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Agriculture in the Twenty-first Century: Challenges and responses

Agribusinesses in the new millennium

The major challenges are twofold

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The new view of agriculture is that it is a system of value chains focused on meeting the demands and preferences of consumers, through the introduction of practices and procedures that include all activities within and outside of the production unit. In other words, all facets of agriculture are included and it is understood that the end result is not merely the production of food.

The value added of agribusinesses is much more important than the simple value of primary production. To be able to assess this value, it is important to bear in mind that five markets are involved: primary production, inputs, distribution, wholesale and retail.

This article is based on a longer text prepared by the Agribusiness Development Area for the document “Current State of Outlook for Agriculture,” which IICA publishes periodically. It presents what, in our opinion, are the future challenges to agribusiness in the hemisphere.

The last 20 years of the twentieth century have witnessed unprecedented change in agriculture worldwide as a result of globalization, changes in consumer demand, the advent of new technologies, and the need to do a better job of conserving land, water and biodiversity. Consequently, agriculture in the XXIst century is viewed as a complete system, replacing the traditional production-based concept.

In this new scenario, agribusinesses are viewed as consumer-oriented, integrated business systems which encompass primary production, processing, storage, distribution and marketing, as well as the public and private services required for them to operate competitively.

Changes in the world order

In May 2004, the European Union proposed eliminating subsidies on all agricultural products. It was later announced that general agreement had been reached with respect to agriculture within the WTO. A process that, it seemed, was doomed after the “Cancun failure” was thereby reactivated.

Both events augured well for the future of agribusinesses, given estimates (data summarized by Runge et al, 2003) that the overall benefits from eliminating agricultural subsidies would exceed US\$32.5 billion by 2025. Despite these expectations, not all countries of the hemisphere would benefit equally and there was even the risk that some might suffer severe effects.

¹ This article is based on contributions from the IICA specialists who work with the Directorate of Agribusiness Development, which have been interpreted by the author. The ideas contained herein are those of the author, and do not necessarily reflect the position of the Institute. The author wishes to thank Luis Lizarazo, Daniel Rodriguez, Estela Meza, Iciar Pavez, Hernando Riveros and Una May Gordon for their valuable contributions.

In order to capitalize on the new opportunities, as a group, they would have to institute structural changes involving the creation of a new public and private institutional framework; the passage of laws to facilitate and promote private enterprise, provide individuals with legal guarantees and facilitate trade and investment; the reform of laws governing land tenure and ownership; investment in infrastructure; the development of know-how in the private and social sectors; and investment in public research on agriculture and the rural milieu.

This new institutional framework would have to be consistent with commitments assumed in various international negotiations and with the national constitutional framework of each country. One common denominator in these proposed changes should be a clear message of security and confidence to the various sectors of society.

Regardless of where the different multilateral and regional agricultural negotiations go from here, the scenario at the beginning of the twenty-first century is vastly different, as reflected in the change in relative importance of the agricultural sector within the economies of the countries and in the importance of the latter in world trade.

Countries that have lower costs, that are more competitive and that are better equipped to respond to changes in demand have a great advantage over those that have been unable to institute sweeping structural reforms. Traditionally, the United States has been considered the country with the most competitive agribusinesses. Today, however, this is being called into question.

Brazil, Argentina, in the American hemisphere, and China, India and the countries of the former Soviet Union are emerging as major players in the world food trade. As a matter of fact, recent estimates suggest that, if significant measures are not taken, the United States could cease to be a net exporting country and become a net food importer. (Wall Street Journal, June 18, 2004)

On the world stage, the performance of China, India and Russia has a profound impact on the global economy and should therefore be carefully observed so that the countries of the American hemisphere can take strategic action to compete. China has to be watched because of its importance as both a consumer and producer, India, because of the key structural adjustments it has made and that have given it a place of prominence among developing countries, and Russia, because of its high potential to produce grains and animal products.

For the small- and medium-scale economies of the Americas, the realignment of production and trade forces involves risks as well as opportunities that will depend on their ability to produce value added goods, offer differentiated agricultural products and lower transaction costs in processes that connect producers to consumers

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(Chesney and Francis, 2004). In the small countries, the major challenge should be to focus on reducing the steady decline in rural incomes caused by falling production and productivity levels.

In short, the countries of the Americas must develop public and private policies and rules and regulations, and build up entrepreneurship to promote and boost the development and consolidation of agribusinesses with a long-term vision. In order to become a reality, this vision must be built on local and territorial development, and the creation of know-how.

Consumer-oriented agribusinesses

The future of today's agribusiness is inextricably linked to trends on world markets, and their success will depend on their ability to respond to changes in such trends.

Several factors will determine the quantity, quality and type of foods that will be in demand in the future. Income level will, however, continue to be the most determining factor, followed by changes in consumption patterns.

It is well known that as income rises so does the demand for more highly processed animal products. Changes in urban populations, improvements in communications, changing perceptions on the part of consumers regarding food safety and quality, and increased awareness of the origin of and methods used to obtain foods, will continue to be constant challenges to the development of agribusiness.

To meet these challenges, technological and strategic packages will have to be developed to promote innovation that will be of benefit at the local level so that the value added is retained in the production areas and international recognition for local values is achieved. At the same time, joint efforts are required to promote products with special characteristics, to organize in identifying market niches and implement rules and procedures to encourage the use of seals to differentiate products from one another, on the



on the development of the markets of origin and transparent marketing systems such as agricultural commodity exchanges and “contract agriculture.”

In response to these demands, it will become necessary to find mechanisms for regional market integration; create uniform and interchangeable information systems, especially for fruits and vegetables; and establish and accept common quality standards, efficient customs procedures and financial systems capable of handling transactions in local currencies between countries at different stages of development.

The challenge will continue to be how to increase the income level for primary producers, despite rising transaction costs. This will mean that new business plans must include strategic partnerships among the different actors in the system and must seek suppliers under the best terms and conditions, including suppliers in nontraditional countries, the use of state-of-the-art technologies (biotechnology), the incorporation of marketing strategies and the use of models to determine the best time to buy and sell. The poultry industry is an excellent example of the possibilities that exist for facing the challenges posed by globalization and consumer demand through the use of these basic strategies.

Agribusinesses and scientific know-how

Recent developments surrounding the threat to human health associated with pathogens in foods of plant and animal origin have changed the perception of consumers and modified shopping and consumption patterns, and could impact international trade. (Buzby, 2002).

Since the agreements were initiated at the Uruguay Round, in the framework of the GATT, to implement sanitary and phytosanitary measures, the countries

have determined that standards should be established on the basis of solid scientific principles and be applied transparently in order to avoid their being used for protectionist purposes.

The greatest challenge is therefore to make certain that agribusinesses base their development on scientific principles and that they have the institutional support and policies needed to ensure that a food or industrial agricultural product will not harm consumers when it is prepared or used properly (WHO).

This will involve the establishment of control strategies, the use of technology to reduce risk points, vertical integration of operations, certification by independent bodies and the use of equivalent risk assessment systems. The use of verification systems based on scientific principles may increase the competitiveness of local agribusinesses. However, it could have a boomerang effect by adding costs which the consumers will not want to pay.

It is important to note that the implementation of local systems can be used unilaterally to block any competition from abroad. As a result, as free trade agreements are implemented, these barriers may become more prevalent in the future.

It is therefore necessary to rely on transparent monitoring systems to be able to detect the existence of non-tariff barriers or any changes in them and provide national agribusiness with sufficient information to enable them to adjust their procedures and meet these needs.

The agricultural scenario at the beginning of the twenty-first century has undergone sweeping changes which are reflected in a change in the relative importance of the sector in the economies of the countries and in the importance of the latter in world trade.

It is likely that the use of foods prepared with genetically modified agricultural products will be the subject of debate in coming years. Advocates and critics alike agree that it will be one of the key topics at the table when discussing industry, consumers, political institutions and international organizations.

Faced with this panorama, the private sector in the Americas must take a proactive stance and keep abreast of any national and international regulations and the establishment of monitoring and risk assessment systems.



On the world stage, the performance of China, India and Russia has a profound impact on the global economy and should therefore be carefully observed so that the countries of the American hemisphere can take strategic action to compete

The widespread threat of terrorism, especially in the United States, has triggered responses that affect the current and future development of agribusinesses, especially the enactment of the Public Health Security & Bioterrorism Preparedness and Response Act in 2002. Immediate action is required on the part of the public and private sectors in the hemisphere to deal with the challenge of responding to these new requirements and evaluating their impacts on trade flows and the cost of merchandise.

Finally, the agribusinesses of the future will need strong innovative capability. The possibilities extend far beyond the traditional businesses to which we are accustomed or a mere improvement in value added. The production of bio-diesel or bio-fuels and/or bio-pharmaceuticals and the manufacture of products designed for specific niches make it necessary to constantly improve technological and scientific know-how.

Professionally-run agribusinesses

The competitiveness of the agribusinesses of the future will be irrevocably determined by their ability to manage knowledge, and will depend on the level of professionalism of companies and of the links in the agricultural production chains. The great challenges of the future are creating the ability to understand market needs, the requirements governing trade transactions and the level of professionalism of businesses.

The ability to base business decisions on proper and timely information will be fundamental in ensuring the sustainability of agribusinesses in the twenty-first century.

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These two challenges translate into other challenges. The first is the need to revise educational and training programs associated with agriculture and to adapt them to the specific needs of each country and region.

The second is the creation of infrastructure that will provide real time access to the information required to make timely business decisions, which, in turn, make it necessary to rethink programs for investment in telephony and electrification in rural areas in the hemisphere.

In short, an investment in human capital will be an essential requirement. The greatest challenge in making agribusinesses competitive will be the capacity to create new paradigms in the minds of producers and rural dwellers, so that they can adjust to change and assimilate technological changes with the required rapidity.

Agribusinesses in harmony with environment

Agribusinesses are particularly important in ensuring the sustainability of the future world. Water, soil, fossil energy and biodiversity are the pillars on which agribusinesses are based.

Water consumption varies greatly from country to country. Nevertheless, the agricultural sector is the main user of this valuable resource, consuming more than 80% in Chile and Mexico. Soil degradation not only leads to a loss of production potential, but also, when added to the fact pace of deforestation, increases poverty.

Given this panorama, the future cannot be conceived without agribusinesses that are compatible with the environment. It will therefore be necessary to create and strengthen the national institutional framework, and find ways of promoting private-sector participation in these initiatives. Technological, educational and investment programs in environmental topics will be mandatory for the agribusinesses of the future.

It is likely that the use of foods prepared with genetically modified agricultural products will be the subject of debate in coming years. Advocates and critics alike agree that it will be one of the key topics tabled for discussion.

Agribusinesses with a social conscience

As the twenty-first century gets under way, the scourges of inequity and poverty are more ominous than at any other time in history. Economic growth is crucial in reducing poverty, and the private sector has a vital role to play in creating wealth and spurring growth.

The # 1 challenge facing future agribusinesses will be humanizing the work of tilling the soil, fostering ways of working together, strengthening families and finding ways to ensure equity, justice and dignity for rural dwellers. To accomplish this, what is needed is a cohesive vision of society, one that places people at the heart of discussions and actions.

IICA's Role

The magnitude of the challenges and the opportunities that come with those challenges create a unique opportunity for the Inter-American Institute for Cooperation on Agriculture (IICA).

Accordingly, the Institute has focused its efforts on the development of agribusiness. It has provided technical cooperation to the public and private sectors based on a comprehensive view of agriculture in an effort to facilitate the development of competitive agribusiness with an awareness of social and environmental factors.

Within this framework, it established the Inter-American Program for the Promotion of Trade, Agribusiness and Food Safety, located in Miami, Florida, as a new model for technical cooperation aimed at serving the private and social sectors of the countries.

The Program seeks:

- To provide technical cooperation for strengthening entrepreneurial capacity
- To cooperate in the identification of market opportunities
- To provide information to facilitate decision-making and promote trade.

This initiative operates on the basis of a hemispheric team of specialists committed to the rural and agricultural sectors, and a hemispheric network of offices in all the countries of the hemisphere, including the Caribbean.