Rethinking the future of agriculture

Thais Thimoteo, São Paulo



In the last 30 years Brazil has become, behind only the European Union and the United States, the third largest exporter of such agricultural commodities as soybeans, sugar, orange juice, chicken, and beef, producing an agricultural trade surplus of about US$50 billion in 2010. That success is due not only to abundant natural resources but also to internationally recognized technology centers, with the Brazilian Agricultural Research Corporation (Embrapa) heading the list. Nevertheless, there is global concern about possible food shortages, given the demand created by 7 billion people today and an expected 9 billion by 2050.

According to the Organization for Economic Cooperation and Development (OECD), world food supply will need to increase 20% in 10 years to meet demand, and Brazil will need to contribute about two-fifths of that. That is why the Brazilian Institute of Economics (IBRE) and the Agribusiness Center of Getulio Vargas Foundation (GV Agro) presented the first Roundtable on the Agribusiness Scenario, on March 19 in São Paulo city.

Today

Despite its apparent success Brazilian agriculture must still deal with a variety of problems, from sanitary issues like foot and mouth disease (FMD) in cattle to structural problems like outdated rural labor legislation, poor access to credit, and unresolved environmental issues.

In his keynote address Roberto Rodrigues, former Minister of Agriculture and GV Agro coordinator, said, "Globally there is a

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need to find a theme that will articulate humanity's demands. I argue that the theme should be food and energy security and sustainability." Today, he said, the world lacks leadership and strategy; because of its agribusiness success, Brazil is likely to become an important catalyst for pioneering projects: "Look at the numbers: planted area in Brazil grew almost 30% in the last 20 years but production increased nearly 180%—six times as much. In sugar cane farming, we have reduced CO2 emissions to 11%—an important contribution to reducing global warming."

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José Carlos Vaz, executive secretary, Ministry of Agriculture, Livestock and Supply (MAPA), acknowledged that Brazil still faces problems that ultimately might undermine its privileged position. He also questioned whether the current model of agribusiness development is too focused on economic factors and not enough on social factors: "This is a model that drives producers out of rural areas, that discourages the younger generations of rural families from remaining. Do we want to continue with a model focused only on global interests? Some say yes, arguing that as society modernizes we will not need so many people on farms. But do we want to be increasingly concentrated in urban areas?" He added that although the scenario for Brazilian agribusiness seems encouraging, "If you look closely there are small cracks, uncertainties." Only through democratic debate and collective empowerment, planning and strategy, he believes, will Brazil "achieve results that are fair, both socially and economically."



Roberto Rodrigues



José Carlos Vaz



Luiz Carlos Carvalho

Luiz Carlos Carvalho, president, Brazilian Agribusiness Association (ABAG), said that if agribusiness is to be more productive, "We need to set regulatory frameworks, focusing on sustainability, and encourage investment in research. No one is creating mechanisms and policies to do this."

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Environmental considerations

Regulation matters. The new Forest Code "contains flaws that generate legal uncertainties and need to be reformed," said Rodrigo Lima, general manager, Institute for International Trade Negotiations (ICONE Brazil). "One of the sore points is the permanent preservation areas (APPs)… How will the government remove thousands of people who have been producing crops in the APP regions for years? … It is not enough to adopt a law and then push a button to make it implement itself. So, we will have to establish a policy line that certainly will displease both sides." Luiz Daniel Campos, representative, International Finance Corporation (IFC) of the World Bank, agreed with Lima about the need for greater legal certainty in the sector. However, he said, more relevant than the clash between the farmers and environmentalists about the Forest Code is a business concern with sustainability. "If we do not have a private sector investing prudently, being sustainable from a financial standpoint," Campos said, "it will not be worth investing in environmental issues, because companies will go bankrupt. … Responsible investment will be balanced between economic and environmental objectives."


Rodrigo Lima


Luiz Daniel de Campos


Werner Grau Neto

Lima and Campos agreed that much of the problem is political rather than technical: There need to be policies to help small farmers generate income or to assist in food distribution."Today," Lima said, "there are more forests than farmlands. Someone who does not have enough to eat will cut down to plant. No one will obey the law. There should be public policies for Indians, settlers, and loggers."

Werner Grau Neto, managing partner, Pinheiro Neto Advogados law firm, thinks that in putting forest conservation and agribusiness in opposition to each other, the Forest Code risks undermining agribusiness competitiveness. "Deforestation is a price we as a society have to decide whether or not to pay. However, the international community will use it to condemn our agricultural sector, as a way to pressure us," Neto said.

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Bottlenecks

A major deterrent to making agribusiness more productive is undoubtedly the lack of sound infrastructure and logistical efficiency. To Cesar Borges, executive director, Brazilian Association of Logistics, solutions like railway privatization are coming about too slowly. The reason, he said, is that "The ministries and government agencies [that deal with transportation] are in the hands of political parties. We are further penalized because the work stops when ministry and agency leadership changes," as when the director of the National Department of Transport Infrastructure (DNIT) resigned.


César Borges


José Torres de Melo


Herman Marx

"This is a sector that contributes 20% of GDP and accounts for 37% of jobs. In 2011, it exported US$95 billion, 37% of total exports. So, it is essential [for the government] to invest in ways to transport this production," said José Torres de Melo, vice president, National Confederation of Agriculture (CNA). The World Economic Forum ranked Brazil 104th in infrastructure last year—114th in quality of roads, 9th in railroads, and 130th in ports. "Brazil invested 1.8% of GDP in transport infrastructure in 1975 and only 0.4% in 2010. China invested 11% of its GDP on it in 2010, and India 8%. At Brazil's current low level of investment in infrastructure, it is impossible to maintain the level of exports," de Melo said. "In the North, Northeast and Midwest production is being halted because it has nowhere to flow."

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Herman Marx, professor, School of Advertising and Marketing, agreed: "When you are not investing enough to maintain the existing transport network, we can see clearly that Brazilian infrastructure is degraded." He explained, for instance, that the problem with highways is paving, and "Of 1,400,000 unpaved roads, 94% belong to municipalities that do not have money to build roads. As for waterways, our cheapest transportation, we do not use even half of what we could today."

International trade

José Augusto de Castro, vice president, Association of Foreign Trade of Brazil (AEB),


José Augusto de Castro


Leila Harfuch


Marco Farani

pointed out that "There has been a change for the worse in Brazil's export composition. We are concentrating only on commodities. ... There must be a greater effort to diversify exports." He added that Brazil needs to take advantage of the huge market that is opening up, because emerging markets like China, India, and Russia have no new areas available for planting. "We can consolidate our position as the world's granary," he said, but he joined the chorus of previous speakers when he added, "We have to realize that we need to substantially improve our infrastructure."

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> Silvio Crestana

Leila Harfuch, ICONE Brazil, pointed out that since 2000 food prices have been increasingly volatile because of the imbalance between supply and demand, saying, "Demand for food is growing at rates higher than production capacity."

Technical cooperation with other countries to promote the development of agribusiness can raise Brazil global profile, suggested Marco Farani, director general, Brazilian Cooperation Agency (ABC), Ministry of Foreign Affairs. "Our job is to send Brazilian technicians to improve the knowledge of other developing countries," he said. "While it is an altruistic activity, non-profit in the short term, it is a way to be recognized and influential. We finance projects and we care for them." Farani's agency is currently cooperating on agribusiness projects in Africa with the Japan International Cooperation Agency (JICA). "The African savanna has vegetation similar to the Brazilian savanna," Farani explained, "and our partnership with Japan provides for transfer of Embrapa's knowledge and JICA funding for



Alexandre Mendonça de Barros



Edivaldo Del Grande



Christian Lohbauer

infrastructure. We hope to bring Brazilian and Japanese businessmen to see the project, to stimulate business opportunities."

Risks

The classic idea that small farms, even subsistence farms, were intended for the cultivation of different varieties of food in the same area is no longer accepted. Now, the trend is specialization. However, while that increases productivity, it also raises risks, in view of possible natural disasters and lack of credit facilities and farm insurance. Here, "cooperatives and associations have a key role in the survival of much dispersed agricultural structure, especially in the South. They allow for greater resilience to market volatility while providing the benefits of production scale," said Alexandre Mendonça de Barros, partner in consultant MBAgro. However, these groups often need better management. "We are very far from companies with clear governance, and solid structure," Barros said.

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>
> Ademir Vian

In the beginning, Edivaldo Del Grande, president, Organization of Cooperatives of the State of São Paulo (OCESP), explained, "Old managers, often with little knowledge, did not give enough importance to administration… This portrait is changing as the second generation of managers, the sons of the former are more educated. The Program for Revitalization of Agricultural Production Cooperatives (Recoop) also contributed to investment in training, including training the managers themselves."

Christian Lohbauer, president, National Association of Exporters of Citrus (Citrus-BR), shared his experience and offered some suggestions: "Since the 1990s national associations have gained importance because out-of-date production structure could not cope with the demand. The entities were modernized and professionalized in only 15 years." But, he explained, with advances also came problems, such as difficulty in adopting a common agenda. "The farmer has a conflicting relationship with industry representatives; and without [transparency] it is difficult to reach a consensus vote on bylaws and budgets, because each company has its own," Lohbauer said. He also noted another problem: "There is a huge gap between what the private sector and farmers are willing to do themselves and the government's ability to respond to their demands."

How Brazil benefits from technological innovation

When multinationals came into the Brazilian agricultural sector, they brought with them technological innovations to boost productivity. One example is Monsanto, a major U.S. company that applies technology to agribusiness, manufactures herbicides, and produces genetically modified seeds. Intact Pro RR2—soybean seed with high value added now being tested by 500 soybean farmers in Brazil—is the company's first product released outside the U.S. Currently, the modification process is being approved by major markets for Brazilian soybeans. Rogério Andrade, Monsanto manager, says the seed protects the soybean from insect-caused injuries; makes it easier to control weeds (the seeds tolerate glyphosate, a strong herbicide); and produces higher yields. Andrade says that part of the US$1.4 billion Monsanto invests annually in technology is spent in Brazil.

The process by which Monsanto chose producers and tested the new type of soybean was meticulous. Farmers were selected in each region. Maize was cultivated between soybean plantings in order to separate the new varieties from older ones and observe differences in crop yields and other factors after harvest. Another breakthrough was the efficient use of the new seeds through accountable product management. "What remains after planting is entirely recycled," said Frederico Saraiva, field supervisor of the Intact Pro.



Rogério Andrade, Monsanto manager.

Modernization and innovation

Technology has driven many of the advances in Brazilian agribusiness in the four decades since Embrapa was established. With the development of new irrigation techniques and drought-resistant seeds, in the savanna grain production, especially of soybeans, has soared. However, science is still striving to cope with such issues as water scarcity, food quality, and the implications of biotechnology and bioenergy. For Mauro de Rezende Lopes, an IBRE specialist in agribusiness, the solution is better marketing: "Competition in the livestock market is largely responsible for investments in research today. Large companies … direct their research according to market demand, and this is an important strategy for us."

José Carlos de Freitas, director, Chamber for Agricultural Machines & Accessories (Abimaq), raised a concern that the national model of agriculture is too costly. He said,

"Soybeans, for example, are expensive to plant due to high prices of pesticides and the huge amounts of chemicals used. The profit margin is small. You gain only because of scale. Thus, the number of producers has been falling since the 1960s." He pointed out that "There are 3,000,000 families who do not have access to agricultural machines because there is no way for them to obtain National Bank for Economic and Social Development credit to modernize."

Embrapa researcher Silvio Crestana considered it essential to understand the geopolitics of food scarcity in order to use technology to increase productivity. Here, the Rio +20, United Nations Conference on Sustainable Development, in Rio de Janeiro on June 20–22, 2012, could be useful. "Think tanks are urgently needed if we are to develop new paradigms, one of which is the green economy in which growth and sustainability are not antagonistic," he said. "Integrated sustainable expansion in traditional areas—tillage, crop, and livestock integration, for example — could be a way to optimize productivity. It is already showing great results."

Protection and Credit

The agricultural credit system is, according to Ademir Vian, deputy director of products and financing, Brazilian Federation of Banks (Febraban), a "handful of overlapping credit standards" that do not meet the specific needs of agribusiness areas. He said that "Although numerous credit lines are available, we risk ending the crop year 2011–12 with the lowest first-time lending in recent years because of the infernal bureaucracy required to obtain credit from the BNDES and a smaller number of private banks offering credit to farmers. Our challenge is to find sources of funding—there is no point in having a modern machine in the field and no money to buy fuel."

Renato Buranello, managing partner, Demarest & Almeida law firm, pointed out that the lack of interaction between the various possibilities of credit for rural producers. "We have enough credit instruments for agribusiness," he says. "The question is how to put them into practice safely in ways that are economically viable." José Américo de Sá, adviser to the president, National Confederation of Insurance Companies (CNSeg), commented specifically on crop insurance, saying, "This is not a Brazilian invention. Everywhere else the market has succeeded this way: The private sector [creates insurance products] and the public sector takes care of subsidizing insurance premiums and ensures solvency for risks caused by nature. This can make insurance more attractive to farmers."

Latin America's turn?



Manuel Otero, IICA representative in Brazil.

The global boom in commodity prices since the 2008 crisis has stimulated Latin America's agribusiness sector. Imbalance between supply and demand, international economic uncertainties, and China's food imports have restructured world supply. For Latin America agricultural production prospects in 2011–2012 thus look promising. A survey by the Inter-American Institute for Cooperation on Agriculture (IICA) found that 70% of the representatives of agribusiness interviewed believe that performance will be even better this year than in 2010. However, Manuel Otero, IICA representative in Brazil, points out, "Rising food prices can be considered good news for exporters in Latin America, but they are a concern for importing countries, which means more than half the countries in Latin America."

For Brazil, the scenario can be advantageous because it reduces competition and helps to consolidate Brazil's international position in agriculture. "Today it would be inconceivable to think of an agricultural summit without Brazil. … In our continent, Argentina and Brazil have enormous opportunities to capitalize," Otero says.

However, to reach a truly positive result, it is essential that investment in research and development (R & D) rise. Latin America may be the world region that has most potential to expand its planted area (41%), but the IICA thinks it does not invest enough in R & D, especially compared to the United States and Canada, which each invest about 2.5% of GDP. Otero says that except for Brazil's Embrapa, "Latin America invests little in R & D. Latin America has no awareness of how science can contribute to the growth of agribusiness."

Another IICA survey found that producers think that public policy priorities in Latin America should first ensure the domestic market, then stabilize prices and promote production. Otero concludes that "We should think less about sectoral policies and more about agricultural policies—think about the responsibility of agriculture for food production, environment, and reduction of poverty in rural areas. Moreover, we must take a proactive stance and conclude the Doha Round so that we have the same trade rules for both agricultural and industrial goods."