58.53	86.85

Index of Revealed Comparative Advantage (RCA) and Balance of Trade (Value Exp/Value Imp) in Food



Real Income, Production and Food Consumption
(per inhabitant, 1986-1988 = 100)



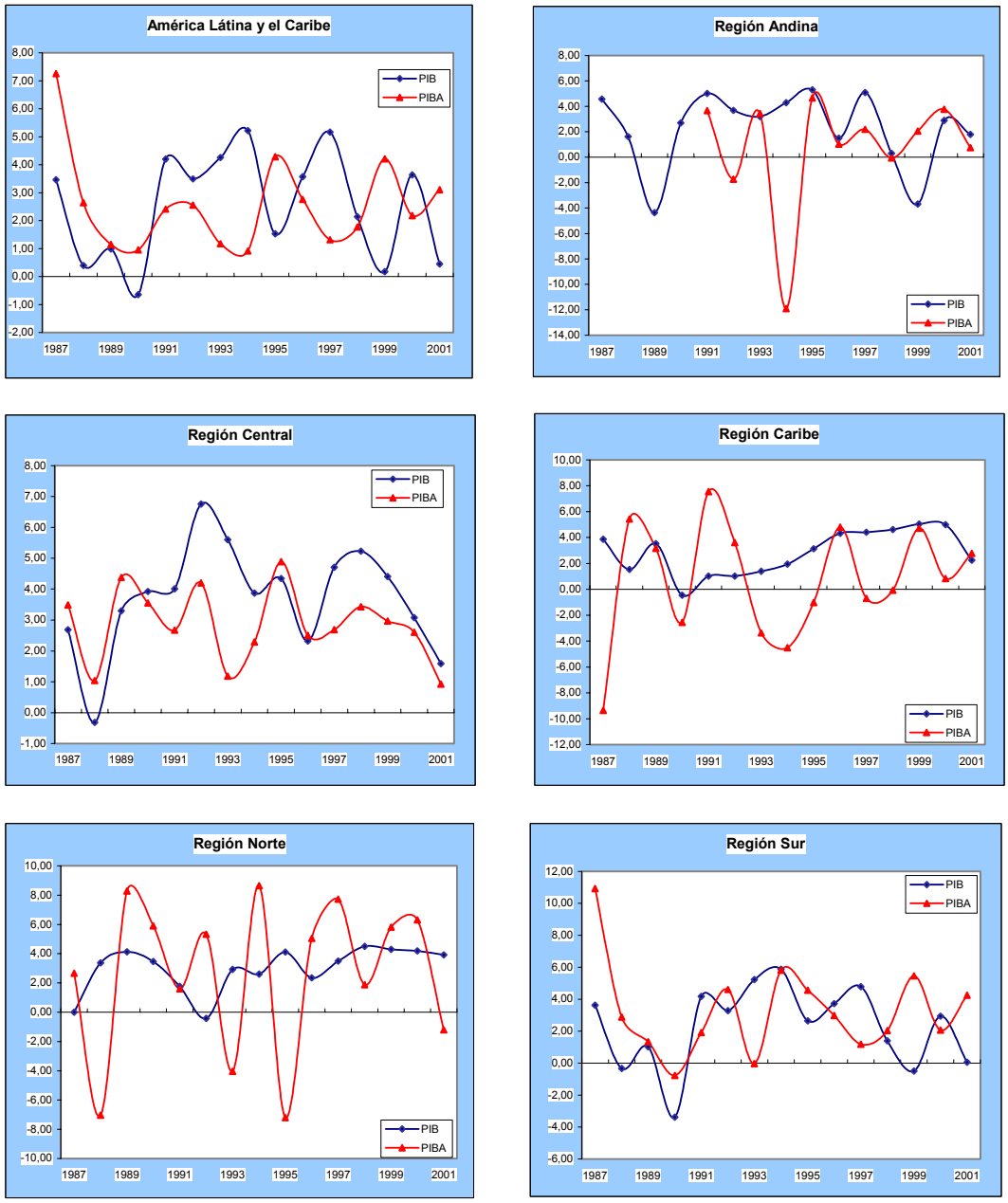
Factors that affect access to food

Period	Real Income per inhab. (1995 US$)	Elasticity Price of Income US$	Debt Service as % of Exp. Goods and Services	Food Inflation (%)	Int. Reserves def. in months of Imports	Food Imp. % Merchandise Exports	Unemploy-ment (as % labor force)
1986-1990	3,450.80	-1.13	34.95	54.72	8.88	6.53	9.56
1991-1999	3,538.89	-1.05	22.65	44.42	8.64	5.63	10.24
2000-2001	3,313.50	-0.97	20.45		6.83	4.93	

Appendix B. Additional Information about Sections 3 and 4

Appendix B (Section 3.1)

Figure B.1 GDP and Agricultural GDP for each region. 1987-2001.



Fuente: IICA. DIPEMI con datos del Banco Mundial

Appendix B (Section 3.5)

Table B.1 Destination of Domestic Supply in percentage, by sector and country, millions of 1997US$.

Sector	D	I	C	X	G	M	Q
TOTAL PAÍSES[1]							
Total Agricultura Ampliada	54,3%	2,1%	43,1%	9,3%	1,7%	10,4%	100,0%
Primario	73,8%	1,1%	19,6%	11,5%	0,5%	6,5%	100,0%
Alimentos y Agroindustria	48,8%	2,4%	49,7%	8,7%	2,0%	11,5%	100,0%
Recursos Naturales	109,5%[2]	0,1%	0,2%	25,8%	0,1%	35,8%	100,0%
Resto Economía	43,1%	11,4%	37,0%	6,7%	9,5%	7,7%	100,0%
Total	45,5%	10,0%	37,4%	7,3%	8,3%	8,4%	100,0%
ARGENTINA							
Total Agricultura Ampliada	44,3%	1,0%	48,9%	7,9%	0,7%	2,8%	100,0%
Primario	69,2%	2,8%	19,1%	10,4%	0,1%	1,6%	100,0%
Alimentos y Agroindustria	35,6%	0,4%	59,3%	7,1%	0,9%	3,2%	100,0%
Recursos Naturales	79,7%	0,0%	0,0%	26,4%	0,0%	6,1%	100,0%
Resto Economía	40,3%	18,0%	44,8%	3,4%	2,6%	9,0%	100,0%
Total	42,2%	11,9%	45,5%	5,3%	1,9%	6,8%	100,0%
BRASIL							
Total Agricultura Ampliada	52,7%	1,4%	44,0%	5,3%	0,0%	3,3%	100,0%
Primario	72,0%	2,4%	24,0%	4,9%	0,0%	3,3%	100,0%
Alimentos y Agroindustria	44,2%	0,9%	52,7%	5,5%	0,0%	3,4%	100,0%
Recursos Naturales	111,8%	0,0%	0,0%	17,4%	0,0%	29,2%	100,0%
Resto Economía	51,2%	12,8%	26,5%	2,9%	13,1%	6,5%	100,0%
Total	52,3%	9,8%	30,5%	3,7%	9,7%	6,0%	100,0%
CANADÁ							
Total Agricultura Ampliada	51,6%	1,0%	30,7%	29,3%	5,0%	17,6%	100,0%
Primario	73,9%	0,0%	10,9%	22,9%	2,5%	10,2%	100,0%
Alimentos y Agroindustria	44,9%	1,3%	36,6%	31,2%	5,8%	19,8%	100,0%
Recursos Naturales	63,8%	0,0%	1,1%	52,0%	0,9%	17,7%	100,0%
Resto Economía	45,3%	12,7%	31,4%	18,1%	12,9%	20,5%	100,0%
Total	47,0%	10,4%	30,3%	21,2%	11,2%	19,9%	100,0%
CHILE							
Total Agricultura Ampliada	45,6%	5,0%	42,6%	16,8%	0,0%	10,1%	100,0%
Primario	66,8%	5,1%	17,8%	14,0%	0,0%	3,7%	100,0%
Alimentos y Agroindustria	36,3%	5,0%	53,5%	18,1%	0,0%	12,9%	100,0%
Recursos Naturales	81,4%	2,9%	0,0%	46,6%	0,0%	30,9%	100,0%
Resto Economía	49,5%	18,5%	31,2%	11,6%	8,3%	19,1%	100,0%
Total	49,7%	14,0%	33,2%	14,4%	5,6%	17,0%	100,0%
COLOMBIA							
Total Agricultura Ampliada	39,5%	0,9%	55,9%	11,1%	0,0%	7,4%	100,0%
Primario	54,1%	1,6%	30,5%	19,8%	0,0%	6,0%	100,0%
Alimentos y Agroindustria	32,1%	0,6%	68,8%	6,6%	0,0%	8,1%	100,0%
Recursos Naturales	44,6%	0,0%	0,0%	56,1%	0,0%	0,7%	100,0%
Resto Economía	50,1%	13,1%	31,3%	5,9%	13,5%	13,8%	100,0%
Total	46,9%	9,2%	37,0%	9,2%	9,2%	11,6%	100,0%
ESTADOS UNIDOS							
Total Agricultura Ampliada	58,6%	2,6%	41,4%	7,6%	2,1%	12,3%	100,0%
Primario	79,8%	0,0%	14,1%	13,3%	0,6%	7,7%	100,0%
Alimentos y Agroindustria	54,1%	3,2%	47,2%	6,4%	2,4%	13,3%	100,0%
Recursos Naturales	154,9%	0,1%	0,1%	5,5%	0,0%	60,6%	100,0%
Resto Economía	42,2%	10,7%	38,3%	5,9%	9,2%	6,2%	100,0%
Total	44,8%	9,7%	38,3%	6,1%	8,4%	7,3%	100,0%
MÉXICO							
Total Agricultura Ampliada	43,1%	0,7%	55,6%	11,2%	0,8%	11,4%	100,0%
Primario	64,9%	1,4%	35,6%	7,5%	0,4%	9,7%	100,0%
Alimentos y Agroindustria	33,8%	0,4%	64,1%	12,8%	1,0%	12,1%	100,0%
Recursos Naturales	59,1%	0,2%	0,0%	43,1%	0,0%	2,4%	100,0%
Resto Economía	42,3%	16,0%	35,2%	17,7%	6,7%	17,8%	100,0%
Total	43,1%	11,7%	38,8%	17,1%	5,0%	15,7%	100,0%
PERÚ							
Total Agricultura Ampliada	40,1%	0,7%	57,2%	8,3%	0,0%	6,3%	100,0%
Primario	54,4%	0,8%	45,2%	5,9%	0,0%	6,3%	100,0%
Alimentos y Agroindustria	34,7%	0,6%	61,8%	9,2%	0,1%	6,3%	100,0%
Recursos Naturales	80,0%	0,0%	0,0%	47,5%	0,0%	27,5%	100,0%
Resto Economía	42,6%	21,9%	30,5%	5,3%	10,4%	10,8%	100,0%
Total	42,7%	14,7%	38,1%	7,2%	6,9%	9,8%	100,0%
URUGUAY							
Total Agricultura Ampliada	42,1%	0,4%	42,7%	22,3%	4,8%	12,4%	100,0%
Primario	65,3%	0,8%	21,3%	11,8%	5,5%	4,7%	100,0%
Alimentos y Agroindustria	30,8%	0,2%	53,1%	27,5%	4,5%	16,1%	100,0%
Recursos Naturales	283,2%	0,0%	0,0%	6,0%	18,2%	207,4%	100,0%
Resto Economía	46,6%	10,2%	43,1%	9,8%	9,9%	19,6%	100,0%
Total	45,7%	6,9%	42,9%	13,9%	8,2%	17,7%	100,0%
VENEZUELA							
Total Agricultura Ampliada	49,4%	3,5%	55,2%	3,0%	0,8%	11,9%	100,0%
Primario	60,7%	3,3%	43,8%	2,3%	0,1%	10,3%	100,0%
Alimentos y Agroindustria	45,3%	3,5%	59,4%	3,3%	1,0%	12,5%	100,0%
Recursos Naturales	39,3%	0,1%	0,0%	61,0%	0,0%	0,5%	100,0%
Resto Economía	47,6%	13,7%	39,6%	10,7%	5,2%	16,9%	100,0%
Total	46,9%	9,8%	37,8%	15,6%	3,6%	13,7%	100,0%
COSTA RICA							
Total Agricultura Ampliada	52,7%	1,2%	53,8%	39,3%	-5,3%	41,7%	100,0%
Primario	56,9%	2,1%	11,2%	43,3%	0,1%	13,6%	100,0%
Alimentos y Agroindustria	50,4%	0,7%	76,7%	37,2%	-8,2%	56,8%	100,0%
Resto Economía	44,3%	15,0%	36,7%	16,2%	6,2%	18,3%	100,0%
Total	47,0%	10,5%	42,2%	23,7%	2,4%	25,9%	100,0%

Fuente: IICA. Dirección de Planeamiento Estratégico y Modernización Institucional. Con datos de GTAP 5.0 y de la MCS de Costa Rica de 1997 (IICA).

[1] No incluye a Costa Rica.

[2] Existen porcentajes mayores a 100% porque se incluye la oferta importada.

Table B.2 Cost of Domestic Supply in percentage by sector and country, millions of 1997 US$.

Sector	II	L_c	L_{nc}	K	T	I	Q
TOTAL PAÍSES[1]							
Total Agricultura Ampliada	55,8%	3,5%	14,8%	17,9%	2,8%	5,2%	100,0%
Primario	46,7%	0,9%	18,7%	20,1%	12,7%	0,9%	100,0%
Alimentos y Agroindustria	58,3%	4,3%	13,7%	17,3%	0,0%	6,4%	100,0%
Recursos Naturales	33,8%	3,4%	10,8%	26,1%	19,5%	6,4%	100,0%
Resto Economía	38,3%	14,1%	20,2%	22,2%	0,0%	5,1%	100,0%
Total	40,7%	12,5%	19,3%	21,7%	0,6%	5,2%	100,0%
ARGENTINA							
Total Agricultura Ampliada	48,1%	2,3%	19,5%	22,1%	5,5%	2,5%	100,0%
Primario	21,5%	1,0%	35,6%	20,2%	21,3%	0,4%	100,0%
Alimentos y Agroindustria	57,4%	2,7%	13,8%	22,8%	0,0%	3,3%	100,0%
Recursos Naturales	11,4%	5,0%	20,7%	42,0%	20,4%	0,5%	100,0%
Resto Economía	32,6%	10,2%	22,0%	29,1%	0,0%	6,1%	100,0%
Total	37,6%	7,4%	21,1%	26,9%	2,2%	4,8%	100,0%
BRASIL							
Total Agricultura Ampliada	59,7%	1,3%	11,4%	21,9%	3,0%	2,7%	100,0%
Primario	39,1%	0,5%	14,1%	36,6%	9,8%	-0,1%	100,0%
Alimentos y Agroindustria	68,7%	1,7%	10,2%	15,4%	0,0%	4,0%	100,0%
Recursos Naturales	48,2%	1,6%	9,3%	21,4%	12,9%	6,6%	100,0%
Resto Economía	44,3%	10,3%	18,2%	23,8%	0,0%	3,4%	100,0%
Total	48,2%	7,9%	16,4%	23,3%	0,9%	3,3%	100,0%
CANADÁ							
Total Agricultura Ampliada	51,8%	4,1%	18,2%	12,9%	1,8%	11,2%	100,0%
Primario	51,2%	1,5%	17,6%	15,4%	7,8%	6,5%	100,0%
Alimentos y Agroindustria	51,9%	4,9%	18,4%	12,1%	0,0%	12,6%	100,0%
Recursos Naturales	40,6%	2,2%	6,0%	18,7%	17,4%	15,2%	100,0%
Resto Economía	31,8%	9,3%	21,9%	20,6%	0,0%	16,3%	100,0%
Total	35,4%	8,2%	20,7%	19,3%	0,9%	15,4%	100,0%
CHILE							
Total Agricultura Ampliada	52,2%	1,3%	13,6%	16,9%	5,1%	11,0%	100,0%
Primario	34,0%	0,4%	23,9%	17,2%	16,6%	7,9%	100,0%
Alimentos y Agroindustria	60,2%	1,6%	9,0%	16,7%	0,0%	12,4%	100,0%
Recursos Naturales	36,1%	2,1%	12,6%	31,6%	7,3%	10,4%	100,0%
Resto Economía	34,6%	7,5%	13,7%	31,9%	0,0%	12,3%	100,0%
Total	39,6%	5,5%	13,6%	27,6%	1,7%	11,8%	100,0%
COLOMBIA							
Total Agricultura Ampliada	53,5%	1,3%	17,9%	14,5%	6,4%	6,4%	100,0%
Primario	28,4%	0,4%	31,9%	17,0%	19,0%	3,3%	100,0%
Alimentos y Agroindustria	66,3%	1,8%	10,7%	13,2%	0,0%	8,0%	100,0%
Recursos Naturales	29,0%	1,7%	10,2%	29,7%	22,7%	6,7%	100,0%
Resto Economía	36,3%	11,4%	20,4%	24,0%	0,0%	7,9%	100,0%
Total	40,8%	8,2%	19,3%	21,5%	2,6%	7,5%	100,0%
ESTADOS UNIDOS							
Total Agricultura Ampliada	58,4%	4,7%	14,8%	16,0%	1,9%	4,3%	100,0%
Primario	60,8%	1,0%	13,7%	14,2%	10,8%	-0,5%	100,0%
Alimentos y Agroindustria	57,9%	5,5%	15,0%	16,4%	0,0%	5,2%	100,0%
Recursos Naturales	38,6%	5,0%	13,7%	19,8%	20,1%	2,8%	100,0%
Resto Economía	38,8%	15,4%	20,7%	21,3%	0,0%	3,8%	100,0%
Total	40,9%	14,2%	20,0%	20,7%	0,4%	3,9%	100,0%
MÉXICO							
Total Agricultura Ampliada	43,5%	1,0%	13,6%	25,1%	5,8%	11,1%	100,0%
Primario	26,5%	0,5%	30,9%	20,9%	19,4%	1,8%	100,0%
Alimentos y Agroindustria	50,7%	1,1%	6,2%	26,9%	0,0%	15,1%	100,0%
Recursos Naturales	15,3%	1,1%	5,4%	51,2%	23,3%	3,7%	100,0%
Resto Economía	30,3%	5,8%	11,4%	34,3%	0,0%	18,2%	100,0%
Total	32,9%	4,5%	11,7%	32,7%	2,3%	15,9%	100,0%
PERÚ							
Total Agricultura Ampliada	37,0%	0,5%	10,2%	39,5%	5,5%	7,4%	100,0%
Primario	26,0%	0,5%	28,5%	18,8%	19,6%	6,6%	100,0%
Alimentos y Agroindustria	41,3%	0,5%	3,1%	47,5%	0,0%	7,6%	100,0%
Recursos Naturales	28,9%	2,0%	12,1%	21,3%	11,9%	23,8%	100,0%
Resto Economía	35,2%	7,9%	11,0%	34,7%	0,0%	11,1%	100,0%
Total	35,6%	5,5%	10,8%	35,9%	2,0%	10,3%	100,0%
URUGUAY							
Total Agricultura Ampliada	47,6%	1,4%	16,2%	16,6%	5,7%	12,5%	100,0%
Primario	29,8%	0,6%	28,3%	16,2%	17,4%	7,7%	100,0%
Alimentos y Agroindustria	56,3%	1,8%	10,2%	16,8%	0,0%	14,8%	100,0%
Recursos Naturales	37,5%	3,5%	21,0%	27,8%	6,8%	3,4%	100,0%
Resto Economía	28,6%	5,8%	14,1%	36,6%	0,0%	15,0%	100,0%
Total	34,9%	4,3%	14,8%	30,0%	1,9%	14,1%	100,0%
VENEZUELA							
Total Agricultura Ampliada	46,1%	1,4%	15,4%	15,5%	5,2%	16,4%	100,0%
Primario	27,1%	0,6%	30,1%	19,0%	19,2%	4,0%	100,0%
Alimentos y Agroindustria	53,0%	1,8%	9,9%	14,3%	0,0%	21,0%	100,0%
Recursos Naturales	12,9%	1,5%	6,8%	41,0%	25,3%	12,4%	100,0%
Resto Economía	39,7%	7,7%	15,4%	30,1%	0,0%	7,1%	100,0%
Total	37,6%	5,6%	14,3%	28,5%	4,3%	9,7%	100,0%
COSTA RICA[2]							
Total Agricultura Ampliada	58,4%	6,0%	13,0%	21,5%	0,0%	1,1%	100,0%
Primario	40,3%	2,6%	23,0%	32,8%	0,0%	1,3%	100,0%
Alimentos y Agroindustria	68,1%	7,8%	7,6%	15,4%	0,0%	1,0%	100,0%
Resto Economía	41,5%	18,5%	11,2%	27,3%	0,0%	1,5%	100,0%
Total	47,0%	14,4%	11,8%	25,4%	0,0%	1,4%	100,0%

Fuente: IICA. Dirección de Planeamiento Estratégico y Modernización Institucional. Con datos de GTAP5.0 y de la MCS de Costa Rica de 1997 (IICA).

[1] No incluye a Costa Rica.

[2] Para este país no se posee la desagregación del pago al factor tierra y la división del trabajo no es entre calificada y no calificada, sino entre rural y urbana, L_c corresponde a la urbana

Appendix (Section 4.2.2)

Table B.3 Macroeconomic Indicators. Base values.

	ARGENTINA	BOLIVIA	BRAZIL	CHILE	COLOMBIA	COSTA RICA	ECUADOR	EL SALVADOR	HONDURAS	MEXICO	PARAGUAY	PERU	DOM.REP.	URUGUAY	VENEZUELA
Absorción	275588.60	39.57	74776.83	2958.82	128903.44	3092.40	28463.60	1223.00	64526.00	2370.10	28100.20	94.00	124.10	127.96	23756583.33
Consumo de hogares	204849.50	28.28	48422.45	1747.27	82414.23	2165.70	19869.40	936.58	43230.60	1693.90	20938.48	64.73	99.60	90.61	18766576.35
Inversión	47878.80	6.10	16101.23	850.52	25465.77	537.50	5412.10	177.71	15873.40	487.60	5420.45	20.63	20.70	22.65	3477085.84
Consumo del gobierno	22860.30	5.19	11465.80	361.03	21023.44	389.20	3182.00	108.70	5422.00	188.60	1533.53	8.64	3.70	14.70	1512921.14
Exportaciones	16237.00	8.39	5545.90	852.21	18062.85	1220.00	7128.30	270.96	26347.40	1006.50	4291.60	12.55	47.00	21.66	10370029.10
Importaciones	23301.00	-10.24	7147.70	903.70	26650.71	1422.20	8126.90	418.50	37256.50	953.10	12301.62	21.55	57.30	-23.63	6083054.39
Tipo de cambio real	100.00	89.70	96.77	93.90	90.98	100.00	100.00	100.00	91.20	100.00	93.10	87.23	100.00	100.00	0.90
agriculture	13884.95	5.41	420.64	278.85	13681.65	347.76	5159.61	144.24	27115.48	150.46	2461.82	9.24	15.15	8.57	864606.88
mining	5094.99	2.09	1874.40	224.42	4096.76		2085.64	5.97	6.04			5.38	1.98		3572741.87
food mfg	10498.77	3.40	6755.71	374.23		223.20	1600.34	121.15	2566.87	125.96		3.88	9.40	7.38	1738777.86
other industry	23186.53	5.01	21899.02	374.23	15497.85	269.05	2570.27	265.24	5442.12	408.91	5260.50	9.63	13.66	13.59	4494455.93
services	200745.76	16.78	28677.38	1844.55	76495.56	1801.49	14158.23	483.63	26177.63	1673.87	10446.98	60.56	69.20	85.64	10015980.79
total value added	253411.00	32.69	59627.15	3096.28	109771.82	2641.50	25574.09	1020.22	61308.13	2359.20	18169.29	88.69	109.39	115.17	20686563.33

Table B.4 Employment, Wages and Welfare. Base values.

Empleo por tipo de factor

	ARGENTINA	BOLIVIA	BRAZIL	CHILE	COLOMBIA	COSTA RICA	ECUADOR	EL SALVADOR	HONDURAS	MEXICO	PARAGUAY	PERU	DOMINICAN	URUGUAY	VENEZUELA
rural calificado	na	na	13790.00	na	na	na	na	na	na	na	na	0.59	29749.00	na	na
rural no calificado			2622.00									3.01	524589.00		
rural total	0.00		16412.00									3.60	554338.00		
urbano calificado	2615.21	20.88	28925.00	608.26		639.15	1286.66	702.36	7319.19	41.63	3517.21	3.11	474475.00		2610166.87
urbano no calificado	7905.83	7.47	7657.00	752.93		843.16	2390.43	1572.37	12839.72	328.19	3950.60	2.14	1329081.00		4226431.84
total urbano	10521.04	28.35	36582.00	1361.19		1482.31	3677.09	2274.73	20158.91	369.82	7467.81	5.26	1803556.00		6836598.71
total fuerza laboral			52994.00									8.85	2357894.00		

Remuneracion por tipo de factor

rural calificado	na	na	1666.44	na	na	na	na	na	na	na	na	2.10	1999.00	na	na
rural no calificado			1283.00									0.71	1529.00		
rural total			1605.18									0.94	1552.50		
urbano calificado	10.07		3385.45	na	5.73		5.12			11.97		5.44	2212.45	0.075	2.40
urbano no calificado	5.96		2708.24		6.51		1.50			2.77		2.35	1501.64	0.037	1.40
total urbano	6.99		3243.70		6.12		2.77			3.80		4.18	1656.42	0.053	1.80
total fuerza laboral	6.99		2736.26		6.12		2.77			3.80		2.86	1631.48	0.046	1.80

Bienestar a nivel de los hogares

Consumo per cápita real

Hogares Rurales		4.80	31208.00		945020.68	0.04	2322.08	803.06	1679.48	na	6637.20	11.33	40.50		
Hogares Urbanos		23.5	24841.00		1343722.82	0.036	10736.71	133.52	13744.43		14301.28	60.02	59.10		
Total Hogares		28.3	56049.00	1747.3	2288743.50	0.038	13058.79	936.58	15423.91		20938.48	71.35	99.60	90.61	18766576