THE BRAZILIAN ECONOMY

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Brazil: World's breadbasket

Brazil must meet 40% of increased demand for food on the planet in the coming years

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The BRAZILIAN ECONOMY

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After 20 years of discussion, the National Solid Waste Law was passed in December 2010. Reporting from the first Seminar on Solid Waste in Brazil: Perspectives and Challenges, Solange Monteiro reports on what experts, public and private, had to say about the prospects and problems associated with the law.

POLITICS

More access to public documents approved

The Senate has approved the bill that facilitates access to public documents in all three branches of government at all levels — city, state, and federal. The House having already approved it, the text will now go for presidential signature. The law establishes a maximum of 50 years for restricting access to top-secret documents. Although today such documents are considered confidential for up to 30 years, the period can be renewed indefinitely. With the new bill, confidential official documents can be classified as reserved (5 years), secret (15 years), and top secret (25 years). (October 25)

Minister of Sports resigns over corruption allegations

Minister of Sports Orlando Silva (Communist Party of Brazil) left the government yesterday accused of embezzlement. He is the sixth minister to fall since President Rousseff was inaugurated. The president appointed Congressman Aldo Rebelo of the same party to succeed Silva. Rebelo said the ministry will not continue partnerships with NGOs, some of which have been the target of accusations of irregularities. (October 27)



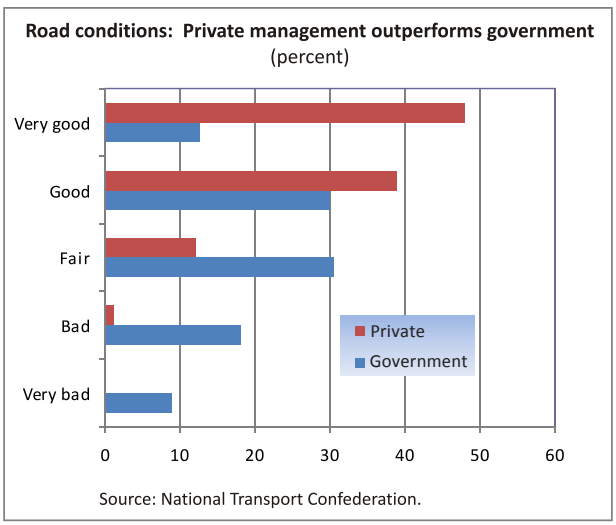
Photo: Jose Cruz/ABr.

New Minister of Sports Aldo Rebelo

INFRASTRUCTURE

More than half of Brazilian roads are deficient

The National Transport Confederation (CNT) report shows that 57.4% of Brazilian roads have serious deficiencies, and 26.9% are in critical condition. CNT surveyed 92,747 kilometers of paved federal and state roads; it says Brazil needs to invest R$200 billion in road infrastructure; last year's investment was only R$9 billion. CNT also said the government needs to change its transport management organization and curb corruption. In contrast, less than 1% of privately managed toll roads were found to be bad, and none were very bad. (October 26)



ECONOMY

Labor market slackens as the economy slows

According to the Minister of Labor, in September Brazil recorded creation of 209,078 jobs with a formal contract, the lowest for the month since 2006, when 176,735 formal jobs were created, and 15% lower than the same month last year. The main culprit was manufacturing, which has lost 30,000 jobs this year. (October 18)

Industrial confidence still sliding

The Industrial Confidence Index fell 0.4% in October compared to September, to 100.7 points; this was the tenth consecutive drop. The October number was the lowest since August 2009, according to the Getulio Vargas Foundation. (October 31)

Corporate bankruptcies rise in October

Corporate bankruptcies increased by 21% in October over September. Decelerating economic activity, monetary tightening, the worsening international situation, and competition from imports have adversely affected corporate performance. (October 31)

Inflation and capacity utilization both lower than expected

Inflation measured by the Getulio Vargas Foundation was 0.4% in October compared to 0.75% in September. Falling wholesale agricultural prices are expected to keep a lid on consumer inflation through the end of the year. As speculation grows that GDP will continue to decelerate, capacity utilization for September declined to 81.6%, down from 82.2% in August, and industrial production for September was down 1.6% year-on-year. (November 8)

ECONOMIC POLICY



Photo: Roberto Stuckert Filho/ABr.

President Rousseff during official photo at the summit of G20 leaders.

OECD: Brazil needs to promote integrity in public service

Brazil has made solid progress over the past decade in the fight against misconduct in the public sector, but better procedures are still needed to detect and prevent improper acts by officials, according to a new OECD report. The OECD review looked at what Brazil has done in four areas: promoting transparency and citizen engagement, implementing risk-based internal control systems; embedding high standards of conduct among public officials; and enhancing integrity in public procurement. It recommended that Brazil make risk management a core responsibility of all public managers, rather than a task only for internal auditors. Managers should be empowered to identify and manage the risk of waste, fraud, and corruption in their operations. (October 27)
http://www.oecd.org/document/54/0,3746,en_21571361_44315115_48943990_1_1_1_1,00.html

Central bank benchmark rate cut no surprise

Although an August 0.5% reduction in the central bank benchmark rate to 12% was a surprise, financial markets received the October 19 cut of 0.5% to 11.5% with tranquility. The drop was expected; the international landscape has deteriorated considerably. It is likely that further rate cuts are on the agenda with inflation expected to converge with its target next year. Weak growth data (see below) gives the central bank more room to cut interest rates. (October 27)

Growth expectations again deteriorate

The central bank's weekly survey of market forecasts reported that GDP growth expectations for 2011 dropped by 9 bps to 3.20%, although forecasts for 2012 held steady at 3.50%. The previous week's industrial production, capacity utilization, and industrial confidence figures had been surprisingly weak. See Focus survey at http://www4.bcb.gov.br/pec/GCI/PORT/readout/readout.asp (November 7)

Public sector surplus in September

Excluding interest payments on debt, the public sector recorded a primary surplus of R$8 billion in September. In the first half of the year, the primary surplus totaled R$78 billion (3.99% of GDP), 66% of the target for the whole year. (October 31)

President reports on G20 summit

President Dilma Rousseff said the recent G20 summit in France was a relative success in that the euro zone countries have moved to decide how to face the euro crisis, though it offered no definite solution. The eurozone issue dominated discussions at the meeting. During the summit, Rousseff reaffirmed that Brazil would consider providing financial assistance to Europe through the International Monetary Fund on condition that more details were provided about the rescue package. Rousseff also confirmed that Brazil would "not oppose" a tax on international financial transactions, which France was keen to support. However, the U.S. and the U.K. forcefully opposed the tax. (November 8)

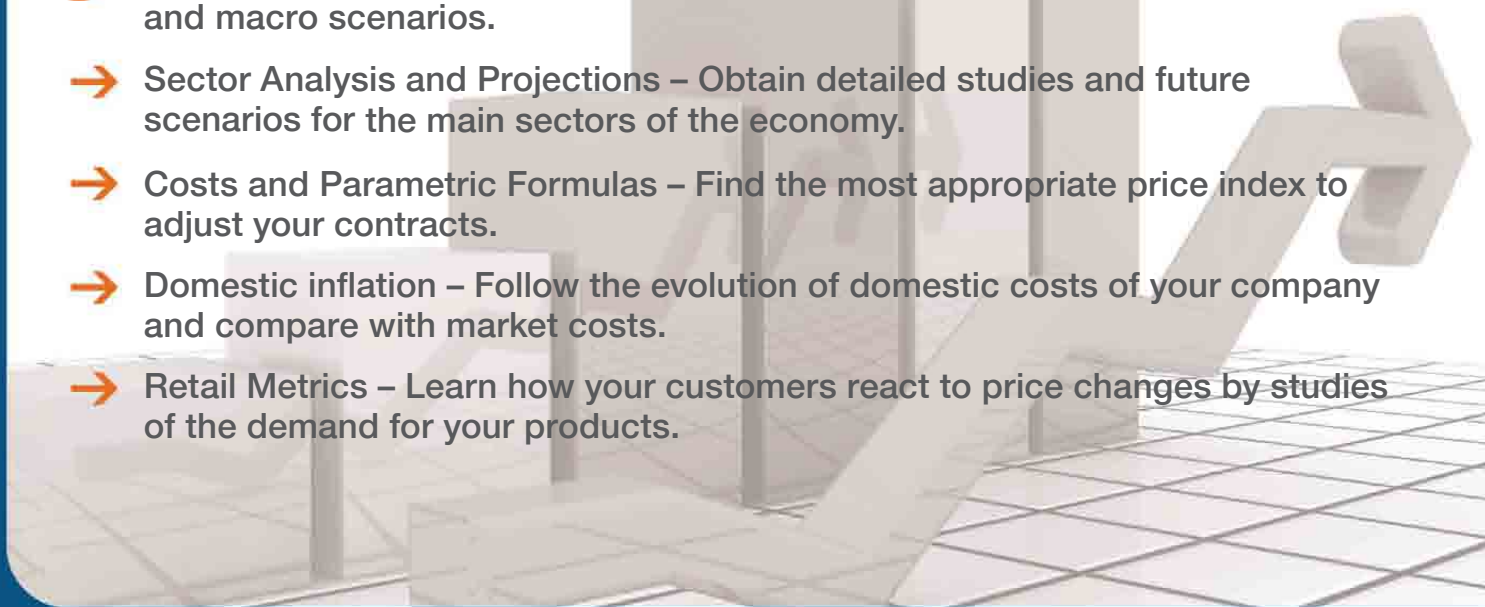
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April 2011

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- FGV Confidence – Have access to key sector indicators of economic activity in Brazil through monthly Surveys of Consumer and Industry.
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Time to plant more seeds for success

The Organization for Economic Cooperation and Development has in effect challenged Brazil to vastly expand its food production to meet surging demand. Brazil is already the third largest agricultural exporter in the world, after the U.S. and the countries of the European Union. Throughout the world rising incomes are stimulating demand for every kind of food, from turkey to tofu. But not many places are in as good a position as Brazil to meet the demand.

We have just about everything in place, at least physically, to meet the OECD challenge: plenty of good soil and pasturage, sunlight, and water. We have brilliant researchers who for years have used their deep understanding of soil and climate to triumph over every kind of agricultural challenge.

So what's to stop us from becoming the world's breadbasket?

Just the usual, the things that threaten to cripple so many other areas of the Brazilian economy: expensive credit, high taxes, unresponsive labor laws, and acute difficulty in getting what we produce to market because infrastructure is so bad. In a nutshell, the problem is the lack of political will to do what needs to be done. Instead, there's political willingness to make grand gestures that have no content — like the insanely expensive bullet train that will carry a few passengers between the cities of Rio de Janeiro and São Paulo cities. The same amount of money could construct solid rail freight lines from Brazil's Midwest to the sea that could carry millions and millions of tons of food from our producers to the hungry of the world.

So what's to stop us from becoming the world's breadbasket? Just the usual, the things that threaten to cripple the Brazilian economy: expensive credit, high taxes, unresponsive labor laws, and acute difficulty in getting what we produce to market because infrastructure is so bad.

Fields are old-fashioned. Agriculture is not flashy. Orange juice is not "creative." There's no glamor to demand for beef and soybeans — only much-needed revenue. Agricultural products gave us our largest trade surplus in 2010, US$50 billion. Think of how much more they might bring in if Brazil actually encouraged farmers and made it easier for them to produce more. Instead ….

About 90% of Brazilian farmers have gross sales of less than R$240,000 a year (US$140,000). Yet the environmental regulations being discussed as part of the Forest Code reform would disproportionately punish small farmers when what they really need is to have their contributions recognized and rewarded.

The government is ignoring the problems caused by the vulnerability of Brazilian cattle to foot and mouth disease. It could be trading on the brilliant work of our scientists in genetics and nutrition to ramp up production to the OECD goal. Together the private sector and the government could confront the inefficiencies in the use of land, as Uruguay has done, and open up millions of hectares to more efficient agricultural uses.

Competitiveness is the name of the game in any economic activity. Brazil has so many natural advantages (including those researchers) that so far we've been able to compete with very little effort to bring agriculture into the 21st century. Really we've been coasting to success. But as other countries make deliberate and carefully defined efforts to make their agriculture more competitive, if Brazil does not do the same, it will be left behind. And many people around the world will be left hungry.

It's time to recognize the importance of agriculture to the Brazilian economy and fertilize its growth with good policies. Immediately.

How Congress sees Brazil's foreign policy: Between the U.S. and China

Brazilian legislators differ in their perceptions on the importance of both the U.S. and China to Brazil. While China is predominantly seen as driving Brazil's economic expansion, the United States is considered a more reliable partner for political objectives. Yet there is no polarization between pro-U.S. and pro-China interests in Congress. What does this imply for foreign policy?

João Augusto de Castro Neves, Washington D.C.

There is little doubt that the rise of China has triggered one of the most dramatic changes to Brazil's foreign policy agenda in the past decade. A fellow member of coalitions that represent the interests of emerging countries, China has also become Brazil's main economic partner. As a result, from a relatively distant position on Brazil's diplomatic radar in the 1990s, China is now close to the center of Brazil's diplomatic strategy for the 21st century.

As new priorities emerge to join older concerns, they begin to crowd the foreign policy landscape. As with economics, however, the unlimited wants or objectives of diplomacy are constrained by a scarcity of resources. Sooner or later, choices have to be made. For many, it is expected that China's new and increasing role will entail a reshuffle of Brazil's relations with more traditional partners, such as the United States. How to balance the relationship with each country will be a major challenge for Brazil in the next decade.

It is always difficult to ascertain and then rank a country's foreign policy preferences. Though ambiguity does have its uses when it comes to strategy and international bargaining, beneath the intentional haziness of diplomatic rhetoric, preferences do coalesce into different, sometimes even conflicting, objectives. How to channel these differing preferences into a comprehensive strategy that benefits the country is a constant challenge for

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decision-makers. This is the general context that informs discussions in Brazil about the country's relations with China and with the United States.

If the intentional ambiguity of the Brazilian Foreign Ministry clouds the ranking of Brazil's international preferences, public debate usually exposes more definite interests that may conceal less mobilized — and possibly less extreme — opinions. For example, while leftwing elements in the current administration's governing coalition have exhibited anti-American rhetoric and an excessive optimism about the "strategic partnership" with China, a considerable number in the industrial sector embrace a more protectionist, anti-China, stance. Political compromise between these two camps is nearly impossible.

So how should Brazil's foreign policy strategists navigate the polarization of interests? China and the United States are not only Brazil's main economic partners, they are likely to continue to be the dominant global superpowers in coming decades. The results of an October 2011 survey by Instituto FSB Pesquisa of Brazilian legislators' international preferences may offer some clues. Nearly 40% of the members of Brazil's lower house of Congress answered three foreign policy questions:

- Is China a threat or an opportunity to the Brazilian economy?
- Which country should be Brazil's main trading partner, China or the United States?
- Which country should be Brazil's main diplomatic (political) partner, China or the United States?

The answers to the first question confirm a generally positive view of China's impact on the Brazilian economy: 57% see China as an opportunity, 27% see it as a threat, 13% see it as both. The numbers do not vary much across party lines; it appears that the government and the opposition share similar views on engagement with China.

While leftwing elements in the current administration's governing coalition have exhibited anti-American rhetoric and an excessive optimism about the "strategic partnership" with China, a considerable number in the industrial sector embrace a more protectionist, anti-China, stance.

The survey [on Brazilian legislators' international preferences] seems to refute the idea of a clear polarization between pro-U.S. and pro-China interests in Congress. This suggests that it may be possible to build bridges between different interests.

As to which country should be Brazil's main trading partner, the legislators favored China (43%) over the United States (27%) or both (25%). Here, the differences between the government coalition and opposition parties were much more dramatic. The Labor Party (PT) overwhelmingly endorses trade with China (68%) or with both countries (24%); no PT member favored the United States. The majority of members of the two main opposition parties, the PSDB and DEM, prefer trade with the United States (54%), although 43% still consider China (26%) or both (17%) important.

Curiously, though, the majority of responding legislators think that Brazil's main diplomatic partner should be the United States (52%) rather than China (27%) or both (20%). Although the pro-U.S. stance is much clearer among the opposition (74%), most of the governing coalition, with the exception of the PT, also prefer the United States to China.

What these figures suggest is that Brazilian legislators have quite different perceptions about the importance of both countries to Brazil. While China is predominantly seen as a driver of Brazil's economic expansion, the United States is considered a more reliable partner for other political objectives. More importantly, however, the survey seems to refute the idea of a clear polarization between pro-U.S. and pro-China interests in Congress. This suggests that it may be possible to build bridges between different interests, which arguably offers the Rousseff administration an opportunity to craft a more sophisticated diplomatic strategy to deal with both countries.

IBRE ECONOMIC OUTLOOK

The Brazilian economy and macroeconomic scenarios

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Should regional inequality be a policy issue?

Whenever the inequality issue comes up, the regional issue tags along. The perception is that a national approach to income distribution is not enough; there must also be programs that attack differences in wealth between Brazil's regions. The traditional contrast between the south and southeast, on the one hand, and the north and northeast, on the other, is seen almost as a cartographic symbol of extreme unfairness in Brazilian society.

However, regional inequality is not really a major national problem. It is certainly much less important than the unequal distribution of income among families across the country regardless of where they live.

Further muddying the debate is that in discussions about regional inequality, two different issues are often confused. The first occurs when a geographically small area produces a large share of national GDP. Here income inequality is associated with inequality in the geographical distribution of production.

The spatial concentration of production, however, clearly does not represent a problem for the government to address. Considering the variations in the characteristics of productive activities, production will never be equally distributed throughout the country. A region with a comparative advantage in agricultural production will always tend to have a lower share in GDP than a highly industrialized area.

This is the case, for example, in the American Midwest. A famously rich region in terms of income per capita, the granary of the world has a relatively modest share of U.S. GDP. The same can be said with certainty about the overachieving vastness of Brazil's Midwest.



Photo: Marcello Casal Jr./ABr

What's not the problem

The second type of regional inequality is characterized by substantial differences in per capita income between different regions of the country. This, however, is not in fact a regional problem.

Per capita income is lower in some areas because the people, not the geographic space

The high degree of mobility of labor in Brazil ensures the integration of the labor market and exercises a strong effect in reducing income inequality between regions.

itself, are less productive. Low productivity is an attribute of the inhabitants, not the geographical area. In other words, this kind of regional inequality is, in essence, simply one facet of social inequality.

Keep in mind that the Brazilian labor market is well integrated. Workers with the same skills are paid roughly the same wage anywhere in the country. The high degree of mobility of labor in Brazil ensures the integration of the labor market and exercises a strong effect in reducing income inequality between regions.

The per capita income differences that persist after leveling off the impact of an integrated labor market are associated with patterns of regional population settlement that are not easily addressed by public policy. In regions where per capita income is low, the population has characteristics associated with low labor productivity. These regions have a low cost of living, which attracts people with lower incomes.

Thus policies that address social inequalities throughout the country will automatically address regional income differences. The best policy to address regional income disparities is a good policy of income redistribution at the national level. And indeed, poor regions, because they are inhabited mostly by people with low productivity or low income, benefit the most from social programs such as rural pensions and family grants.

Programs that are specifically regional always run the risk of taxing the poor. These initiatives are funded by taxes paid disproportionately by the poor who live in rich regions, and benefits are snapped up by the economic elites living in poor regions — always a risk, given the lobbying power of the oligarchs in less-developed regions of Brazil.

Given that the main source of low productivity and income per capita differences is insufficient schooling, clearly the best policy will be to reduce regional differences in the quality of educational systems.

Summing up, the high mobility of labor in Brazil suggests that social inequality between individuals is much more important than income inequality between regions. Brazilian governments have done a good job of improving national income distribution in the last decade. It is best that the government continue to focus on that task and not listen to regional interests.

Given that the main source of low productivity and per capita income differences is insufficient schooling, then, clearly the best policy will be to use national policies to reduce regional differences in the quality of educational systems.



Claudio Accioli and Solange Monteiro
Rio de Janeiro

The United Nations has named a baby girl, Danica May Camacho, born October 31st in Manila, as the seven billionth inhabitant of the planet. The news highlights population growth and its challenges, particularly food production. The Organization for Economic Cooperation and Development (OECD) predicts that world food supply will have to increase 20% over the next 10 years to stay even with demand, especially in emerging countries and Asia. And the OECD says Brazil's food production will have to contribute 40% of the total.

A quiet revolution over the last two decades has made Brazil the third largest agricultural exporter in the world, second only to the countries of the European Union (EU) and the United States. This impressive position is due not only to such natural resources as plentiful soil, water, and sunlight but even more to technological advances.

Yet despite high productivity and enviable potential for expansion, Brazilian agriculture has some negatives, from livestock exposure to foot and mouth disease to structural obstacles to production, such as expensive credit, high taxes, unresponsive labor laws, poor infrastructure, and environmental controversies.

Brazil is the top exporter of major commodities like sugar, orange juice, tobacco, chicken, and beef and second in shipments of soybeans. Its largest trade surplus, in fact, is in agricultural products: US$50 billion in 2010.

A quiet revolution over the last two decades has made Brazil the third largest agricultural exporter in the world, second only to the countries of the European Union and the United States.

REAL PLAN PLUSES AND MINUSES

Marcos Fava Neves, professor of planning and strategy, University of São Paulo State, and coordinator, Markestrat, associates the advance of agribusiness to the Brazilian *Real* Plan, which introduced a new currency (the *real*), curbed hyperinflation and stabilized the economy in 1994. Former minister Roberto Rodrigues points out that at the time the government opened Brazil up to international competition without any protection. "This caused a wave that wiped out thousands of producers," he says, but it also "brought about a great improvement in competitiveness, supported by technology and management."

"All this, together with global demand for grain and food, led to an explosive growth of agribusiness in the last 15 years," says Neves. He predicts that Brazil's agricultural exports will rise from the current US$76 billion to about US$200 billion in 2020. "The correspondence between consumption in Asia and production in Brazil makes this inevitable. It might be faster, if we adopt the correct public and private strategies, or slower. But it will happen because Brazil is the leading global food producer."

Elibio Rech, the Embrapa researcher who coordinated development of the first transgenic soybean in Brazil, sees no threats to Brazil's comparative advantage in soybeans. "Genetic engineering has already developed varieties that increase photosynthesis and assimilation of nutrients by plant roots. But the problem is cost," he says. "Without water, you cannot plant. Africa and China have little water."

This does not mean, however, that the technology race in Brazil will slow down. Rather, more and more institutions are seeking capital to expand research. Take the

Campinas Agronomic Institute (IAC), linked to the Agency of Agribusiness Technology of the Department of Agriculture and Supply of São Paulo state. With an uninterrupted history of 124 years, IAC research has been vital at critical moments when Brazilian agriculture has had to cope with, for example, citrus diseases in the 1940s, sugar cane mosaic in the 1950s, and coffee leaf rust in the early 1970s. "Thanks to our understanding of soil and climate, for example, the IAC was able to develop coffee varieties adapted to warmer regions," explains agronomist Hamilton Humberto Ramos, IAC director general since March. "Climate change is a major focus of attention today, as we move forward to solutions for the problems of the future."



Ramos sees one of his responsibilities to be seeking new resources from private enterprises. In 2010, of the R$25 million needed to support the budget, only half came from the private sector, with the rest from federal agencies and funds from other states. "My intention next year is to increase fundraising by 5% to 10%," he says. For him, intensified partnerships with companies will bring another benefit: to promote the use of seed varieties developed at the institute. "Today, it is the researcher's job to advertise in Brazil," Ramos says. "Thus, a partnership with the private sector would facilitate the spread of these varieties. In addition to improving the image of the institute, it improves farmer incomes. It would be good for everybody."

Similarly, in January 2011 the Center for Sugarcane Technology (CTC), in Piracicaba, São Paulo state, changed its status from a non-profit to a corporation, with Coopersucar and Cosan as the main shareholders. "We spent the first few months … adapting the documentation," says Osmar Figueiredo Filho, CTC director of markets and opportunities.

Brazilian exports of selected agricultural products, 2010

PRODUCE	World's exports (tons)	Brazil's exports (tons)	Main exporters	Brazil's ranking
Soybeans	98,258,000	29,073,000	U.S., Brazil, Argentina	2°
Sugar	51,824,000	28,000,000	Brazil, Thailand, Australia	1°
Cellulose	44,314,000	8,229,000	Brazil, Canada, U.S.	1°
Orange juice	1,472,000	1,199,000	Brazil, U.S., Mexico	1°
Tobacco	2,652,000	677	Brazil, India, China	1°
Beef	7,253,000	1,731,000	Brazil, Australia, U.S.	1°
Chicken meat	8,666,000	3,800,000	Brazil, U.S., European Union	1°

Sources: USDA, FAO, Abiove, Brazil Ministry of Agriculture, Bracelpa, CitrusBR, ITGA, Abiac, and Ubrafe.

"This year, our budget was R$80 million, and we want to enhance it."

Neves believes that technology could still advance many areas of Brazilian agriculture; he cites initiatives such as genetically modified (GM) foods, better use of land, and asset and equipment sharing. "The importance of safe GM, sanctioned by the National Technical Commission on Biosafety (CTNBio), has already been demonstrated. The new GM beans that Embrapa has just developed, free of typical diseases, mean a huge gain for society worldwide," Fava NEves says. "Imagine reducing the cost and pollution of pesticides in African countries, for example."

THE ENVIRONMENT QUESTION

The magnitude of the numbers for some sectors may mask shortcomings and difficulties. Take livestock. Using figures from the U.S. Department of Agriculture and Brazil's Ministry of Industry, Development and Trade, the Brazilian Association of Meat Export Industries (Abiec) shows that Brazil is now the second largest producer of beef, with its estimated volume of 9.7 million metric tons in 2011 behind only the 12 million metric tons of the U.S. This year its beef exports should reach 1.650 million metric tons. But the sector is not without problems. The first is vulnerability to FMD (foot and mouth disease), which restricts beef trade with markets like the U.S., Japan, and South Korea. "It will take a determined effort by the Brazilian government to solve the problem," says Fernando Sampaio, Aboec director and coordinator of sustainability. Another

Technology could still advance many areas of Brazilian agriculture, such as genetically modified foods, better use of land, and asset and equipment sharing.

is productivity. Sampaio points out that the United States, despite 50% fewer cattle than Brazil, has about 20% higher production. Among other factors, he says, the U.S. cattle are raised in confinement. "Still," he adds, "we have the greatest potential to grow because our technology in genetics and nutrition is among the best in the world. … We can gain in productivity by making better use of both pasturage and herd size."

The choice of Brazilian livestock farmers to avoid confinement has been questioned, for environmental reasons and to free cattle ranges for more productive crops. According to Sampaio, the mathematical models of the Institute for International Trade Negotiations (Icon) estimate that over the next 30 years, supplying domestic and export demand for soybeans, cotton, sugarcane, eucalyptus, and some crops will require freeing up about 15 million more hectares. "More than 10 million acres of old pasture areas can be freed by efficiency gains in livestock. The other lands will come from arable land in the Cerrado, not the Amazon, where legislation and the cost of opening new areas make it unprofitable," Sampaio says, noting that the country has a good track record of sustainability. "Even after 200 years of raising livestock we have retained

Brazil is now the second largest producer of beef; its estimated volume of 9.7 million metric tons in 2011 is behind only the 12 million metric tons of the U.S.

Share in global food exports, %

COUNTRY	1980	2010
U.S.	51	31
Brazil	1	16
Argentina	7	9
Australia	6	6

Sources: MBconsult and USDA.



Trade balance of agricultural goods, 2009

COUNTRY	BALANCE (US$ billion)
1° Brazil	49.5
2° Argentina	26.2
3° U.S.	18.8
4° Thailand	18.6
5° Canada	15.2
6° Indonesia	13.9
7° Australia	13,7
8° Russia	-8.0
9° European Union	-30.5
10° China	-35.7

Sources: Agroconsult, WTO.



85% of the Amazon, 87% of the Pantanal (tropical wetland), 63% of the Caatinga (Brazilian Northeast savanna), 60% of the Cerrado (Brazilian Midwest savanna), 41% of the Pampas (South American lowlands), and 26% of the coastal Atlantic forest. Europe has preserved only 0.3% of its original forests. Renewable water per capita is also higher here than in other meat-producing regions of the world."

In 2009 a Strategic Affairs Secretariat of the Presidency study identified 200 million hectares that were abandoned or used for low- productivity livestock farming. "We're still a country with just 1.3 head of cattle per hectare. We need to bring in technology and skilled labor," says Elibio Rech of Embrapa. Glauber Silveira, president of the Association of Producers of Soybeans and Corn of the Mato Grosso state (Aprosoja), says that the same hectare could produce 10 tons of grain, although he realizes for some degraded areas the high cost of recovery may not pay off. "In Brazil, we could release at least 25 million of hectares of pastures and increase agricultural production by 80% without opening any new areas," says Silveira, pointing out that in Uruguay repurposing pasture for soy has claimed about 1.1 million hectares. "But it has to be profitable," he says.

Although Brazilian soybean cultivation is a world productivity — 50 bags per hectare in the 2010/11 crop — farmers in the Midwest must spend heavily on technology and other investments to compensate for poor soil. "Our production cost is higher than in other countries," Silveira says. "The United

States uses 30 kg of fertilizer per hectare and Argentina 40; we use 450 kg. And we have to import it because high taxes discourage production of fertilizer in the country," he explains. To make matters worse, financing is scarce.

THE HIGH COST OF INEFFICIENCY

Soybeans have been the main commodity exported since the 1980s, when they displaced coffee. According to Aprosoja, in the past 10 years area planted in soybeans rose 48%, but production grew 200%. "We made great strides, especially in biotechnology. But to extend that advantage it is necessary to open roads, improve logistics, take care of ports and railroads," Silveira says.

Ignez Lopes, coordinator of the Center for Agricultural Studies of the Brazilian Institute of Economics of Getulio Vargas Foundation (IBRE), explains that "because agriculture is unable to pass on higher costs to prices, any inefficiency burdens production, especially for small farmers," she says. She explains that the tax burden — estimated at 37% for the sector — and appreciation of the Brazilian real both cut profit margins.

The Institute for International Trade Negotiations estimates that over the next 30 years, supplying domestic and export demand for soybeans, cotton, sugarcane, eucalyptus, and some crops will require freeing up about 15 million more hectares.

Soybeans: Changes in productivity and acreage, 2004-2009 (% change)

COUNTRY	Planted area (millions of ha)	Production (metric tons/ha)
Argentina	3.7	-4.8
Brazil	4.0	39.0
China	5.8	11.8
France	-0.7	0.5
Japan	-4.7	-2.3
Russia	2.4	19.5
European Union	15.6	-10.7
U.S.	-0.1	8.9



Source: Aprosoja, 2011.

Although Brazilian soybean cultivation is a world leader in productivity, farmers in the Midwest must spend heavily on technology and other investments to compensate for poor soil.

Francisco Turra, CEO of the Brazilian Poultry Union (Ubabef), agrees with Lopes that taxes and real appreciation depress agricultural competitiveness. In 2010 Brazil ranked third (12.2 million metric tons) in world chicken production, after China (12.5 million) and the United States (16.6 million).

Since 2004 Brazil has been the world leader in poultry exports, followed by the U.S. and the EU. In 2010, it shipped 3.8 million tons to more than 150 countries, an increase of 5% over 2009. And "the demand for animal protein is increasing worldwide," Turra says. "In Africa, for example, rising incomes have stimulated consumption of food, especially chicken. Rabobank, which specializes in agribusiness, predicts that by 2030 poultry consumption will expand by 60% and it will become the most common animal protein at the table, surpassing pork around the world."

FEA-YSP's Neves warns, however, that Brazil's comparative advantages are decreasing because the country is not addressing critical bottlenecks or working to boost production: "Today, investment decisions are made by multinational companies, which are finding more favorable and friendlier conditions in other countries than in Brazil. For now, we are still in a comfortable situation, with capital inflows reaching record highs. In the medium and long term, however, we are vulnerable because we have not made any progress in the reforms we need to make the country more competitive."

Urgently needed, Neves believes, are tax reduction and simplification, and labor reform, because structural factors make it hard to hire workers. But his greatest concern is infrastructure. "It's a disaster," he says. "Why build a bullet train [between São Paulo and Rio de Janeiro cities] when we could use the money to establish a route from the Brazilian Midwest to the Pacific coast and Asia, which is the major export market for food and bioenergy in the world?"

SUPPORTING SMALL FARMERS

According to the last IBGE Agricultural Census in 2006, 4.4 million family farms account for 84% of Brazilian agriculture. An IBRE study found that 3.3 million small farmers get federal support and credit through the National Program for Strengthening Family Agriculture (Pronaf). These properties account for 18% of the total area of Brazilian agriculture.

Even though the numbers are modest compared to large producers, small farmers contribute considerably to the basic food basket of Brazilians. Lopes points out how they are integrated with large agribusinesses: "Livestock producers, for example, benefit from the competitive price of corn to feed their animals, and often work in an integrated system with large companies with supply

contracts that guarantee a certain price stability against market price volatility."

Embrapa's Rech emphasizes the need to intensify efforts to bring more technology and better management to small farmers. "What we have to show the world is that we can innovate in the least efficient and most needy sectors," he says. "If we want to increase production, we have to think about public policies to strengthen small farmers. This will imply reducing carbon emissions, application of pesticides and fuel, taking the whole country to sustainable agriculture."

In its 2009 document, the Presidency SAE agrees, arguing that an effective agricultural policy should not only consolidate Brazil "as a major agricultural exporter" but also "enhance complementarities between corporate and family farming."

Considering that about 90% of Brazilian farms record gross sales of less than R$240,000 a year (US$140,000), Ignez warns that small farmers would be disproportionately punished by the environmental regulations being discussed as part of the Forest Code reform: "Treating corporate farming and small farmers under the same conditions may undermine the sustainability of small farms and become a disincentive to new investment."

The tax burden — estimated at 37% for the sector — and appreciation of the Brazilian *real* both cut agricultural profit margins.

Brazil's comparative advantages are decreasing because the country is not addressing critical bottlenecks or working to boost production.

Neves argues that this is the time to eliminate ideological biases: "There is much talk about income distribution, but very little about creating income. The National Indian Foundation (Funai) wants 20% of Brazil's territory to be indigenous area, and conservationists want 80% of Brazil's territory to not be exploited. … It is worth asking them how we would then generate income and export products. Brazil is well positioned to produce and export food and bioenergy in an entirely sustainable manner, for it is today one of the most competitive countries in the world in this segment."

How Brazilian agriculture can lead the world



Roberto Rodrigues

Former Minister of Agriculture

Solange Monteiro, Rio de Janeiro

After decades advocating for the potential of Brazilian agribusiness, former agriculture minister Roberto Rodrigues, now a businessman and academic, coordinator of the Center for Agribusiness School of Economics, FGV São Paulo, has raised nearly R$13 million to launch "I am Agro," to raise awareness of how much the countryside contributes to the Brazilian economy. Rodrigues discusses major achievements that have put Brazilian agribusiness on the world radar. He explains why sale of Brazilian land to foreign private entities should continue, and comments on how Brazil can assume world leadership of a project for food security and sustainable energy, and on the lack of a strategy, either public or private, for agribusiness.

***The Brazilian Economy* — In recent years, much has been said about the global importance of Brazil's agriculture. What have been the high points for Brazilian agribusiness?**

Roberto Rodriguez — The great development was the opening of the Brazilian Midwest savannah area in early 1970 with the Nippon-Cooperation Program for the Development of the Brazilian Cerrado, with cooperatives and settlements funded by the Brazilian and Japanese governments. This coincided with the creation of the Brazilian Agricultural Research Corporation (Embrapa) in 1973. My farmer was a farmer, and I bought a farm in the cerrado (Brazilian savannah). A competent agronomist told me I would regret the purchase: no one wanted bad land.

The introduction of technology to the cerrado is marked by a very important triad: Brachiaria, zebu cattle, and soybeans. Brachiaria is a rough grass that has adapted to the savannah, which

Photo: Roosewelt Pinheiro/ABr.

allowed for exponential growth for the cattle. Since by fixing nitrogen in the soil soybeans improve its quality, the cerrado became the goal of the modern pioneer: farmers who had 15 hectares [ha] in Rio Grande do Sul, the Parana, the Santa Catarina sold their land and came to the Midwest to buy 10,000, 20,000 ha, transforming the region and giving a continental dimension to our agriculture.

The Agronomic Institutes of Campinas and Paraná and some universities spurred the process, but it was mostly Embrapa. Its creators — Ministers Luis Fernando Cirne de Lima and Alysson Paulinelli — prioritized a massive build-up of human resources. From the beginning, technicians were sent abroad for advanced education, and Embrapa's high-level technical staff has given a big boost to Brazilian agricultural technology.

In July this year you helped launch the "I am Agro" movement, something you tried many years ago. Why is it acceptable now?

Public policies are only carried out if the majority of society is in favor of them. If society continues thinking that agriculture is old-fashioned, cannot compete, defaults on its debts, as Fernando Henrique Cardoso would say, and moreover spoils the environment, public policy will never be consistent.

For 30 years I've been trying to change this scenario. Why is it happening now? The world has begun to see Brazil as an emerging agricultural powerhouse. Late last year, the Organization for Economic Cooperation and Development [OECD] reported that in the next 10 years the world's food supply has to grow 20%. The OECD predicted that Brazil's agriculture will grow 40%.

At the same time, foreign capital, which saw Brazil's potential before the government and OECD, is flowing into sugarcane, buying and merging Brazilian groups. And without any reduction of protectionism in developed countries, with no domestic subsidy, the country's exports have been growing, thanks to technology and training and dynamic Brazilian farmers.

What has facilitated the training of Brazilian producers?

Until 1994, Brazilian agriculture was protected by the government, in a very paternalistic way, with bad public policy, with inflation of 80% a month, with a closed economy. Then the situation changed dramatically: inflation was curbed and Brazil was opened to international competition. In the process, thousands of producers disappeared, especially small producers in the South and Northeast and big producers in the Midwest who could not pay their debts. But there was also a huge improvement in

The world has begun to see Brazil as an emerging agricultural powerhouse.

competitiveness, backed by technology already available through Embrapa. But there was no management oriented to agriculture, no computer software promoting its modernization. It took almost 10 years for technology and modern management to reach the sector.

Our logistics are bad, our trade policy is a tragedy, and we do not have phytosanitary protection. We have no agricultural strategy.

Globally, what are the issues that most influence agribusiness?

There is a lack of world leadership. Obama was the hope to give a new direction to the world, but the U.S. economy's crisis wrecked that hope. Europe has no important leader. China, India, Russia are powerful but have internal problems. International institutions like the United Nations are ineffective. ... The driver of the contemporary world is financial, but the financial system has no ideology, no country, and no religion. Business weighs only two things: growth and concentration. This leads to terrible consequences and economic crises.

We have to find something that excites the planet: poor, rich, Asian, African, American, European ... The world is facing expensive food, increasing hunger, and energy shortages. The world needs a joint effort to address food security and sustainable energy.

Is Brazilian agribusiness in a position to lead this project?

Over the past 20 years, the area planted with grains grew 30% in Brazil, and grain production increased 179%. These numbers are stunning. Currently, we cultivate 49 million ha of grain. If productivity was the same as it was 20 years ago, we would need 53 million more ha. In other words, using very modern technology, unique in the world we have preserved 53 million ha. That's sustainability.

And this technology is attracting international capital. Why do you think Bunge, Cargill, ADM, Petros, Total, Petrobras buy ethanol plants in Brazil? Renewable energy. And we have it ready — or at least partly ready, because our logistics are bad, our trade policy is a tragedy, and we do not have phytosanitary protection. We have no strategy. "I am Agro" proposes that Brazil take the lead in a project of global food security and sustainable energy, because we've already done part of the homework. It will help people realize that, thanks to agriculture, they will have cheaper jeans and toilet paper, a better life, and Brazil will grow wealthier, with more jobs and more exports.

What stands in the way of this?

Logistics and infrastructure are the most serious challenges; any increase in grain production confronts infrastructure bottlenecks. Another problem is income

policy. The whole world, except Brazil, has rural insurance and price support policies. Right now ... agricultural prices are rising because the supply is less than demand, consumption is growing because of the emerging countries, and prices are going up. Fertilizer, machines, pesticides, seeds, credit, transport ... are all paid for by high prices. But what happens when supply equals demand, inventories return to normal, and prices begin to fall? ... An income policy for the sector is essential to end this inefficient business cycle.

Do trade agreements also affect this scenario?

Yes. We need more trade. In the last 10 years we have placed all our hope in the Doha Round. Mexico has made agreements with Chile, Colombia ... Everyone has made bilateral agreements with China, South Africa, creating markets. We're lagging behind. We need a more aggressive trade policy that involves government and private agreements as well, to add value and participate more in global markets. It's unbelievable that cattle here still get foot and mouth disease (FMD). Mexico ended FMD in 1948. We lose millions of dollars in beef exports because the Ministry of Agriculture has no money for phyosanitary protection.

Finally, improving technology is vital. We have by far the best technology in the tropical world, but this scenario is dynamic, it is constantly evolving. So you always have to invest in technology, especially private companies. The government cannot do everything.

What about regulatory factors, such as the Forestry Code and restrictions on sale of land to foreigners?

I support a definitive law like the Forest Code that can balance sustainability issues and farmers' interests, but the bill passed in the House needs corrections. That will not be hard, and I hope we can do it quickly, eliminating retrograde ideological extremism on both sides. As for land sales, we should not sell land to foreign governments, particularly China, but as for the private sector, what's the problem? ... Private companies go to Argentina, Colombia, and don't come here. It is estimated that Brazil lost U$15 billion last year because of [such restrictions]. It's foolish; we have land, technology, and people, but we lack capital.

"I am Agro" will help people realize that, thanks to agriculture, they will have cheaper jeans and toilet paper, a better life, and Brazil will grow wealthier, with more jobs and more exports.

Today, Brazil concentrates its agriculture in exportable products like soy, corn, and sugar that have benefited from rising international prices. Are there medium-term risks? Are we making the bet in the right direction?

There are many very serious risks. Imagine if China has a crisis, its inflation explodes, it decides to change its import program. This is a risk not only for Brazil but for the whole world. To open markets and trade policy is vital.

Another issue is adding value to exports. Brazil now exports about a third of the green coffee in the world but less than 3% of roasted and ground coffee. Germany and Italy, which do not plant coffee, export more than half the coffee products in the world. So should we roast and grind coffee to sell? No. If Brazil exported roast and ground coffee to Europe or Japan without a trade agreement, our products would die at the ports. Any decision to industrialize the agricultural sector to add value depends on trade agreements. Otherwise, we cannot add value to our exports.

Today it is charged that Brazil's agricultural production for biofuels jeopardizes food security worldwide.

Energy is the crucial issue today. Globally, increased food demand over the next 10, 20, 30 years is small compared with demand for energy. Japan, the European Union, and the United States together have an average of 61 cars for every 100 inhabitants. China and India, representing one third of the world's population, have less than 3 per 100. In recent years, China has been buying the most cars in the world. Because of the cars it will consume more fuel than food. Clearly, oil will not be the salvation. Therefore, bioenergy is vital. Of course we should not substitute energy for food. But we have the model with sugar cane and cellulose.

Any country can produce food. Even Siberia. It may be expensive, but it can be done. Bioenergy can only be produced efficiently if there is sun year-round. And where is it sunny year-round? It is between the Tropics of Cancer and Capricorn — where Latin America, Sub-Saharan Africa, and Asia's poorest countries are located. These are the countries that can produce bioenergy, not only for fuel but also for electricity for cogeneration. In these poorest countries, the population will grow more, so will per capita income, and so will demand for energy, renewable energy, and less CO_2 emissions. This changes global geopolitics. I think that bioenergy is even more important for Brazil than food.

Without any reduction of protectionism in developed countries, with no domestic subsidy, the country's exports have been growing, thanks to technology and trained and dynamic Brazilian farmers.

Yet we face problems with the supply of ethanol.

This happened because we do not have a strategy, public or private. In 2009, it rained a lot and we couldn't harvest 60 million tons of sugarcane. In 2010, there was a brutal drought that lowered produc-

tion by 50 million tons. This year it is estimated that the harvest will be 15% lower. In three years, that's nearly 200 million metric tons less. Meanwhile, domestic demand has grown enormously because of the flex car. Another factor is the explosion in sugar prices from shifting production from alcohol to sugar. None of these factors would be much of a problem if there were a clear strategy that incorporated storage, logistics, production, and financing.

Imagine if China has a crisis, its inflation explodes, it decides to change its import program. This is a risk not only for Brazil but for the whole world.

How do you think the Ministry of Agriculture is doing?

I hope they do a good job. But the Foreign Relations Ministry makes international agreements. The Ministry of Development, Industry and Foreign Trade, with the Foreign Trade Chamber (Camex), makes the trade rules. The Ministry of Environment deals with forests. The Ministry of Agrarian Development handles land issues. Logistical questions are the province of the Ministry of Transport, for railways and highways, and the Port Authority. Government banks such as the National Bank for Economic and Social Development and Banco do Brazil deal with financing. The Ministry of Planning manages resources and plans. The Central Bank sets interest and exchange rates. Unless there is a government agricultural strategy that brings all this together, you could appoint Jesus Christ as a minister, but nothing would happen.

What are the prospects for agribusiness in the next decade?

In Brazil, there are restrictions on foreign investment. But there is also an internal movement of large Brazilian business and industrial groups that see agribusiness from a new perspective. Economic issues will spur the process, but the politics could be either highly restrictive or highly propulsive — it will depend on the vision of the Brazilian government. The president is a determined woman, and I think she wants to make Brazil a major player in global agribusiness.

The future has arrived. I am very hopeful that our time has come, that an external drive will lead Brazil to produce an effective strategy.

We need a more aggressive trade policy that involves government and private agreements to add value and participate more in global markets.



The new National Solid Waste Law

Brasilia – Work station of the Cooperative of Recycling, Labour and Production (Cortrap).

Solange Monteiro, São Paulo

After almost 20 years of discussion, the National Solid Waste Policy (PNRS) was passed in December 2010. In general, it has been much praised. However, the law divides responsibility for correct waste disposal between manufacturers, retailers, distributors, importers, consumers, and government. The question now is how to bring together different players with different degrees of awareness, training, and financing. This was central to the discussion during the first Seminar on Solid Waste in Brazil: Perspectives and Challenges, presented October 24–25 in São Paulo, by the Conjuntura Econômica magazine and the Brazilian Institute of Economics (IBRE) of the Getulio Vargas Foundation.

CONCEPT

Asking why previous proposals had failed and the PNRS succeeded, Congressman Arnaldo Jardim ((see p. 40 sidebar for full titles of all participants), who chaired the

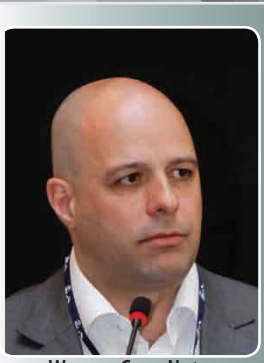
Photo: José Cruz / ABr.

working group responsible for the policy proposal, said, "This is an integrating law." Significantly, the PRNS replaced the concept of polluter-payer ("which sounded like a threat") with the idea of shared responsibility. A second factor was to set targets by sector for collection and disposal with reporting systems and waste inventories. "It is expected that industries will come to a consensus on their tasks," Jardim said. "Only when there is no consensus will the government impose mandatory targets."

Nabil Bonduki of the Ministry of Environment said the first PNRS requirement is to minimize residues. "The packaging industries, for example, should rethink the packaging of products with a short shelf life that generate waste quickly," he said. Sharing management of solid waste will require first-rate planning "because the PNRS will not be successful unless all levels of government are mobilized to carry out its


Arnaldo Jardim


Nabil Bonduki


Werner Grau Neto

"It is expected that industries will come to a consensus on their tasks. Only when there is no consensus will the government impose mandatory targets."

Arnoldo Jardim

"Our society is not used to thinking that the government, citizens, and industry all have a share in this task."

Werner Grau Neto

"The PNRS will not be successful unless all levels of government are mobilized to carry out its policies."

Nabil Bonduki

policies." Bonduki said the PNRS policy objectives can transform Brazilian society — fighting poverty, for instance, by bringing collectors into the formal market

For Jardim, the challenge is for society to change its consumption patterns. He pointed out three major tasks for successful PNRS implementation: "First, we must reconcile existing state and municipal laws; there are still conflicts. Second, it is necessary to institute policy tolls, particularly taxes. And third, we have to valorize recycled material."

Lawyer Werner Grau Neto said, "Our society is not used to thinking that the government, citizens, and industry all have a share in this task." He stressed


Breno Palma


Eleusis Bruder Di Creddo


Cristina Godoy

the responsibility to carefully craft agreements so that they do not generate disputes. "We cannot wait for the judiciary to decide questions about this policy, nor wait another 20 years to see it in place," he said.

MUNICIPALITIES

The experts saw municipalities as weak links in the PNRS chain. The 5,565 Brazilian municipalities must present waste management plans by August 2012 and close dump sites and start landfills and selective collection by August 2014. So far, according to the Ministry of Environment, just 1,112 municipalities have landfills, and 670 have selective collection. According to businessman

THE GREAT CHALLENGE
Increasing the number of sanitary landfills and expanding selective collection of garbage

	Counties with sanitary landfills		Counties with selective collection	
Region	Number of counties	Population (Millions)	Number of counties	Population (Millions)
North	37	2	16	1
Northeast	97	15	57	11
Midwest	62	4	27	2
Southeast	534	51	335	38
South	382	15	235	7
Total	1,112	88	670	58

Source: Ministry of Environment.

Breno Palma, even in urban centers claiming to have selective collection, the recycling rate is less than 2% of total waste produced. He estimated that every year the country loses R$8 billion in recycling opportunities.

According to Eleusis Bruder Di Creddo, Brazil's urban population currently generates 183,000 metric tons of waste a day, 32% of which could be recycled but only about 0.3% (1,500 metric tons) actually is. It is true, he said, that every day recyclers handle 26,000 tons of metal, 10,000 tons of paper, 26,000 tons of plastic, and 1,300 tons of glass. But, he said, this "comes from industry, which already has a reverse logistics chain and informal collection."

Many analysts consider it unlikely that municipalities will articulate good waste management plans in an election year, but Bonduki said that failure to meet the deadline will mean a loss of transfers from the federal government and stressed the need to find economically viable ways to establish systems. One study, he said, suggests regionalization, bringing all municipalities into 380 larger units.


Mario Reali


Wladimir Ribeiro


Diógenes Del Bel

The cost of setting up and maintaining landfills only becomes feasible, he said, for regions with at least 120,000 residents. Large regional units, he added, "could be managed by concession, public-private partnership, or direct provision."

Cristina Godoy noted that in the 1990s, the Company of Environmental Sanitation Technology of São Paulo state (Cetesb) helped to establish municipal consortia to set up landfills, "but bad management eventually resulted in dumpsites," she said. That must be avoided this time.

For mayor Mario Reali, well-managed consortia might help generate technical expertise. "We have

Consortia "require mayors with regional vision. In addition, the consortium not only demands scale, it demands that large municipalities help small ones."
Wladimir Ribeiro

RETAIL AT THE EPICENTER

Every day about 25 million Brazilians go to a supermarket. That is why the retail sector has become the center of major initiatives to raise the awareness of consumers and suppliers.

Although the three largest supermarket chains operating in the country added nearly 800 points for voluntary disposal (PEVs) including packaging, batteries, light bulbs and electronics, Sussumu Honda said supermarkets are still concerned about the PNRS concept of shared management. "When it comes to reverse logistics, many questions remain to be investigated and decided," he said.

Honda pointed out that "The private sector has to carry out a number of actions that depend on the efficiency of the public sector in selective collection. Otherwise, it may be a major effort for nothing." He also had questions about the management capacity of cooperatives of those who work with solid waste. "When the policy is implemented, solid waste volumes will increase significantly, and


Sussumu Honda

logistics will have to work in parallel," he said. "If not, we risk seeing supermarket parking lots transformed into dumpsites."

Honda argued that in addition to sharing responsibilities for disposing of used products, retailers and manufacturers should consider sharing costs and think about pricing. "There is the risk of burdening the consumer in a few product categories, inhibiting their consumption," he said.

Actions within the retail sector have unquestionable potential. Honda pointed out the sector's previous commitments to the Ministry of Environment to reduce the use of plastic bags by 40% by 2014; in some cities the target has already been met. In fact, he said, in Jundiai city the use of plastic bags is down by 95%.

Felipe Zacari Antunes said that Walmart encourages use of reusable bags by offering customers a three-cent refund for every five items purchased without a plastic bag; "since 2009, we have paid R$1.9 million in refunds to customers and reduced the use of plastic bags by 42%."


Environmentally friendly reusable bags are sold commercially to replace plastic bags.

Photo: Fabio Rodrigues Pozzebom / ABr.

to invest in technology and institutional arrangements," he said, citing the example of Lindoia region in São Paulo, where 14 municipalities have come together to set up a shared landfill.

Lawyer Wladimir Ribeiro warned, however, that consortia do not solve all problems. "They require mayors with regional vision. In addition, the consortium not only demands scale, it demands that large municipalities help small ones. If São Jose dos Campos city, for example, does not help cities like Monteiro Lobato and Paraibuna," he said, "the solid waste problem will not be solved."

A problem identified by Diogenes Del Bel is that there is no information system to serve as a basis for decision making. The ideal would be a national database consolidating all waste treatment company inventories in each state, to help establish a quality standard for waste treatment services.


Odair Luiz Segantini


Newton de Lima Azevedo


Estanislau Maria

Odair Luiz Segantini pointed out that if there is to be a shift in the model for waste management, the taxpayer will have to pay for it. "Today, the average investment in public sanitation in Brazil is R$10 per person per month. In some U.S. states it is R$70, and the excellent public sanitation in Japan costs R$100," he said. Municipalities will need to establish ways to collect such taxes.

"Today, the average investment in public sanitation in Brazil is R$10 per person per month. In some U.S. states it is R$70, and the excellent public sanitation in Japan costs R$100."

Odair Luiz Segantini

"Even if the cities had all the resources they need to invest [in waste disposal] today, it would not help because cities are not prepared to manage waste systems."

Newton de Lima Azevedo

THE COMPLEX ELECTRICAL AND ELECTRONIC LANDSCAPE

The PNRS requires certain sectors to undertake reverse logistics. This will not be easy for the electrical and electronics sector, which represents 15% of Brazil's industrial output, 4.5% of GDP, and a vast variety of products.


André Luis Saraiva

André Luis Saraiva questioned whether an industry so diverse — household appliances, computers, and cell phones among other products — can carry out reverse logistics. A major obstacle, he said, is the attitude of the Brazilian consumer. "With used electronics, 35% of consumers keep them; 29% donate them; and 19% sell them. So how can we comply with the law?" he asked. "The industry should be responsible for recycling 100% of returned products, not sold products; otherwise, to meet the target some industries will rent, not sell, their products, taking ownership away from consumers."

Saraiva also mentioned the relatively large informal market in information technology. "A trade federation surveyed in Rio de Janeiro reports that 42% of consumers buy pirated products. Who will recycle those goods?" he asked. "Who is responsible for reverse logistics in e-commerce, which already represents 32% of purchases in the country? What about licensing and approval of hazardous waste transportation? Who is responsible for deleting information from computers and cell phones that are returned?" Saraiva argued for gradual implementation of the law to give adequate time to raise consumer awareness of how recycled inputs are used in new products.

Saraiva also pointed out that there are no companies in Brazil that recycle, for example, used printed circuit boards and monitors. "Most companies end up reselling collected materials abroad," he said.



Photo: ABr archive.

Newton Lima Azevedo believes no institutional arrangement will be effective if it does not prioritize the improvement of public services. "Even if the cities had all the resources they need to invest [in waste disposal] today, it would not help because cities are not prepared to manage waste systems," he said. "We have 100 million people who do not benefit from sewage treatment. To bring them into the system, we would need to invest about R$17 billion a year through 2020. In the case of treated water, we are losing 40% in distribution. This is a serious waste." According to Azevedo, the 26 sanitation utilities in Brazil have more expenses than revenue, which suggests poor governance. He recommends instead public-private partnerships.


Felipe Zacari Antunes


Cesar Faccio


Adrianna Charoux

CONSUMERS

Some seminar participants argued adamantly that a major aspect of the PNRS should be to educate society about the need to change consumption patterns. "We already consume one and a half times what the planet can produce and absorb. We are using our ecological overdraft," said Stanislaus Maria. He noted that 76% of the resources extracted globally are consumed by only 16% of the people and gradual improvement in per capita income in developing countries could considerably

IF IT IS PROFITABLE, THERE IS MARKET
Share of selective garbage collection in total recycling, 2008

	Quantity (1,000 tons/year)	Share in total recycling (%)
Metals	9,818	1
Paper	3,828	8
Plastic	962	18
Glass	489	10

Source: Ministry of Environment.

exacerbate the environmental problem. He noted cities where awareness is more advanced. For instance, Copenhagen, Denmark, is building a huge composting plant within the city. "Copenhagen intends to have zero waste by 2016," he said.

To reach this level will entail a huge educational effort, considering that "70% of the population dispose of batteries in the trash, 66% drop medicines in the trash, and 39% discard cooking oil down the water drain," pointed out Felipe Zacari Antunes. Brazilian consumers have not yet felt in their pockets the consequences of their mismanagement of solid waste. In the tire industry, for instance, "unlike Europe, where the cost of disposing of used tires is reflected in a fee paid by the consumer upon purchase of a new tire, here the costs ... must be paid by manufacturers," said Cesar Faccio, whose organization is responsible for recycling the tires manufactured in Brazil.


Fernanda Belizário


Jorge Augusto Rodrigues


Jorge Soto

Adrianna Charoux noted that the PNRS is not clear about the responsibilities of consumers. It is necessary, she said, to establish clearly how to dispose of products and packaging and develop an efficient collection system.

In 2006 Estre, a company that provides landfill management, logistics and waste disposal, and soil remediation, established the Estre Institute, which in partnership with University of São Paulo state offers environmental education programs for schools. It aims to reach 11,000 high school students in 2011.

Fernanda Belizário argued that educating from childhood on transcends environmental concerns; she believes we need to show how in modern society consumption is part of the process of forming each individual.

"We do not talk about garbage; that is pejorative. We look at everything as if it is input, and find a place for it."

Jorge Augusto Belizário

SOCIAL INCLUSION

Can all dumpsites be closed by 2014, as the National Solid Waste Policy requires? Everything will depend on whether the thousands of collectors who work in dumpsites can be brought into the formal market. "Today we have about 600,000 collecting workers working in unhealthy conditions, and they need to participate in the solid waste treatment cycle," Nabil Bonduki said.


Roberto Laureano Rocha

Roberto Laureano Rocha says the National Movement of Recyclable Material Collectors (MNCR) supported the law but still sees many challenges. "The first is to ensure we integrate [collectors in] this process in a dignified manner," he said. Rocha argued that collectors need to be seen as service providers and should participate in discussions on technologies for processing each type of solid waste.

For Werner Grau Neto, the law raises other questions. "There is the issue of handling hazardous waste, which the government has been unable to address with adequate health policies [for affected workers]," he said. "But that implies a liability risk for private companies, and now the courts are inundated with lawsuits by cooperatives against companies."

Henio De Nicola noted that "Strengthening the integration of collectors is desirable. But it is not clear … where funding will come from to invest in collector cooperatives to meet the policy goals," he said. "Today only 7% of all collecting workers are organized in cooperatives." The industry will have to pay to bring collectors into the solid waste treatment cycle.


The appropriate destination of garbage is a problem that affects most Brazilian cities.

Photo: ABr archive.

BUSINESS

Because companies are exposed to public judgment on their environmental practices, the private sector has already taken action. Jorge Augusto Belizário, for instance, said that "We do not talk about garbage; that is pejorative. We look at everything as if it is input, and find a place for it." In the Souza Cruz company, he says, this line of thinking is applied not only to reducing the waste generated, but also to inputs. "For example, our water consumption in 1999 was 8.7 cubic meters of water per thousand cigarettes manufactured; today, it is 2.2 cubic meters,'" he says.


Renato Netto

Renault Freitas de Castro

Henio De Nicola

At the Braskem petrochemical company the commitment to sustainability goes beyond reducing waste. "We encourage the market for recycled plastic by purchasing it," Jorge Soto said; he believes that other large buyers should do the same. Similarly, Renato Neto said that Johnson & Johnson is "concerned to use recycled material, reducing amounts — the packaging for Band Aids now uses 20% less material — and thinking about the life cycle."

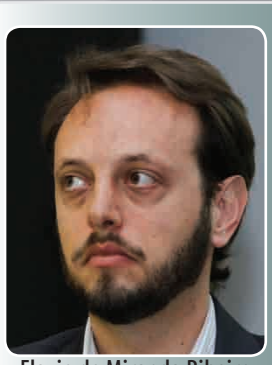
Companies see good business opportunities in recycled waste. "The market for recycling aluminum, for example, is composed of 2,000 companies with revenues exceeding US$600 million," says Renault Freitas Castro.

Henio De Nicola stressed the importance of government incentives to encourage recycling, and gave credit to Brazil. "In the last nine years we have recycled more [aluminum cans] than countries like Japan and Germany. It is a self-sustaining chain that does not depend on subsidies. We do not get tax relief," he said. "That means an aluminum can, whose life cycle is one month, pays the same taxes 12 times in a year."

Flavio Miranda Ribeiro thought that companies in general are showing more interest in their responsibilities. In October, the government received proposals from sectors that the PNRS requires to use reverse logistics related to collecting, disposing or recycling their used products. "We received over 100 proposals. It is an important test to determine the maturity of productive sectors to negotiate aggressive commitments," he said.

Silvano Costa was also optimistic about the prospects for reverse logistics. "The logistics can be carried out through government regulation, statements of commitment, or sectoral agreements. We want to prioritize sectoral agreements," he said.

Ribeiro said that companies realize that their inputs will become increasingly scarce and expensive, so saving resources has value. He saw four major ingredients in the PNRS transformation of Brazil's consumer society: "First, it is recognized that many changes are underway, and other radical ones must happen soon; second, society must mobilize for action and take responsibility; third, there is an unquestionable need for convergence of efforts and policies; and finally, we recognize that environmental education is indispensable."


Flavio de Miranda Ribeiro


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