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Issues on Brazil **Agricultural Policy**

Building bridges between the
agribusiness and the financial market



Ministry of
Agriculture, Livestock
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The world view of the Brazilian agriculture

Roberto Rodrigues¹

Over the last fifteen years, international agriculture has been marked by significant changes in agricultural and macro economic policies in Brazil and other emerging nations, a phenomenon that has been repeated with lesser intensity in the OECD countries.

These transformations, which are strongly market-oriented, resulted in greater efficiency, increased production and income growth in emerging economies, bringing important changes to world agricultural trade.

The dynamism, size and high competitiveness of the Brazilian agriculture have been responsible for its impressive growth and participation in the international market, strengthening its position as an agricultural powerhouse.

In order to enlarge knowledge about this reality, OECD conducted a study called "Review of agricultural policies in Brazil", identifying the main changes in agricultural policy and the productive and commercial performance of the agriculture sector, paying special attention to social and environmental aspects. One of the study's main conclusions is that Brazil is one of the countries that least subsidizes agriculture. In other words, the growth of Brazilian agribusiness in the world market is solely the result of its competitiveness.

The publication of the study was preceded by an ample debate between the OECD team and specialists from the Secretariat for

Agricultural Policy (SPA/MAPA), from other areas of the government and from research and teaching institutions. This initiative was complemented by the text "Brazilian Agricultural Policy in Perspective" made by SPA, which lays emphasis on agricultural policy transition and the launching of new financial instruments designed to foster agribusiness competitiveness.

Considering the importance of these initiatives for a more ample knowledge of the Brazilian agricultural policy, this special bilingual edition of the *Revista de Política Agrícola* presents a summary and the conclusions of the study conducted by the OECD and the full content of SPA study.

The innovative feature of recently-approved agricultural policy instruments works as bridges which will link the interests of rural producers, cooperatives and agribusiness firms, to those related to financial and capital markets. This union of interests between field and city will strengthen Brazil's agriculture and agribusiness, which reveals the strength and entrepreneurship of our agribusiness producers.

With the publication of these two studies, the Brazilian government expresses its gratitude to the OECD and to all involved persons, for their contribution to world agriculture and to Brazil.

¹ Minister of Agriculture, Livestock and Food Supply.

Foreword

Stefan Tangermann¹

This Special Edition presents the highlights of the OECD Review of Agricultural Policies: Brazil. The Review was undertaken as part of an initiative to provide analyses of agricultural policies for four major agricultural economies outside the OECD area, the others being China, India and South Africa. The study measures the extent of support provided to agriculture using the same method that OECD employs to monitor agricultural policies in OECD countries. In addition, it focuses on key interactions between Brazil and OECD countries, including the impacts of trade and agricultural policy reforms. The aim of the country study is to strengthen the policy dialogue with OECD members on the basis of consistent measurement and analysis, and to provide an objective assessment of the opportunities, constraints and trade-offs that confront Brazil's policy makers.

The study was carried out by the OECD Directorate for Food, Agriculture and Fisheries. The principal authors were Jonathan Brooks and Olga Melyukhina, who received valuable contributions from Darryl Jones, Andrea Cattaneo, Hsin Huang, and Garry Smith. Research and statistical support were provided by Florence Mauclert and Adriana Verdier, and technical and secretarial assistance by Stefanie Milowski and Anita Lari.

The study benefited from the substantive input of a range of Brazilian experts. Information on domestic policies was provided by Guilherme Leite da Silva Dias from the University of São Paulo (USP); Gervasio Castro de Rezende and José Garcia Gasques from the Institute of Applied Economic Research (IPEA); Antônio Salazar Brandão from the Federation of Industries of the State of Rio de Janeiro; and Vicente Marques from the Centre for Agrarian Studies and Rural Development of the Ministry

of Agrarian Development (NEAD). Information on trade policies was provided by researchers at the Institute for International Trade Negotiations (ICONE), including Mário Jales, Antônio Neto, Joaquim da Cunha Filho and Marcos Sawaya Jank. The analysis of changes in incomes, poverty and inequality was provided by Steven Helfand and Edward Levine from the University of California, Riverside (USA). A database and framework for assessing the prospective impacts of global trade and agricultural policy reforms in Brazil was provided by a research team at the FIPE / USP, including Carlos Azzoni, Fernando Gaiger, Joaquim Guilhoto, Eduardo Amaral Haddad, and Tatiane de Menezes. This was complemented by modeling work undertaken by Scott McDonald (University of Sheffield, UK).

The study benefited greatly from the support of the Brazilian Ministry of Agriculture and Food, the Ministry of Agrarian Development, and the National Treasury, whose experts provided essential information on the functioning of agricultural programmes in Brazil as well as comments on the draft report.

The study was made possible through financial assistance from Germany, the Netherlands, New Zealand, Spain, Switzerland, the United States, and the European Union.

The study was reviewed in a roundtable with Brazilian officials and experts in Brasilia in March 2005. Subsequently, Brazilian agricultural policies were examined by the OECD's Committee for Agriculture in its 141st session in June 2005, bringing together policy-makers from Brazil, OECD Member countries and some non-OECD countries. The report is published under the authority of the Secretary-General of the OECD.

¹ OECD: Director of the Directorate for Food, Agriculture and Fisheries.

Review of agricultural policies in Brazil¹

Highlights and Policy Recommendations

Brazil provides relatively little support to its farmers. Producer support, as measured by the PSE, accounted for 3% of the gross value of farm receipts in 2002-04 – a rate comparable with that of New Zealand (2%) and Australia (4%), and far below the OECD average (30%). The highest support levels are for import-competing staples (wheat, maize and rice) and cotton, ranging between 6% and 17% for these products.

Support to farmers accounts for about three-quarters of all support to agriculture, with the remaining quarter delivered as general services to the sector, such as research and extension, training, and the development of rural infrastructure. These general services include important long term investments, but have been declining in relative terms at the expense of credit subsidies, about half of which stem from the restructuring of farm debt accumulated over the period of macroeconomic instability in the late-1980s to mid-1990s.

The low level of producer support reflects the radical transformation of the Brazilian economy that has occurred over the last 15 years. The abandonment of import substitution policies has enabled agriculture to grow rapidly. Livestock output rose particularly quickly in the 1990s, while more recently there has been a boom in the production of soybeans, driven by high prices and a low exchange rate. These effects have since dissipated, so it is unrealistic to extrapolate

current growth rates. Agricultural growth has been mostly attributable to improved productivity and lower prices for imported inputs, with increases in agricultural area a more recent factor.

The recent boom in Brazil's agricultural exports has been associated with a change in the composition and direction of trade. There has been a shift away from traditional tropical products, such as coffee and orange juice, towards soybeans, sugar, and meats, notably poultry and pigmeat. Although OECD country markets are still very important, with more than 40% of agricultural exports destined for the European Union, the fastest export growth is with countries outside the OECD area, notably China and Russia. Even so, the majority of agricultural production in Brazil serves the domestic market. The share of agricultural production exported has typically averaged around 25%, although that share climbed to 30% in 2004.

Having substantially liberalised its own agricultural policies, the main source of future benefits to Brazil is reforms in other countries, where access to OECD country markets is the most important issue. Brazilian exporters are impeded by high tariffs in key markets, tariff escalation according to the degree of processing for several important commodities, unfavourable treatment under trade preference schemes and tariff-rate quota systems, and significant non-tariff measures (notably for livestock products).

¹ Extract from the study "Review of Agricultural Policies in Brazil", OECD 2005.

At the domestic level, sectoral growth could be further supported through improvements in infrastructure, changes in the credit system (notably on the treatment of outstanding debt), and a simplification of tax policies.

At the same time, there is a strong need for effective social policies. Although rural poverty has fallen significantly in Brazil, the situation for the poorest of the rural poor has actually deteriorated, and poverty has become increasingly concentrated in the North and North East regions. This calls for targeted measures to upgrade the farming skills of smallholders, and to facilitate income diversification and the exploitation of non-farm opportunities. Investments at the individual level, for example through education and health expenditures, are important, as are policies that foster rural development, such as infrastructure development.

Reforms and their impacts

Brazil's economy has undergone radical reforms that have provided a more stable investment climate and stimulated agricultural growth.

Brazil is a major player in the global economy, with a population of 180 million and a GDP of USD 1,300 billion (in PPP terms) that places it among the ten largest economies in the world. The country is endowed with vast natural resources, and has an agricultural area that is exceeded only by China, Australia and the United States. Primary agriculture accounts for 8% of GDP, while agricultural products account for about 30% of exports. Agriculture thus plays an important role in the overall functioning of the nation's economy.

Over the past 15 years, the Brazilian economy has undergone a radical transformation. Following the abandonment of

import substitution policies in the late 1980s, the government embarked upon a wide range of reforms. These included macroeconomic stabilisation, structural reforms and trade liberalisation. Macroeconomic stability was achieved in the mid-1990s when, following several unsuccessful stabilisation plans, the Real Plan invoked the budgetary restraint necessary to bring inflation under control. Structural reforms included the privatisation of state-owned enterprises, the deregulation of domestic markets, and the establishment of a customs union, Mercosur, with other South American countries. Policy changes included deep tariff cuts and the elimination of non-tariff barriers to trade.

Agriculture both contributed to these reforms and benefited from them. Through the 1990s, there was a scaling down of expenditures on price support and subsidised credit; the markets for wheat, sugar cane and coffee were deregulated; and trade was liberalised not just on the import side, but also for exports, notably with the elimination of export licenses, quotas and taxes. Agriculture benefited in overall terms from the change in development paradigm, as it removed the discrimination against the sector that was implicit in the support for manufacturing industry, and helped establish a more stable investment climate.

The Brazilian economy is now much more robust than it was ten years ago, but it remains vulnerable to outside shocks, as evidenced by contagion from the Asian crisis in 2001, and the effects of weak market sentiment in the run-up to the presidential election of 2002.

Macroeconomic stabilisation, by removing the regressive effects of inflation, led to a substantial reduction in the level of poverty, which fell by 10 million in just two years (1994-95). But reforms also induced adjustment stresses, including within the agricultural sector, where producers of importable commodities (such as wheat) were

suddenly forced to compete. Moreover, reforms have not resolved Brazil's social problems. The incidence of poverty remains high, at more than 30% of the population, while the distribution of income is among the most unequal in the world.

Agriculture has grown rapidly since the abandonment of import substitution policies, and this growth has accelerated in the last few years (Figure 1). A large share of this expansion has occurred in the Centre West of the country, where, through the 1990s, livestock output rose particularly rapidly. More recently there has been a boom in the production of soybeans and complementary crops (e.g. second crop maize). Much of the recent boom is attributable to the combination of a short term strengthening of world prices and a low exchange rate. These effects have since dissipated, so it is unrealistic to extrapolate current growth rates.

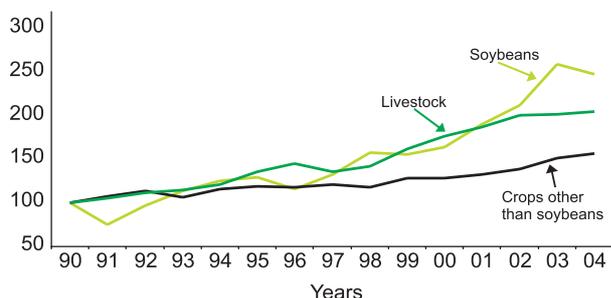


Figure 1. Output indices for crops and livestock products, 1990-2004.

1990=100

Source: IBGE / SIDRA.

Agricultural growth has been mostly attributable to improved productivity and lower prices for imported inputs, with increases in agricultural area a more recent factor.

The growth in output has occurred despite falling long term prices for most commodities. One reason is that output prices fell more slowly than input prices through most of the 1990s, as the opening up of trade allowed

access to imported inputs (notably machinery). Allied to this, productivity improved substantially, with a 40% improvement in total factor productivity between 1990 and 2004. The productivity of importables (wheat, dairy) improved more than that of exportables, as the former were exposed to foreign competition while the latter were competitive anyway. In fact, some crops that were formerly imported have recently become net exports (e.g. maize and cotton). Yields have improved substantially, thanks largely to agricultural research tailored to climatic conditions in the Centre West, while big improvements in labour productivity (77% between 1990 and 2004) reflect the release of farm labour from the sector. However, with high real interest rates, access to capital remains a problem for many farmers, and continues to dampen overall productivity growth.

Until recently, it was productivity growth rather than the mobilisation of new factor resources that underpinned agricultural growth. Total agricultural area remained more or less constant through the 1990s, as increases in the Centre West were offset by reductions in the South and South East. However, between 2000-01 and 2003-04 the area planted to crops increased from 52 to 61 million ha, with soybean area alone increasing by 50%. The rapid expansion of soybean acreage in the Centre West can be seen as a precursor to more balanced agricultural development in this region, as infrastructure development catches up and producers stand to benefit from external economies of scale. The shift in the locus of agricultural production has also led to an increase in the average size of farm operations, as land in the Centre West offers greater economies of scale.

The growth in soybean area and rising demand for pasture from livestock farmers threatens the Amazon rainforest. In addition there are concerns about the environmental impacts of agricultural development in the

Cerrado grasslands. Since 1990, Brazil has lost an area of forest equal to the size of the United Kingdom. Large scale commercial ranchers are responsible for the majority of this deforestation, ahead of logging and the migratory slash and burn practises of many subsistence farmers. Some argue that soybean farming has contributed indirectly, by causing the migration to the forest frontier of displaced cattle ranchers and subsistence farmers. The trade-off between the economic benefits of agricultural expansion and the environmental benefits of forest preservation is a difficult domestic policy decision facing Brazil, while the choice of instrument to achieve the desired balance needs to take account of the difficulties of policing such a vast area. Deforestation would be more limited if more integrated farming practises with higher livestock stocking rates were adopted in the *Cerrado*. Current research in Brazil is oriented towards this objective.

The recent boom in Brazil's agricultural exports has been associated with a change in the composition and direction of trade.

Despite rapid export growth, the majority of agricultural production in Brazil serves the domestic market. The share of agricultural production exported has typically averaged around 25%, although that share climbed to 30% in 2004. This share is similar to that of the United States (which also has a large domestic market), but lower than that of other agricultural exporters such as Canada, where 40% of production is exported, and Australia, where the exported proportion averages about two-thirds. The domestic market is likely to continue to be the main outlet for production. On the supply side, the recent production boom is likely to fade with weaker prices, a higher exchange rate, and the exposure of infrastructure bottlenecks. On the demand side, there is considerable scope for poorer Brazilians to consume more products with relatively high income elasticities (such as meat and fruit and vegetables).

The recent export boom has been driven primarily by soybeans and soybean products, but supported by other products, such as sugar, poultry and pigmeat. In the last few years, Brazil has become an exporter of maize and cotton (both of which can be rotated with soybean production). More generally, there has been a shift in the composition of exports, away from traditional tropical products, such as coffee and orange juice, towards soybeans, sugar, and meats, notably poultry and pigmeat.

The direction of agricultural trade has also changed. Although OECD country markets are still very important, with more than 40% of agricultural exports destined for the European Union (Figure 2), and exports to most OECD countries are increasing in absolute terms, the fastest export growth is with countries outside the OECD area, notably China and Russia (Figure 3).

Shifts in the scale, composition and location of production have been associated with profound structural changes within the agricultural sector. These changes have had important implications for the level and distribution of incomes, and the incidence of poverty.

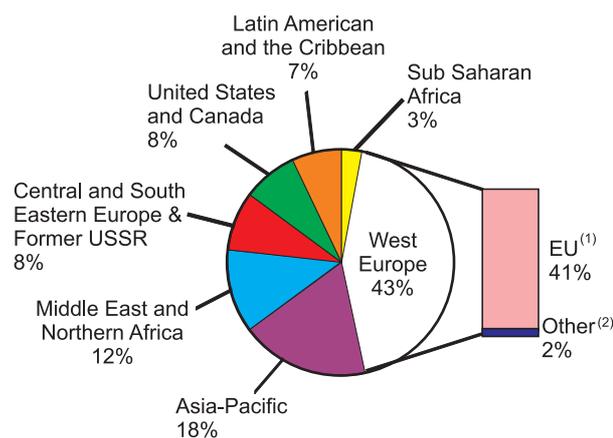


Figure 2. Brazilian agro-food exports by destination region, 2000-03 average.

⁽¹⁾ EU/15; ⁽²⁾ Other countries include Cyprus, Iceland, Liechtenstein, Malta, Norway and Switzerland.

Source: MDIC ALICE.

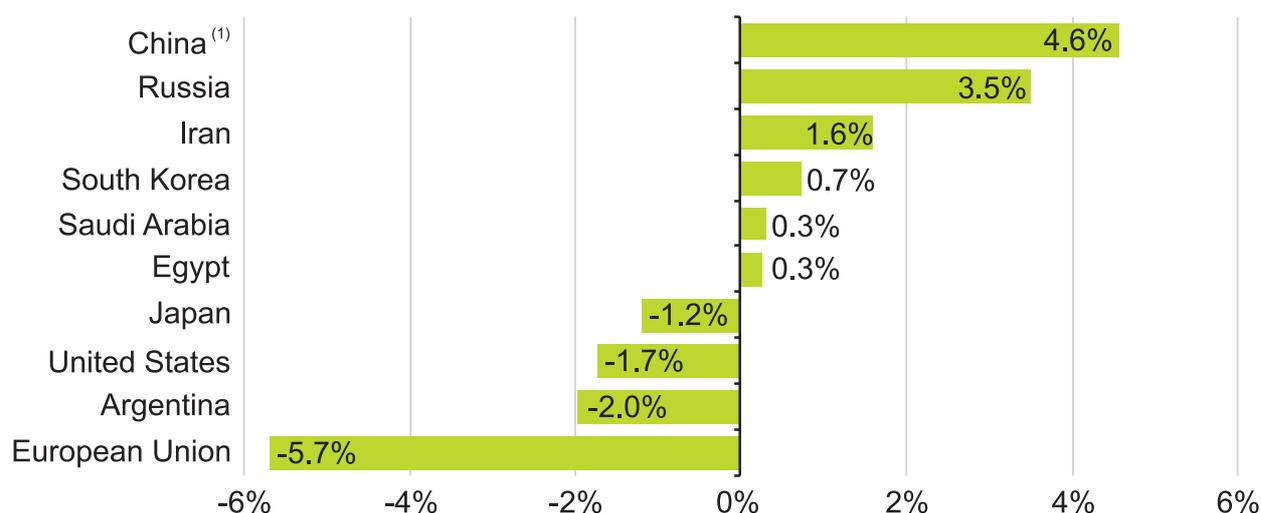


Figure 3. Changes in export shares of Brazil's major export destinations between 2000 and 2003

⁽¹⁾ Includes Mainland China, Hong Kong, and Macao.
Source: MDIC/ALICE.

Although rural poverty has fallen significantly in Brazil, the situation for the poorest of the rural poor has actually deteriorated, and poverty has become increasingly concentrated in the North and North East regions.

In general terms, per capita income growth has led to a substantial fall in the incidence of poverty and extreme poverty. For Brazil as a whole, real per capita incomes rose by 29% between 1991 and 2000, reducing the proportion of the population living in poverty from 40% to 32% (Figure 4), and the share living in extreme poverty from 20% to 15%².

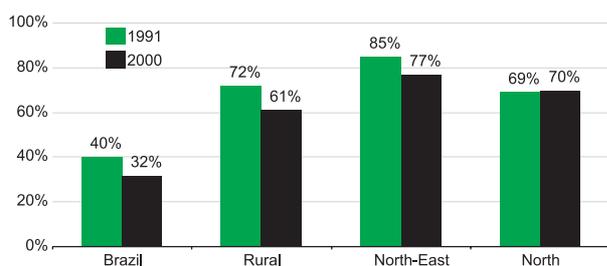


Figure 4. Poverty in Brazil, 1991 and 2000 – Per cent of population below the poverty line.

Source: Helfand and Levine (2004) based on the Demographic Census.

² The poverty and extreme poverty lines are set at ½ and ¼ respectively of the August 2000 minimum monthly wage per person (BR 151). At the contemporaneous nominal exchange rate, this translated into a poverty line of approximately USD 1.33 per person per day and an extreme poverty line of USD 0.67 per person per day.

The incidence of poverty is higher in rural areas, but because 80% of the population live in urban areas the number of urban poor exceeds the number of rural poor. In the 1990s, rural incomes rose more rapidly than urban incomes (32% versus 23% between 1991 and 2000). This enabled rural poverty to fall from 72% of households in 1991 to 61% in 2000, and extreme rural poverty to decline from 45% to 36% over the same period.

However, the improvement in rural incomes has not been principally attributable to agricultural incomes, which grew by just 2% between 1991 and 2000, compared with non-agricultural income growth of 38%. Moreover, agricultural income became more concentrated among richer households (although it remains less concentrated than non-agricultural income), and so made little contribution to poverty reduction.

The situation for the bottom 20% of rural households, who are well below the extreme poverty line (more than a third of rural households), has actually deteriorated. A trebling of government transfers between 1991 and 2000 helped poor households in general, but many of the poorest missed out because they fell outside the remit of the formal economy and the coverage of pensions and other programmes.

These national averages mask important regional variations. Income growth in the Centre West has been strong enough to reduce rural poverty, even though inequality has increased. Rural poverty has fallen more slowly in the North East and actually risen in the North (where the rural population has actually grown), meaning that rural poverty is increasingly located in these regions.

Structural changes at the farm level have been reinforced by wider developments along the food chain. In particular, the increasing share of retail sales accounted for by supermarkets carries important implications for farm structures. The associated growth of contracting offers opportunities for some producers, who may, for example, see their credit constraints eased through the forward supply of seed. However, it poses a threat to many smallholders who may not be able to meet the standards set by downstream purchasers, yet find it increasingly difficult to find local outlets.

The opportunities for smallholders also depend on the success of land reform initiatives and associated credit programmes. So far, the scale of land reform has not been sufficient to make a significant dent in the overall poverty figures, and it is likely that its ultimate potential will depend on how well it is complemented by broader investments (e.g. in education) that improve households' income earning potential both within and outside agriculture.

Current agricultural policies

Brazil provides a relatively low level of support to its agricultural sector. Most of that support goes to producers in the form of preferential credit.

Brazilian agricultural policies have been broadly liberalised, although there continues to be an array of policy interventions. Total support to the sector, as measured by the Total Support Estimate (TSE), averaged BRL 8.2 billion (USD

2.7 billion) per year in 2002-04, or 0.5% of GDP. The cost of support to the overall economy is low relative to most OECD countries, and is roughly comparable to that in Australia (0.3%) and New Zealand (0.4%).

Most of this support is delivered to producers, as opposed to general services to the sector. Indeed, producers received about three-quarters of total support to agriculture in 2002-04 (Figure 5). Producer support in Brazil, as measured by the percentage PSE, accounted for an average of 3% of the value of gross farm receipts between 2002 and 2004 – a rate of support that is comparable with that of New Zealand (2%) and Australia (4%), and far below the OECD average of 30% (Figure 6).

The highest support levels are for import-competing staple crops (wheat, maize and rice) and cotton (Figure 7). These commodities receive minimal border protection, but producers are effectively compensated for having to compete with other Mercosur partners, as the value of domestic assistance is approximately equivalent to Brazil's current extra-Mercosur tariff.

Producer support is provided mostly through taxpayer transfers associated with preferential credit to the sector (Figure 8). Brazil's official credit system, which accounts for about 28% of agricultural borrowings, confers special treatment on the agricultural sector, through the administered allocation of credit resources and controlled interest rates. This system has been justified on the grounds that it offsets high market

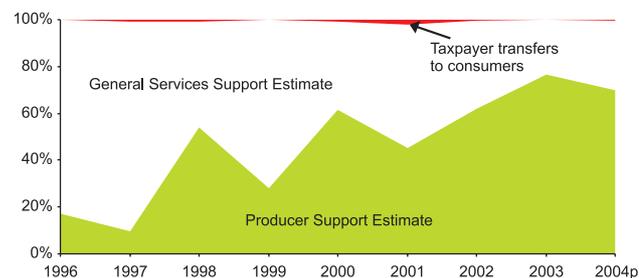


Figure 5. Composition of the total support estimate in Brazil – Per cent.

Source: OECD Secretariat.

Figure 6. Producer support estimate in Brazil and selected countries, 2002-04 average – As per cent of gross farm receipts.

Note: 2002-03 average for China and Russia.
Source: OECD Secretariat.

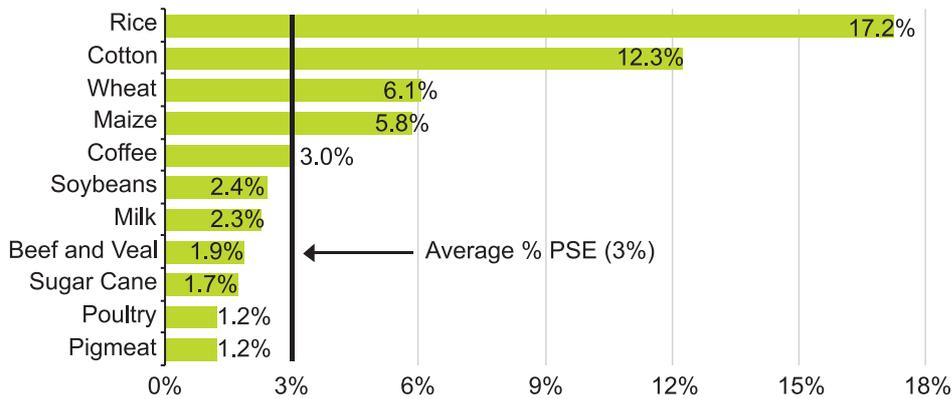
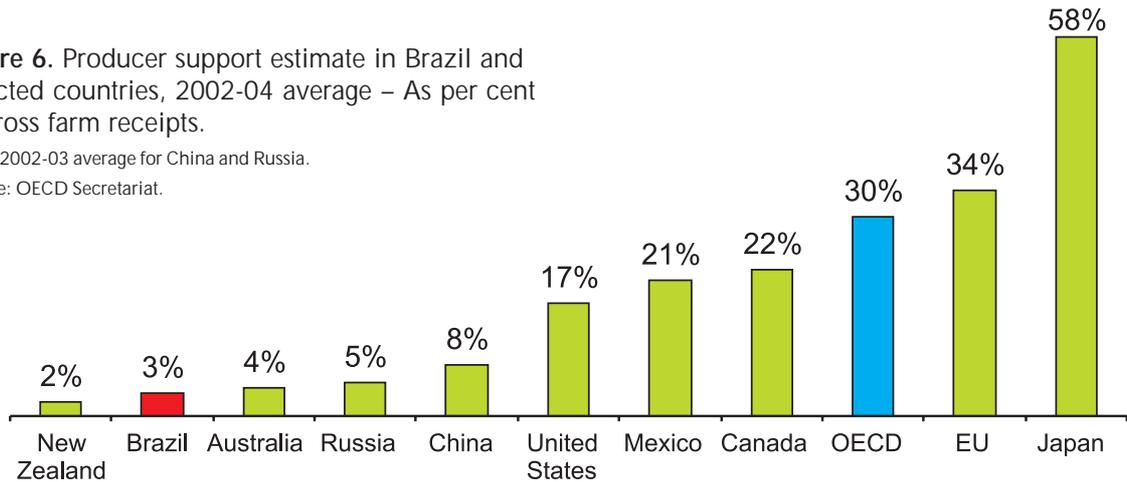
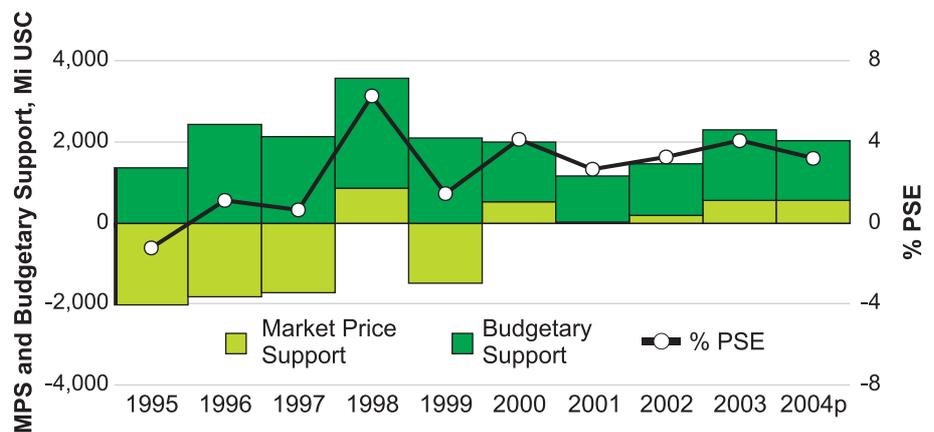


Figure 7. Brazil's producer support estimate by commodity, 2002-04 average – As per cent of gross farm receipts.

Source: OECD Secretariat.

Figure 8. Composition of producer support estimate, 1995-2004 – Million USD.

Source: OECD Secretariat.



interest rates that are a legacy of macroeconomic instability (from which agriculture suffered disproportionately). A further rationale for special treatment of the sector emanates from social goals, where affordability of production credit is seen as a crucial element of supporting income generation among the rural poor. The preferences are to some extent eroded by the practice of banks imposing additional requirements on rural borrowers (such as the purchase of insurance) as a condition for receiving reduced interest credit.

Approximately one half of the overall benefit from credit support stems from the restructuring of large debt accumulated over the period of macroeconomic instability in the late 1980s to mid-1990s. Debt rescheduling was unavoidable, given the need to renew the flow of liquidity into the sector. However, successive rescheduling has created "moral hazard" and led to defaults that are likely to continue in anticipation of further concessions. This may impede fresh lending. Also, to the extent that debt rescheduling involves budgetary support, it may crowd out more productive public spending (e.g. for infrastructure development).

Aside from preferential credit, Brazil employs several mechanisms to support producer prices, such as intervention purchases and commodity loans. However, these do not result in broad, sector-wide price distortions. Indeed market price support has tended to be close to zero in recent years.

The purported aim of price support policies is to reduce price instability, as well as to provide a limited subsidy to producers who are considered to be at a disadvantage, either because their costs are raised by underdevelopment of infrastructure, or because of locally depressed incomes. Insofar as these policies are locally targeted to keep potentially viable farmers afloat until they become profitable - either as infrastructural development catches up, or as investments to improve semi-subsistence farmers' competitiveness take hold - they have

the potential to correct market failures. On the other hand, they also have the potential to retard adjustment among farmers whose best prospects lie ultimately outside agriculture.

To summarise, Brazil provides little support to its agricultural sector, yet it has become more distorting and less oriented towards long-term development. The share of support provided to producers, mostly in the form of credit subsidies, is increasing, while expenditures on general services are becoming less important. However, the latter category includes important long-term investments for Brazil, in areas such as research and extension, training, and the development of rural infrastructure.

The future benefits of policy reforms

The benefits to Brazil from multilateral reform will come mainly from reforms in agricultural policies, where access to OECD country markets is the most important issue.

Given that Brazil has broadly liberalised its own agricultural policies, most of the future benefits to the country from multilateral agricultural policy reforms are expected to come from the removal of protectionist measures in other countries. Indeed, Brazil is expected to be one of the biggest external beneficiaries from reforms in OECD countries and elsewhere.

For Brazil, agricultural reforms matter more than reforms to any other sector, and the majority of the potential gains derive from reforms in OECD countries (Figure 9). It is estimated that a 50% cut in tariffs and export subsidies globally and for all sectors, together with a 50% reduction of domestic support to agriculture in OECD countries, would provide a welfare gain to Brazil of USD 1.7 billion equating to about 0.3% of GDP. Of these gains, 59% would come from tariff reductions

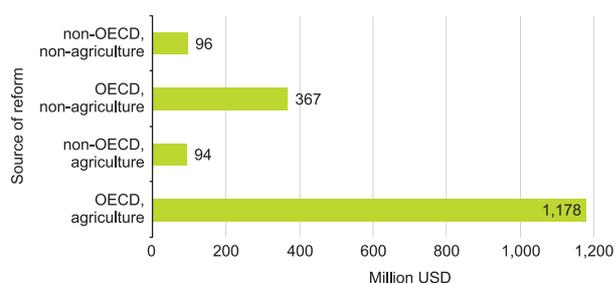


Figure 9. Welfare gains to Brazil from multilateral reform.

Source: OECD Secretariat.

on agricultural products by OECD members. The gains to Brazil from agricultural policy reforms in OECD countries account for more than half of all the gains to developing countries.

There are two reasons why OECD reforms matter most: first, a large share of Brazil's agricultural exports go to OECD countries (notably the European Union), and protection in these markets is relatively high; second, OECD countries account for the majority of support that undermines Brazil's competitiveness in third country markets. That said, a rising proportion of Brazil's exports is going to non-OECD country destinations, notably China and Russia, which makes policies in these countries of increasing importance.

Among the areas in which an agreement on reforms is being pursued, market access is paramount for Brazil, as for world markets overall. Brazil faces a range of difficulties in gaining access to foreign agricultural markets, especially among OECD countries. These include:

High tariffs in key markets (notably sugar, poultry, orange juice, beef and pigmeat, and tobacco).

Tariff escalation according to the degree of processing (notably in the soybean sector, and for processed food products and coffee).

Discriminatory import regimes, such as country-specific TRQ allocations, and preference schemes, which typically do not

favour Brazil. These mechanisms for controlling imports tend to be relatively important in the sugar, beef and cotton sectors and are applied most by those countries which represent Brazil's biggest overall markets, i.e. the European Union, the United States, China and Russia.

Non-tariff measures, such as sanitary and phyto-sanitary regulations, which, irrespective of their legitimacy, impede market access. These are a particular problem for meat products, where several countries do not accept Brazil's contention that specific regions should be considered as free from foot-and-mouth disease, even if this is not the case for the country as a whole.

Reforms in these areas, and accompanying reductions in domestic support promise gains to Brazil that are expected to be widespread among different groups of households:

Commercial agricultural producers with links to foreign markets are expected to reap most of the benefits that derive from higher international prices. Potential losses to import-competing sectors are less of a threat, since these sectors have already been opened up to imports from low-cost Mercosur members (e.g. Argentine wheat).

Non-commercial "family" farms are also expected to benefit, to the extent that they are integrated with markets. This does not rule out the possibility that some households will lose, for example because they are net consumers of agricultural products, or because land rental payments are forced up by more than any increase in farm receipts. But on balance this is not expected to be the case - even for the poorest farm households.

Non-agricultural households are also expected to gain from multilateral reforms, with the benefits from higher profits and wage payments in the agro-food sector and elsewhere exceeding the losses to consumers from higher food prices.

Wage-earning agricultural employees should be a major beneficiary from the expansion in

commercial production and exports; most likely from an increase in employment (i.e. a brake on the structural decline) rather than higher wages, given the high rate of unemployment (and underemployment) in Brazil.

In the case of the reform scenario described above, real incomes are expected to increase between 2% and 4% for agricultural producers, by around 3% for agricultural employees and by about 1% for urban households. These income gains lead to a modest decline in the incidence of poverty. Because commercial farmers gain more than smallholders, inequality among producers is expected to increase. But the wider gains to agricultural employees and urban households (who account for about 80% of the population) imply that the overall effect on income inequality is likely to be broadly neutral.

In any event, these impacts are much milder than those induced by market changes, including global demand growth and declining real agricultural prices. Indeed, it is important not to confuse all the enhanced opportunities for exporters, or the adjustment stresses facing farmers (often operating on a small scale) whose productivity cannot keep pace with price declines, with the more limited impacts of multilateral reforms.

Policy challenges

Brazil's agricultural policies seek to reconcile the pursuit of agricultural growth with social and environmental objectives. Sectoral growth can be supported domestically through improvements in infrastructure and the country's credit and tax systems; while internationally the biggest need is for improved access to key markets.

Agricultural policy design in Brazil involves reconciling multiple objectives. These objectives include the promotion of agricultural growth and competitiveness

within the constraints of environmental objectives, and the design of specific policies that are tailored to the needs of poor farm and rural households.

Weak infrastructure is emerging as a significant bottleneck to agricultural development. Producers in Brazil are typically a long distance from their principal markets, and face internal logistics systems that are relatively underdeveloped. For example, only 10% of all highways in Brazil are paved, compared with 29% in neighbouring Argentina. Moreover, transport costs are relatively important for Brazilian exporters, as a relatively large share of the country's agro-food exports tends to be in the form of bulk commodities.

The upgrading of rural infrastructure need not be detrimental to the environment, but nor is it likely that an unregulated expansion of agricultural area will provide sufficient protection to environmentally important areas. Brazil's policies need to take account of the implicit trade-off between the economic benefits and environmental costs of agricultural growth in the Amazon region, while their design needs to reflect the difficulties of policing such a vast area.

For many agricultural producers, the terms and availability of credit are also a major constraint. Commercial agri-businesses typically receive their payments in hard currency (mostly US dollars), which provides evidence of creditworthiness to lenders. In many cases, these companies do their own lending to agricultural suppliers, either by providing credit or financing inputs (such as fertiliser) directly. In Brazil, for example, soybean farmers often find it cheaper to obtain finance from the crushers.

The greatest difficulties arise for businesses that are obliged to borrow on the domestic market. Although the economy has stabilised in recent years, macroeconomic uncertainty still has a disproportionate effect on less well-established companies without easy access to

overseas lenders. High real interest rates mean that access to credit from banks is almost prohibitive, despite government subsidies. General credit subsidies risk crowding out non-agricultural investment more than targeted subsidies to land reform recipients and smallholders under the PRONAF programme.

Tax policies also have an important effect on producers' opportunities. Under Brazil's ICMS (value added) tax system, each of the country's 26 states imposes its own taxes and exemptions. This distorts producers' incentives, while the system's complexity places an additional burden on taxpayers.

The shadow that hangs over attempts to improve competitiveness, and to build successful agribusinesses around a core comparative advantage in agriculture, is trade protection in important markets and subsidised production and exports by rival suppliers. Some of the adverse impacts can be cushioned by moves into products where effective demand is less constrained (e.g. tropical products), but these policies nevertheless impose an important constraint on the agro-food sector's growth prospects. With supply-side improvements likely to continue, the need for further liberalisation of trade in agricultural products becomes more important.

The social challenges presented by agricultural development call for targeted adjustment policies and effective safety nets.

In addition to the need to continue improvements in agricultural competitiveness, Brazil also faces a number of social challenges associated with agricultural development. Agricultural employment fell by 14% between 1992-93 and 2001-02. This decline is not exceptional by international standards, but it indicates particularly strong adjustment in the labour market, given that

the sector's share of national income was more or less constant over the same period.

Moreover, agricultural growth has made little impact on the problem of rural poverty. More than 60% of the rural population has an income below an absolute poverty line of half the minimum wage, while income inequality in rural areas has gone up over the last decade and the poorest have become poorer. Out-migration from rural areas may have helped reduce rural poverty, but to a large extent this has shifted the burden to urban areas. Rural poverty is increasingly concentrated in the North and North East, where there is a heightened need for effective development policies and social safety nets.

Poverty rates are influenced by two competing forces. On the one hand, economic growth at the national level helps raise incomes, and generates demand-linkages throughout the economy. On the other hand, structural change poses a threat to poor producers who are progressively less able to compete. The competitive pressure may come from imports or from domestic pressures. Given that Brazil has little tariff protection, the major challenge to less competitive producers comes not from further liberalisation, but rather from structural change within the country, where traditional producers (often operating on a small scale) have experienced long-term price declines but not shared in the cost reductions that generated them. Indeed, Brazil is becoming increasingly competitive in a number of products that have been important to small scale farmers (e.g. dairy, maize); a positive development, but one that nevertheless puts pressure on smallholders.

The key need is for targeted adjustment policies. For some households, programmes to upgrade farming skills (e.g. through extension) may enable them to become competitive within the sector. At the same time, it is important to recognise that the long-term (inter-generational) future for most semi-

subsistence farm households lies outside agriculture, so there is a parallel need for measures that facilitate income diversification and the exploitation of non-farm opportunities. Investments at the individual level, for example through education and health expenditures, are important here, as are policies that foster rural development, such as infrastructure development.

Many of the policies that improve competitiveness, or facilitate adjustment, fall within the general services element of the calculation of total support to agriculture. Yet this component of support has been falling at the expense of producer support, mostly provided in the form of credit subsidies and debt reduction. Moreover, the majority of producer support has not been targeted at poorer agricultural households, while the poorest of the rural poor are outside the scope of several economy-wide social policies, particularly pensions.

Policies to improve commercial competitiveness and address social objectives need to take account of the macroeconomic constraints that bind policy makers. Neither improvements in competitiveness nor long term poverty reduction are attainable without economic growth and stability, which in turn require fiscal discipline and hence the adoption of well-targeted measures. Such policies have the potential to create a virtuous circle, with improved competitiveness and enhanced human capital supporting faster economic growth.

In overall terms, Brazil has pursued essential policy reforms that have benefited the agricultural sector and helped raise incomes and reduce poverty. A shift of support towards longer term investments in areas such as infrastructure, and research and extension should further enhance competitiveness, while better targeting of agricultural and economy-wide social policies could enable agricultural development to be more fully inclusive than it has so far been.

Issues on Brazil agricultural policy

Ivan Wedekin¹

This text was based on a presentation made at the opening session of the Committee for Agriculture of the Organization for Economic Co-operation and Development (OECD), in June 2005, which held a debate on draft study "Review of Agricultural Policies in Brazil", now published by that organization. The objective of the presentation was to highlight the Brazilian delegation viewpoints on Brazil agriculture and agricultural policy developments, including social and environmental impacts.

The debate clearly demonstrated the influence of macroeconomic factors (monetary, fiscal and foreign exchange policies) and the limitations imposed by Federal Government fiscal constraints (balanced budgets requirements) to carry-out the agricultural policy. Analysts, negotiators and policy makers in the field of international agricultural policy see a non evident contradiction between the outstanding Brazilian agricultural growth in the last five years and the fact that Brazil has one of the lowest levels of farm support worldwide. OECD concluded that only 3% of gross farm receipts in Brazil, in the period 2002-2004, were derived from government support.

This paper is divided in three parts: the first presents a brief summary of the Brazilian agricultural policies and its instruments; the second deals with issues on agriculture and environment with due considerations of recent concerns on the environmental impact of growth in soybeans production; the third presents remarks concerning the Brazilian agricultural policy in the future.

1. Brief history of the Brazilian agricultural policy²

Brazilian agricultural policy is based on two main tools: credit and producers income guarantees. The first includes working capital, marketing and storage, and investment, and the second one relies on a set of devices developed under the Minimum Guaranteed Price Policy (PGPM) to support prices, guarantee producers income and ensure complementary food supply.

Table 1 presents the key points of the Brazilian agricultural policy which can be traced since its inception in 1931, when the *Conselho Nacional do Café* [National Coffee Council] and the *Comissão de Defesa da Produção de Açúcar* [Commission for the Protection of Sugar Production] were created. Afterwards, it was replaced by the Instituto Brasileiro do Café (IBC) [Brazilian Coffee Institute] and the *Instituto do Açúcar e do Alcool* (IAA)³ [Sugar and Alcohol Institute]. Agriculture, mainly coffee, for many decades generated most of the fiscal and foreign exchange revenues that enabled the implantation of Brazil's urban and industrial development model.

In sectors such as grains (cereals, oilseeds and fibers) and regional products (such as sisal, jute and cashew nuts), the effective outbreak of agricultural policy occurred in

¹ Secretariat for Agricultural Policy of the Ministry of Agriculture, Livestock and Food Supply. This paper counted on the contribution of SPA-MAPA team.

² A more complete analysis can be found in the paper "70 anos de Política Agrícola no Brasil (1931-2001)", by Carlos Nayro Coelho in *Revista de Política Agrícola*, Year X, Jul-Aug-Sep 2001.

³ Both institutes were abolished in 1990.

Table 1. Syntheses of the Brazilian Agricultural Policy.

| Credit and Financing | | Price and Income Support |
|----------------------|---|--|
| 1931 | National Coffee Council Sugar Production Defense Commission | |
| 1943 | | Production Financing Commission (CFP) |
| 1945 | | Minimum Price Guarantee Policy (PGPM) |
| 1965 | National Rural Credit System - SNCR (Law 4829/65) | |
| 1966 | | PGPM Redesigning (DL 79/66) |
| 1967 | Banking <i>exigibilidades</i> (Res. 69) | |
| 1987 | Rural Savings | |
| 1988 | Constitutional Funds (Law 7827/89) | |
| 1991 | Agricultural Law (8171/91) | Stock Release Sales Price - PLE |
| 1994 | Rural Product Note - CPR (Law 8929/94) | |
| 1995 | Rural Debt Rescheduling - Securitization (Law 9138/95)* | |
| 1996 | National Program for the Strengthening of Family Agriculture - PRONAF (Decree 1946) Finame Special Line | EGF-COV (Federal Government Loans with Sell Option) extinction |
| 1997 | | Government Sell Option Contracts, Premium for Commercial Buyers (PEP) and Product Delivery Value (VEP) |
| 1998 | PESA (Resolution 2471/98) and Prosolo | |
| 1999 | Recoop (Resolution 2666/99) and Proleite | |
| 2000 | CPR Financeira and Moderfrota | |
| 2003 | Support to the Rural Insurance Premium (Law 8423/94) | Marketing Credit Special Line (LEC) |
| 2004 | Rural Savings for Cooperatives Banks New Agricultural Notes - CDCA, LCA, CRA (Law 11076/04) | CDA-WA and Private Sell Option Contract - PROP (Law 11076/04) and Purchase Option Contract |
| 2005 | Commercial Agribusiness Note (NCA) - Agrinote (Instruction 422-CVM) | |

Elaboration: SPA-MAPA.

1943, when the *Comissão para Financiamento da Produção* (CFP) [Commission for Production Financing] was established. This agency was later (in 1990) transformed into the *Companhia Nacional de Abastecimento* (CONAB) [National Food Supply Company], which arose from the merger of two companies controlled by the Federal Government: *Companhia Brasileira de Armazenamento* (Cibrazem) [National Warehousing Company] and the *Companhia Brasileira de Alimentos* (Cobal) [National Food Company].

In 1945 it was created the PGPM and its main devices: the *Aquisições do Governo Federal* (AGF) [Federal Government Purchase], a source of direct intervention in the market, and the *Empréstimos do Governo Federal* (EGF) [Federal Government Loans], credits for marketing and storage. The PGPM was modified in 1965 (Decree 57391) and underwent a deep reform in 1966 through the Decree-Law nº 79, whose characteristics remain in force.

The framework of preferential credit for agriculture was launched in 1965 under the *Sistema Nacional de Crédito Rural* (SNCR) [National System of Rural Credit], by Law 4829, regulated by Decree 58380/66. The SNCR was established once the *Sistema Financeiro Nacional* [National Financial System] was set in December 1964, which instituted the Central Bank (BACEN) and the National Monetary Council (CMN). The CMN remains the decision-making body responsible for the main agricultural policy measures. The *Manual de Crédito Rural* (MCR) [Rural Credit Manual] consolidated the guidelines of the SNCR, including the main types of credit: working capital, marketing and storage, and investment. The legislation defined rural producers and their cooperatives as public target, which have access to credit at interest rates below those prevailing in the internal financial markets. Agroindustry firms may also have access to rural credit but always related to marketing credit operations that benefit producers and cooperatives.

Rural financing development

Under Law 4829, which created the SNCR, the banks were obliged to reserve part of their resources for rural credit, an *exigibilidade*⁴ which was regulated by the CMN in 1967. Current rule requires that 25% of cash deposits in commercial banks must be invested in agriculture. The non-fulfillment of this *exigibilidade* leads to the freezing of such resources by the Central Bank, without any payment to the financial institution.

In 1987, twenty years after the establishment of these bank *exigibilidade*, a new source of funding was created – the *Caderneta de Poupança Rural* [Rural Savings Account], which was operated by *Banco do Brasil*, *Banco do Nordeste do Brasil* and *Banco da Amazônia*. The balance of deposits in *Banco do Brasil* savings accounts is approximately USD 12.6 billion. From the 1st of August 2005 onwards, these three official banks must compulsorily offer 55% of these deposits to the agricultural sector. The percentage of compulsory funding will grow by 5 percentage points yearly until up to 65% on the 1st of July, 2007.

Until 2004, the so-called *Poupança Verde* [Green Savings] was operated only by official federal banks. Private Banks and *Caixa Econômica Federal* (CEF) attracted resources from people through another type of savings account, part of which is for the financing of home building. They are not allowed by law to use those resources to finance agriculture, and official federal banks and cooperative banks do not deal with savings for home building financing. Private Banks are interested in financing agriculture with part of its savings deposits given that these operations have higher turnover and shorter term, in comparison with real estate financing.

In March 2004, the Government allowed also the cooperative banks BANCOOB and

⁴ A certain share of banks obligatory sight deposits that can be allocated to rural lending.

BANSICRED to deal with savings deposits under the condition of investing 65% in rural credit. This opening of the rural savings market for cooperative banks rekindled the interest of private banks facing difficulties in complying with home building *exigibilidade*.

The amendments of 1988 made in the Brazilian Constitution provided for the creation of constitutional funds for the development of the Center-West (FCO), Northeast (FNE) and North (FNO) so as to carry fiscal resources to investment in these less-developed regions. The constitutional funds are important sources for the financing of agriculture and agro-industry. Over the last two crop years, the three funds have invested in agriculture approximately USD 700 million per year.

The first private instrument for agricultural financing outside the SNCR, was the *Cédula de Produto Rural* (CPR) [Rural Product Note], created in 1994 by Law nº 8929. It is a note, issued by rural producers and cooperatives, which enables the financing of working capital, mainly for the purchase of agricultural inputs. In addition to notes financed, acquired or guaranteed by a bank, the market has also seen the rise of the so called "*CPR de gaveta*", which works mainly as a sort of guarantee on commercial transactions between rural producers and suppliers of inputs, processing industries and foreign trade companies. The *CPR-Financeira* (CPR-F) [Financial CPR] was launched in 2000. The operation is settled in cash and thereto there is no physical delivery of merchandise.

The Law⁵ that created CPR-F opened the doors for an important source of modernization for the Brazilian agriculture called Moderfrota⁶, a program which finances the agricultural machinery renewal. Moderfrota put forward a "family" of MAPA-

BNDES investment programs for rural producers and cooperatives. They rely on resources from the *Fundo de Amparo ao Trabalhador* (FAT) [Unemployment Insurance Fund] administered by the *Banco Nacional do Desenvolvimento Econômico e Social* [National Economic and Social Development Bank] and contracted by financial agents⁷.

Between 1998 and 2003, MAPA launched 16 new programs, which gave a new allure to productive investment in agriculture. Breaking with monetary indexation habitude, all these programs work with fixed interest rates (from 8.75 to 12.75% per annum), long term repayment (5 to 12 years) and cost compensation (*equalização*)⁸ by the National Treasury. The strong demand for agricultural machinery was also met by a line of credit complementary to Moderfrota, the BNDES *Finame Agrícola Especial* [Finame Special Line], for which interest rates is 13.95% per annum. After July 1st 2004, Moderfrota no longer included cost compensation.

In the 2003-2004 Agriculture and Livestock Plan, the Government merged some programs and reduced their number from 16 to 8, and to 7 in the following crop year. This rationalization facilitated the marketing and application of funds. Starting from the application of USD 186 million in the 1999-2000 (Moderfrota - USD 114 million), the MAPA-BNDES programs reached a record of USD 1.9 billion in the 2004-2005 crop, which ended in June, 2005. When added to other sources of funding (Finame Special Line, Constitutional Funds and Rural Proger), investment credits provided to producers reached USD 2.9 billion in the 2004-2005 crop season.

Brazil is characterized by significant imbalances in the distribution of income on individual, regional and sectorial levels. The

⁵ Provisional Decree 2117, of 1/10/2000, converted into Law 10200, of 14/2/2001.

⁶ Program for Modernization of the Fleet of Agricultural Tractors and Associated Implements and Harvesters (Provisional Decree nº 2017-1, dated 2/17/2000, transformed into Art. 3º of Law nº 10200, dated 2/14/2001).

⁷ Finame Special Line (BACEN Resolution 2314/96) was the first step of BNDES in financing rural producers. The programs Prosolo (1998) and Proleite (1999) were created before Moderfrota.

⁸ Difference between the rate paid by producers and the costs with the remuneration of the FAT, BNDES and financial agents.

expansion of agriculture has had a beneficial effect on the population residing in Brazil's interior. Nonetheless, the per capita income of the rural population is equivalent to 45% of urban dwellers income.

Measures for the reduction of poverty are being implemented by several ministries and agencies, at the federal, state and local levels. Brazilian agricultural policy has also sought to promote the social and economic inclusion of producers and rural inhabitants. One important example is the *Programa Nacional de Fortalecimento da Agricultura Familiar* (PRONAF) [National Program for the Strengthening of Family Agriculture], created by Decree 1946/96⁹. With a focus on sustainable rural development, the program involves market instruments (such as credit and insurance) and structural aspects (infrastructure, research, education).

From 2003 onwards, the emphasis has been on increasing the volume of and facilitating access to credit. In two years – between the crops season of 2002-03 and 2004-05 – the PRONAF showed an exceptional growth: the number of operations rose from 926,000 to 1.64 million, while the amount of credit granted jumped from USD 660 million to USD 2.3 billion.

The various macroeconomic stabilization programs implemented in the 1980s and 1990s resulted in a rural debt crisis. The dramatic situation was largely due to the incompatibility between the rate applied to adjust the outstanding debt and those used to calculate minimum prices, which serve as reference in the formation of producer incomes. After a long and intense negotiation, the rural debt question was settled in three stages: Law nº 9138, of 1995, opened the first phase of debt securitization; followed by the rescheduling of debts above R\$ 200,000 by the *Programa Especial de Saneamento de Ativos* (PESA) [Program of Financial Assets

Rehabilitation], regulated by BACEN Resolution 2471/1998; and yet another stage by means of the *Programa de Revitalização de Cooperativas de Produção Agropecuária* (RECOOP) [Program for the Revitalization of Agricultural Production Cooperatives], under BACEN Resolution 2666/1999. It is estimated that the current stock of farm debt, originally contracted with financial institutions, is approximately USD 13 billion, with a compensation cost (equalização) which represents the main share of Federal Government agricultural policy expenditures.

Market price and income support

The objective of the PGPM is to ensure an adequate income for producers and accessible prices for consumers and to complement supply in regions where the demand for certain products may exceed local supply. In order to achieve these goals, government intervention seeks to correct market failures, which are aggravated by Brazil's continental dimensions and deficient infrastructure.

The PGPM remained practically unchanged from the 1960s to the 1980s. The *Preço de Liberação de Estoques* (PLE) [Stock Release Sales Price] was set by the Agricultural Act in 1992. It is a criterion used to define the market government stocks sales price. It was implicit for the legislator that the government market intervention by means of stocks sale might be detrimental to the interests of producers.

The fiscal crisis of the State forced the extinction of EGF-COV in 1996, which combined financing with sales option. This instrument enabled the compulsory settlement of storage loans by delivery of the product to the government, an eventuality which was likely to occur in periods of high inflation.

The modernization of government market intervention was initiated in 1997 so as to sustain farmers income, without necessarily

⁹ In 1999, the program's management was transferred from MAPA to the Ministry of Agrarian Reform, today Ministry of Agrarian Development.

including the purchase of goods and maintenance of costly stocks by CONAB.

Sales Options Contracts for the sale of agricultural products to the government is one of the most important PGPM instruments. A standard contract defines the date, location and exercise price of the option. The difference between the price prevailing on the market on the date of auction and the exercise price at a future date signals the upward trend in prices desired by the policy makers. In auctions organized by CONAB, rural producers and cooperatives – the target public of the policy – purchase the right, subject to payment of a premium, to deliver the product to the government if, on the contracted date, market prices are below the exercise price. If the measure is efficient, in other words, if it helps market prices to recover, it will guarantee income to producers, who will not exercise their options, thereby freeing the government from the need to use scarce funds in order to build up stocks.

By the *Prêmio de Escoamento de Produto* (PEP) [Premium for Commercial Buyers] and the *Valor de Escoamento de Produto* (VEP) [Product Delivery Value], the government enables the transfer of products from regions with excess production (and low producer prices) to other regions with supply deficits (especially North and Northeast). The PEP operation occurs when the transferred product belongs to the farmer or cooperatives. In this case, an auction defines the premium that the government will grant to consumers for the purchase of goods in the region with excess production, paying the minimum price to the producer. In the VEP, the premium is paid to consumers for the removal of public stocks deposited in warehouses. In both cases, the auction opening premium, set by the government, takes into account the product importation parity in the destination region.

Established in 2003, the *Linha Especial de Crédito à Comercialização* (LEC) [Special Credit Line for Marketing] provides storage

credit using as parameter a price above the minimum price established by the government, which serves as a reference for EGF contracts. This instrument has the additional advantage of being simpler than the EGF.

The management of the PGPM is complex because it involves managerial, macroeconomic and fiscal issues. MAPA Secretariat of Agricultural Policy is responsible for defining the government's intervention measures in agricultural markets. These policies are then carried out by CONAB. Annually, the federal budget sets out revenue and expenditure forecasts and authorizes a limited deficit for the execution of the PGPM, in the budget of the *Operações Oficiais de Crédito* (OOC) [Official Credit Operations], under the control of the National Treasury. Thereby, the effectiveness of market interventions depends on the size of the authorized deficit and the generation of revenues from the sale of stocks. According to the Fiscal Responsibility Law, no expenditure may be made without a corresponding availability of resources in the budget. Considering that agricultural policy measures may affect the economy (price levels for example), there is a need of coordination with Federal Government personnel in charge of the economic policy. It means that there is a permanent process of negotiation not restricted to the need of ensuring resources to provide price and income support to producers.

Three outstanding agricultural policy phases

The last four decades of Brazilian agricultural policy can be divided into three periods with markedly distinct characteristics. The first phase, which lasted from 1966 to 1985, was one of "*Massive Intervention*" by government in agriculture (Figure 1). There was a strong increase in the supply of rural credit, reaching its peak in 1978, when the volume of

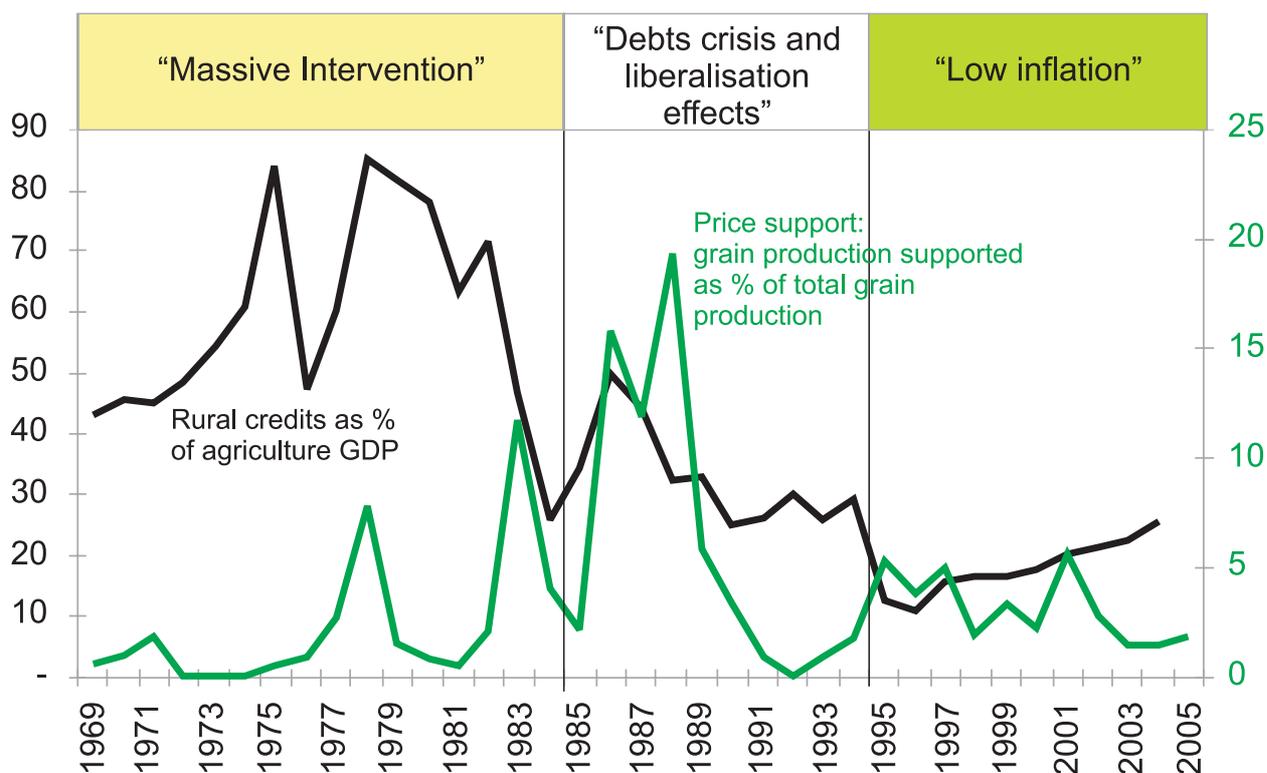


Figure 1. Four decades of Brazilian agriculture policy.

Elaboration: SPA-MAPA.

Sources: BACEN, IBGE, CONAB.

preferential credit for rural producers was equivalent to around 85% of agricultural GDP. By means of the PGPM, the government market price support to agricultural products showed a similar trend. The share of grain production benefiting from price support measures rose from approximately 5% of total production in the early 1970s to about 12% in 1982. In addition to the accumulation of high levels of stocks, government intervention included price controls and even full regulation of an entire sector such as wheat.

From 1985 to 1994, agricultural policy reflected the *"Debt Crisis and Economic Liberalization"*. The deep governmental fiscal crisis and the measures taken to open up the economy, especially import tariffs cuts in the early 1990s, caused a strong competitive shock in the agricultural sector. The reduction in credit was enormous: in relative terms, it

plunged from 85% of agricultural GDP in the late 1970s to 29% in 1994. On the other hand, due to the big 1987 crop (a consequence of *Cruzado Plan*) the government provided market price support for up to 19% of the grain production in 1988, by means of the Minimum Guaranteed Price Policy (PGPM). But the support fell down close to zero in the early 1990s.

The third period – characterized by *"Low Inflation"* – started with the Real Plan and persists until today. This period is marked by the almost complete depletion of traditional agricultural policy instruments. In 1996, the supply of rural credit fell to only 11% of agricultural GDP and then was gradually recovered, reaching 25% in 2004. In this period Government support to marketing remained between 2% and 5% of grain production.

In the 1965-85 period, about 80% of rural credit was derived from the government's monetary budget, 12% came from banking *exigibilidades* and 8% came from other sources (Figure 2). During the following period, the 1990-94 "Debt Crisis", the government budget (National Treasury) fell drastically cut to 26% of total rural credit supply. The worsening of public accounts obliged the government to modify the rural credit. In 1983, the CMN started to reduce the interest rate implicit subsidy and adopted the monetary indexation of loans. In 1986, BACEN *Conta de Movimento* held in *Banco do Brasil* was eliminated. It allowed the transfer of high amount of resources from the monetary budget for rural credit. But what is more impressive are the statistics for 2004, which show that the National Treasury accounted for only 4% of total rural credit supply. Banking *exigibilidades* (41%) and rural savings (26%) became the two main sources of rural credit. A point worth emphasizing is the redirection of rural credit towards productive investments. MAPA-BNDES programs represent 11% and the Constitutional Funds a further 6% of total agricultural credit in 2004.

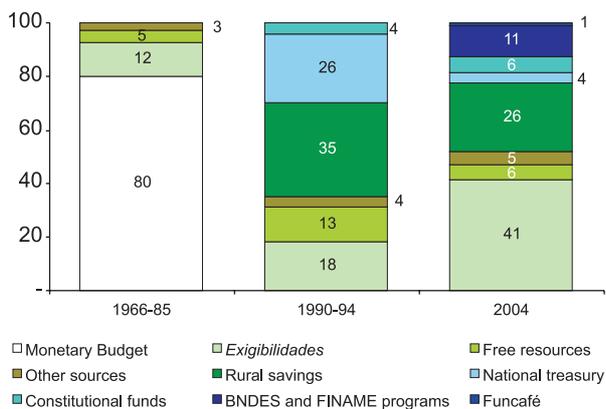


Figure 2. Rural credit funding (%).

Elaboration: SPA-MAPA.

Sources: BACEN, BB, BNB, BASA, BNDES, STN.

Starting in 2003, great efforts have been made to broaden the supply of rural credit. The amount of resources invested in rural credit

lines has jumped from USD 9.6 billion, in December 2002, to USD 23.7 billion in August 2005, an increase of 137%. In spite of the high interest rates prevailing in Brazil, the government has decided to maintain the interest rate of 8.75% for commercial farmers and up to 4% for small family farms (PRONAF).

There is a strong correlation between the increase in grain planted area in recent years and the availability of investment credit for agriculture. In the 1999-2000 crop, the area under cultivation was 37.8 million hectares, which grew to 48.7 million in 2004-05. During the same period, rural investment credit rose from USD 900 million to a record of USD 2.9 billion in the crop year that ended in June 2005 (Figure 3).

In recent years, there was a recovery of the lending to the agriculture sector and a substantial improvement in the quality of credit. The rescheduling of agricultural debt approved in the 1990s, along with exchange rate devaluation and favorable conditions on world commodity markets, improved the agricultural sector performance and reduced its credit risk. In December 2004, about 94% of total rural credit were classified as normal risk, e.g. within the four least risky levels (AA, A, B and C), according classification as defined by the CMN (Figure 4). By the end of August 2005, the share of lendings classified as normal risk fell to 90%, a reflection of income crisis in the grain sector in 2005, caused by an increase in the value of national currency and a crop lower than it was expected.

The challenge of guaranteeing prices and income

Empirical evidence demonstrates that agricultural markets are much more volatile than those for industrialized products. If this is true for the world, in the case of Brazil the volatility is even greater due to chronic infrastructure deficiencies and of macroeconomic instability.

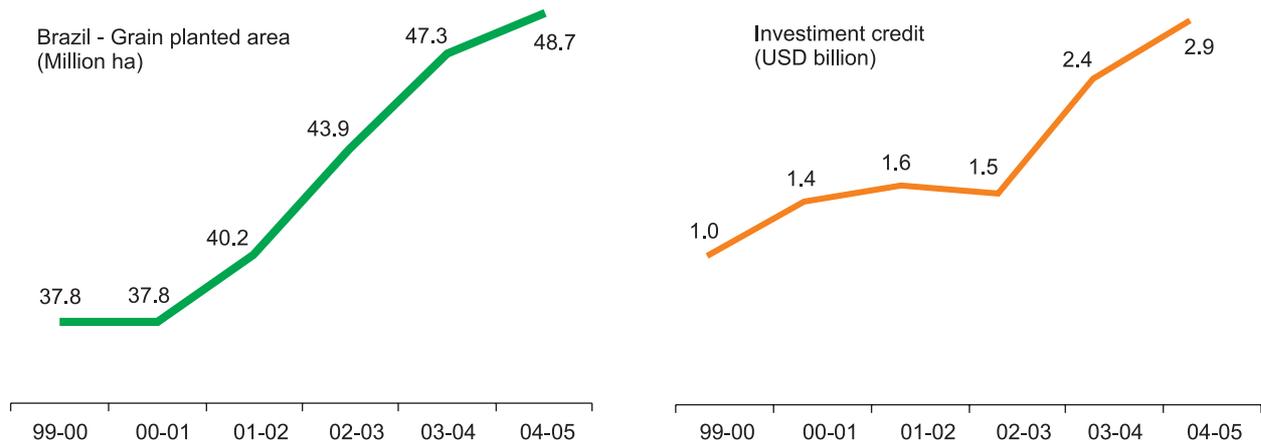


Figure 3. Planted area and agricultural investment.

Elaboration: SPA-MAPA.

Sources: CONAB, BNDES, BB, BNB, BASA

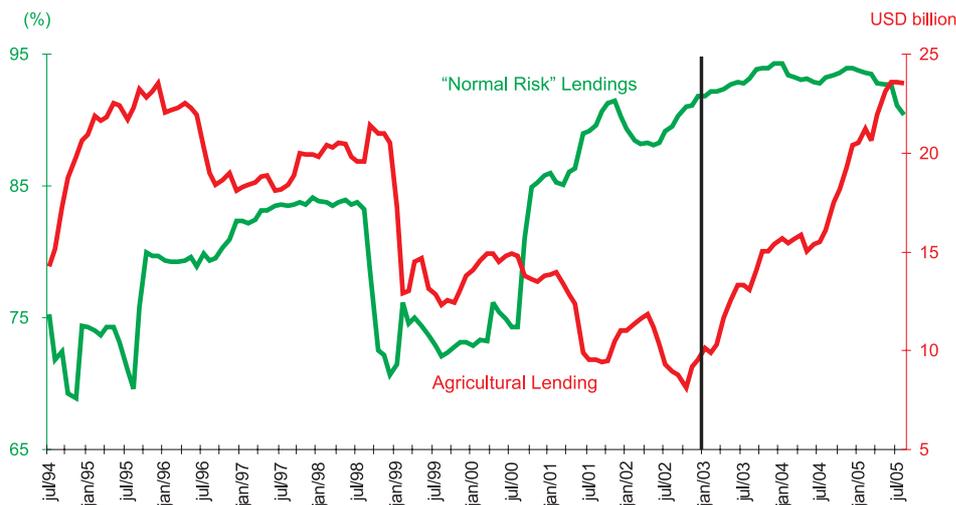


Figure 4. Loans and rural credit risk.

Elaboration: SPA-MAPA.

Source: BACEN

Corn is a good example of a volatile market. In the USA, the maximum annual price variations are in a range of 20%, upwards or downwards. In Brazil prices reductions are frequently observed from one year to the other and attain from 20% to 40%; and peaks of price change can reach 60% in one year, as occurred in the second half of 2002 and 2003 (Figure 5).

In view of this instability and market failures, the demand for government intervention to stabilize producer prices and income is very high in Brazil. The PGPM is established by law, but comes into conflict with another

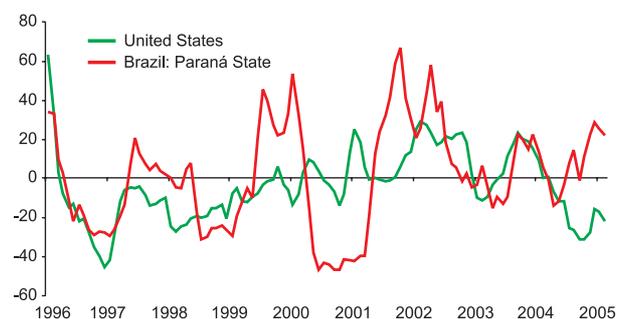


Figure 5. Annual corn price variation (%).

Elaboration: SPA-MAPA.

Source: Safras e Mercados and USDA.

more recent act called Fiscal Responsibility Law, which prevents the government from increases in spending without the respective budgetary funding.

Last decade saw a strong reduction in the Official Credit Operations (OOC) budgetary share for the market price support. The budget has fallen from about US\$ 9 per produced ton of grain in 1997 and 1998, to less than US\$ 0.90 per ton in 2003 and 2004. It is an insignificant value when compared with grains average price of about US\$ 200 per ton. The lack of budgetary funding is preventing an effective policy of price stabilization, food supply and overcome agricultural market failures. Here is one of the greatest dilemmas faced by Brazil agricultural policy.

2. Agriculture and Environment

In recent years, international press has given great emphasis to the Brazilian agriculture for two reasons. Firstly, it was due to production and export increases, which allowed Brazil to achieve the largest trade surplus in the world, according to World Trade Organization (WTO) criteria. Secondly, because the pressure made by environmentalists, especially regarding the rapid expansion of soybeans cultivation. Competing international producers manifest their perplexity and concern about the fact that cultivated area in Brazil may expand substantially.

Indeed, the Brazilian agriculture potentialities related to the availability of land are impressive. Brazil currently uses 48 million hectares for annual or temporary crops and a further 15 million hectares for permanent crops. Cattle herd has reached 200 million heads which occupy a pasture area of 200 million hectares, showing a very low rate (0.9) of animals per hectare. In view of technological developments in livestock breeding in the last two decades, it is estimated that 30 million hectares of pasture could be shifted over to the production of crops without any adverse effects on meat

production. In addition, Brazil has a stock of 106 million hectares of arable land that has not yet been exploited.

In other words, Brazilian agriculture is already highly competitive and has a great potential for expansion because the ample availability of land (land prices are low in relation to its international levels) and an enormous stock of technology related to agricultural production in tropical and subtropical areas. Considering also the economy of scale advantages of bigger farms and the prospects of logistic and transport cost reductions, Brazil can increase strongly its participation in the world agrofood market. Therefore, issues on the environmental impact of the Brazil agricultural growth are an important aspect of the competitiveness among major world agricultural producers and exporters.

Environment in Brazil is much more a question of law enforcement than policy concerns. After May 2000, the Brazilian environmental legislation became even more restrictive concerning land use by farmers. Out of the total farm area (exclusive permanent preservation areas), the law for the Legal Amazon requires that the 80% of forest areas and 35% of *cerrado* areas should remain out of use. For other regions this requirement is 20%. Formerly, these figures were 50%, 20% and 20%.

The impact of soybeans cultivation on the Amazon forest is small. Only 2.7% of the Brazilian soybeans are produced in the North region, and it does not necessarily come from land originally covered by the Amazon rainforest. Soybeans production represents only 1.2% of the Legal Amazon area, out of which 98% are in the States of *Mato Grosso*, *Tocantins* and *Maranhão*.

An analysis of soybeans production data by municipality, between 1990 and 2003, reveals that its cultivations were increasingly concentrated in traditional producing areas.

The map shows the soybeans growth in Brazil takes a “Y” form (Figure 6). It starts in the southeast and northeast regions of *Rio Grande do Sul*, passes through *Santa Catarina*, *Paraná*, *São Paulo* and reaches the *Cerrado* of *Minas Gerais*. From this point onwards it splits into two branches: westwards, including *Goiás*, *Mato Grosso do Sul* and *Mato Grosso*; and towards the northeast, encompassing the *Cerrado* of Western *Bahia* and, more recently, *Tocantins*, *Maranhão* and *Piauí*.

During the period under consideration, soybeans production increased from 20 million to 52 million tons. However, the most important producing cities, responsible for 81% of soybeans planted area in 1990, remained important in 2003, accounting for 63% of the total soybeans area. Production became concentrated in cities where soybeans were

already planted in 1990, and expanded towards new cities, most of them in the same region.

In addition to rigorous environmental legislation, technology has strongly contributed to the sustainability of Brazilian agriculture. One example of good practices in Brazil is the direct tillage. Indeed, it is an example to the world. This technology spares land, reduces erosion and improves soil quality, especially with regard to microorganisms and the percentage of organic material. It lessens the need to till the soil and, therefore, the demand for capital and fuel, and also cuts the consumption of plant protection products, thereby reducing environmental impacts and production costs.

In 1992, direct tillage was utilized in 2 million hectares, about 4% of the grain planted area, and 22 million hectares in 2003, representing 37% of total cultivated grain area in Brazil.

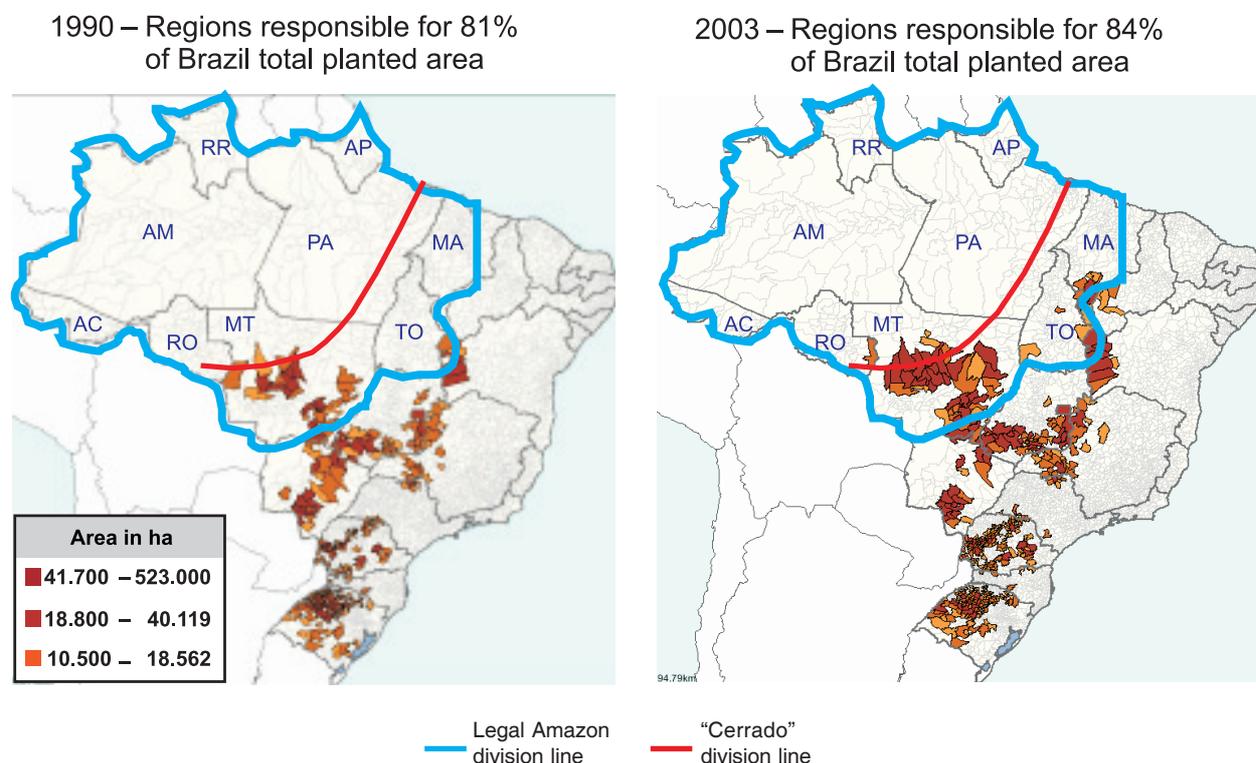


Figure 6. Soybeans expansion in Brazil.

Elaboration: SPA-MAPA.

Source: IBGE.

3. The future of agricultural policy

Macroeconomic restrictions

The nature of agricultural markets makes them vulnerable to infrastructure deficiencies and dependent on macroeconomic policy-making. Brazil has been forced to live with high real interest rates, above 20% per annum, as registered 1998 and 1999 and in the second half of 2002. Although real interest rates have fallen in recent years, Brazil is still a world champion in terms of high real interest rates, whose level was about 14% per annum in October 2005.

Such high levels of interest rates accentuate the market failures and reduce demand, especially in harvest season, when a large volume of product comes on the market. Consequently, market volatility is increased, to the detriment of farmers at the very moment in which they must market their crop.

In view of the high degree of insertion of Brazilian agriculture in the international market, for the majority of farmers their income is the result of a combination of international commodity prices and exchange rate. In this sense, the exchange rate is the key variable for the agribusiness. The devaluation of the Brazilian currency which began in 1999 stimulated agricultural growth in subsequent years. From 2004 onwards, however, there has been a continuous downward trend in the exchange rate, from an average of R\$ 3 per US dollar in the second half of 2004 (inputs purchasing period for planting the 2004-05 crop), to around R\$ 2.50 in the second quarter of 2005, when the crop is sold. This situation put an unexpected pressure on the balance sheet of grain production in 2005. The gross value of the production of the five main types of grain – rice, cotton, corn, soybeans and wheat – fell from USD 20.5 billion, in 2004, to an estimated USD 18.8 billion in 2005. The fall in prices is responsible for 83% of this reduction, while the remaining 17% is due to the reduction in crop size caused by the weather.

The deficiencies in infrastructure represent a prime example of how the “Brazil cost” affects agriculture, with a powerful effect on producer’s income since agricultural and livestock products typically have low unit value, increasing the relative share of transportation and distribution expenses in the final price of goods in consuming markets. Under a situation that has dragged on for more than ten years, Brazil invested less than 1% of GDP in transportation in 2004, and the value of interest rate payments was equivalent to 7.4% of GDP.

Building up agribusiness competitiveness

According to Michael Porter, a company, region or country is competitive when its long-term performance exceeds the average of its competitors. The construction of sustainable competitive advantages is the result of strategies and actions on three levels: a) cost leadership, indispensable in case of commodity products; b) product and service differentiations, by the addition of value and special features to the product (quality, brand image, services etc.); and c) focus, e.g., selection of a target market for action, whether broad (national and international) or narrow (local and regional).

Therefore, competitiveness is the result of: investments in research and development; quality and food safety; infrastructure; marketing, sales and distribution; and gains from economies of scale, among other factors. In order to strengthen the competitiveness of the Brazilian agribusiness, the “*First Brazilian Agribusiness Congress*,” organized in 2002, by the Brazilian Agribusiness Association (ABAG) and MAPA, recommended the implementation of strategies and actions set forth in the “*Ten Commandments of Competitiveness*” (Figure 7):

1) Capital: credit, finance and insurance mechanisms to increase the supply and reduce the cost of capital and limit the risks associated with agricultural activities.

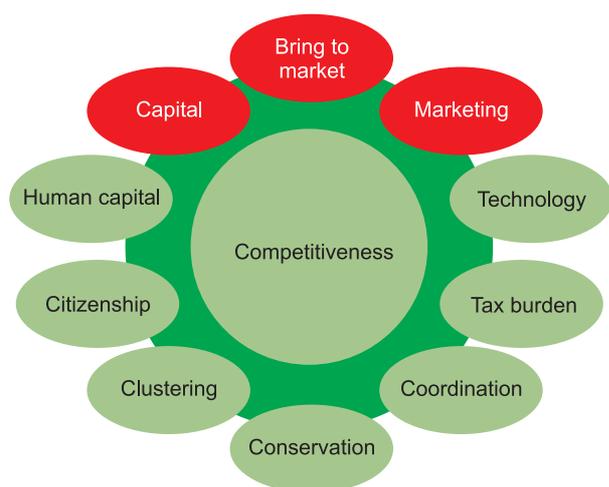


Figure 7. The 10 commandments of agribusiness competitiveness.

Source: ABAG.

2) Bring to market: facilitation of the flow of products by means of improvements in infrastructure and logistics.

3) Marketing and Foreign Trade: new instruments to increase the liquidity of agricultural markets and facilitate prices stabilization measures and income guarantees for producers.

4) Technological Knowledge and Communication with the Consumer: improvements on technology, by investing in research and development, and information to facilitate communication with consumers and the society.

5) Tax burden: reduce taxes on production, especially exportable goods and Brazilian staple food.

6) Conservation of natural resources and the environment: guarantee the sustainable development of agriculture; take advantage of opportunities in the carbon market (environmental commodities) and the market for bioenergy products; and promote alternative uses of low productivity areas.

7) Citizenship and social inclusion: enhance the opportunities for social and economic

inclusion; fight hunger and reduce poverty levels, including in rural areas.

8) Clustering – Inland movement and local development: stimulate the formation of clusters and similar local productive arrangements, and strengthen sustainable production chains, taking advantage of market opportunities and promoting rural and local development.

9) Human capital: improve rural producers and workers skills and access to education, bearing in mind that 80% of the Brazilian illiterates live in rural areas.

10) Coordination: govern with society, by means of institutional organizations that facilitate the formulation of stable policies, by increasing public and private sectors responsibility, commitment and joint actions.

Coordination is a vital element for the efficiency of the competitive strategies above suggested. For this purpose, in addition to two bodies with a wider frame of reference – the *Conselho Nacional do Agronegócio* (Consagro) [National Agribusiness Council] and the *Conselho Nacional de Política Agrícola* (CNPA) [National Agricultural Policy Council] –, MAPA has already implanted 25 sector oriented chambers divided by production chains and themes, such as financing and rural insurance, rural science and international negotiations. The boards are composed of government officials, representatives of all links in the production chain and providers of essential agribusiness services. The Ministry uses these mechanisms to receive the demands and recommendations from the Brazilian agribusiness leadership, facilitating the implementation of their proposals through its operational structure and interaction with the other areas of the Federal Government.

The agricultural policy considers as priority the following commandments: “*Capital*”, “*Bring to Market*” and “*Marketing*”.

Preferential credit at controlled interest rates accounts for 30% of the agricultural sector’s

requirements of working capital. Farmers receive financing from suppliers (agricultural inputs industry), buyers (processors and exporters) and from financial institutions, at interest rates that exceed 25% per annum. In addition, the high interest rates prevailing in Brazil increase the opportunity costs of its own capital.

The combination of scarce official credit at favorable interest rates with farmer's own resources and expensive credit from other sources results in a weighted average interest rate for the financing of working capital that is much higher than those of Brazil's international competitors. In other words, Brazilian agriculture works with limited and expensive credit which reduces its competitiveness.

This was the main motivation for the implementation of measures related to "Capital" – credit, financing and insurance for the agribusiness (Figure 8).

Law 11076, dated 30/12/04, created three new notes for the refinancing of receivables originated from commercial relations between farmers and companies operating in the agribusiness chains. These are the *Certificado de Direitos Creditórios do Agronegócio* (CDCA) [Agribusiness Credit Rights Certificate], the *Letra de Crédito do Agronegócio* (LCA) [Agribusiness Letter of Credit] and the *Certificado de Recebíveis do Agronegócio* (CRA) [Agribusiness Receivables Certificate]. The main difference among these three notes is the type of issuer institution. The CDCA is issued exclusively by cooperatives, service companies and suppliers or purchasers of agricultural production. LCA is a note issued by financial institutions (banks and credit cooperatives), and CRA is issued by securitization companies, firms constituted specifically to act in the agribusiness receivables market.

The supply of inputs to producers for payment at harvest time by means of financing

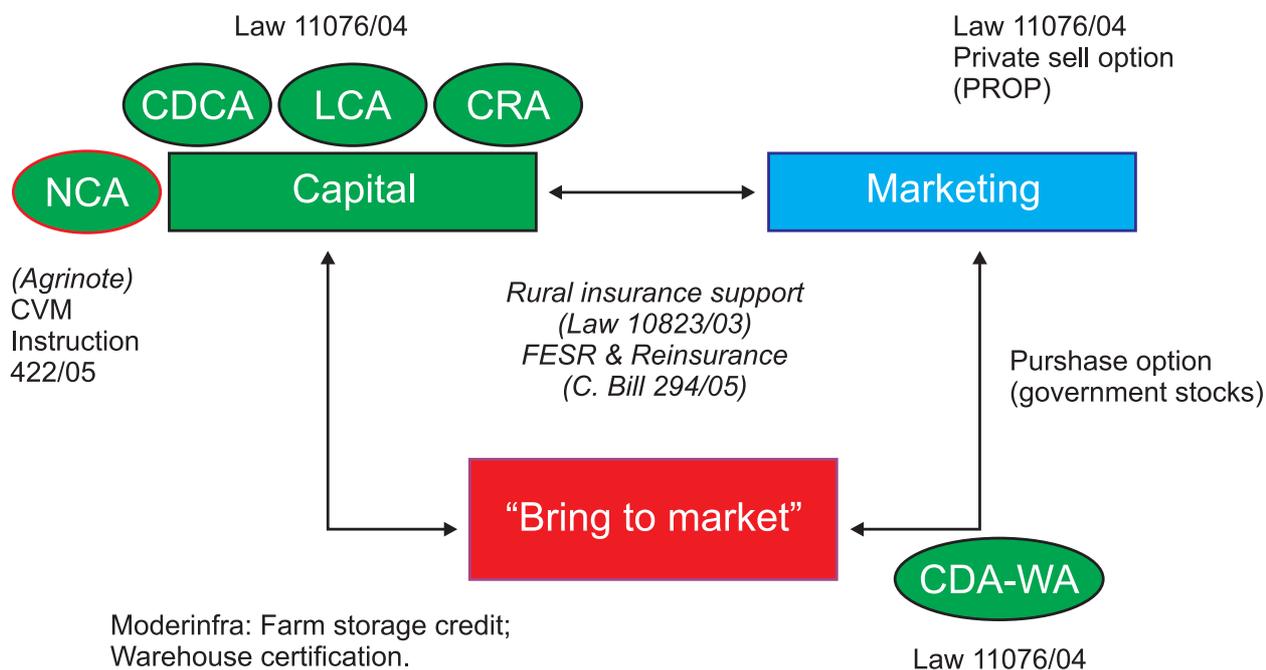


Figure 8. New agribusiness instruments.

Elaboration: SPA-MAPA.

guaranteed by CPRs kept as an asset until maturity, is a common practice in Brazil. This type of sale tie up the working capital of the input suppliers, whether industry, distributor or cooperative. Firms holding such receivables (CPR, promissory note, contract or other) may reinforce their working capital or their capacity to finance sales by issuing and offering CDCAs to investors in the financial market. In order to decrease operational risks for investors, the CDCA and its underlying guarantee (CPRs or other receivables) are obligatorily deposited in a custodian institution approved by the Central Bank.

A fourth note was regulated by the *Comissão de Valores Mobiliários* (CVM) [Securities and Exchange Commission], by means of Instruction nº 422, dated 09/20/05. This is the *Nota Comercial do Agronegócio* (NCA) [Commercial Agribusiness Note] or Agrinote. This note is for public distribution, issued by public limited companies, private limited companies and cooperatives, which have commercial relations with farmers. In this fact lies the novelty of the CVM's decision: the inclusion of limited companies and cooperatives among potential issuers. It is important to note that the NCA is just one of the new wave of agricultural notes that can be issued by rural producers, as long as the issuer is organized as a legally registered firm.

In order to reduce risks in agriculture, the government is promoting the development of rural insurance industry. For this purpose, Law 8423 was approved at the end of 2003 and regulated in June 2004. It authorizes economic support to crop insurance premiums, which is being implemented for the 2005-06 season. By means of this mechanism, the National Treasury will back-up 30% or 40% of the value of the insurance premium to be paid by farmers. The first crops covered by the program are cotton, irrigated rice, beans, corn, soybeans, wheat, apples and grapes.

Another important point regarding rural insurance is the opening of the reinsurance market, in order to heighten competition and stimulate greater participation by international

reinsurers. Thus, the Executive submitted the Complementary Bill 249/05 to the Congress, now under appreciation, and consider the possibility of changes in the *Fundo de Estabilidade do Seguro Rural* (FESR) [Rural Insurance Stabilization Fund]. The idea is to transform it into a catastrophe support fund with adequate resources and operational procedures. Change in the FESR is viewed by the insurance market as a fundamental step to accelerate the development of rural insurance industry in Brazil.

With regard to "Marketing", the government is promoting a series of actions to improve the cooperation and coordination of the production chains and face the budgetary restrictions of farmers price and income guarantee programs. Therefore, Law 11076 authorizes the Federal Government to provide economic support for Private Sell Option Contracts, when issued by the private sector to the benefit of rural producers and cooperatives. In this sort of "public-private partnership", private companies replace the government as provider of price guarantee.

In order to reduce the risk of the operation, the government defines by auction a certain level of support – *Prêmio de Risco de Opção Privada* (PROP) [Private Option Risk Premium] – which will be paid to the company if the producer exercises the right to deliver the product on the stipulated date in the sales option contract. This new instrument has the advantage of requiring less budgetary funds (1/6 or even less) than the Government Sell Option Contract or the purchasing by the government, by means of the AGF. Thus, it is possible to improve the efficiency of agricultural marketing support measures. In 2005, the new instrument was successfully utilized, providing support to 15% of the cotton crop, which became 32% when added to the PEP program. Other commodities were also included in the PROP program.

Public Stock Purchase Option Contract is another recent innovation which enables the

sale by auction of products in public stocks, for future delivery to the buyers.

The third priority of agricultural policy – “*Bring to market*” – was also considered by Law 11076, which created two new twin notes, the *Certificado de Depósito Agropecuário* (CDA) [Agricultural Deposit Certificate] and the *Warrant Agropecuário* (WA) [Agricultural Warrant]. These notes represent promises to deliver products deposited in warehouses, issued by the holder of the deposit (warehouse), at the request of the depositor (rural producer). They must be duly registered in an institution authorized by the Central Bank (BM&F, Bovespa and Cetip) and can be negotiated electronically.

In the spot market of agricultural products and byproducts, the taxation of each purchase and sale operation increases the product value. Therefore, the sole option left to farmers is to sell the goods directly to processing industries or exporters. No taxation will apply to negotiations of CDA and the WA. The taxation is postponed until the moment in which the holder of the CDA decides to remove the product from the warehouse for processing or consumption.

The CDA and the WA are strategic for “*Bring to Market*” and “*Marketing*” commandments. Their objective is to stimulate speculators to run the price risks associated with carrying stocks over time, thereby, increasing agricultural liquidity. The WA can become a sort of “private EGF”, enabling its holders to receive loans by providing these notes as guarantee. These two notes enable a wide number of combined operations in the spot and future commodity markets, as well as interest rates and exchange rate markets, and other financial operations.

In addition, the government is defining the rules for the creation of a private system for warehouses certification, with the objective of

improving the quality of service and increasing the volume of information on Brazil warehousing industry. Furthermore, the Moderinfra¹⁰ finances the construction of farm warehouses, with the objective of reducing the need of overselling at lower prices, especially at the harvest time.

CDCA, LCA, CRA, CDA and WA benefit from the exemption of *Imposto sobre Operações Financeiras* (IOF) [Financial Operations Tax].

The rural credit resources of Brazil Agricultural and Livestock Plan (2005-06) for farmers and cooperatives is R\$ 53 billion (approximately USD 23 billion). This is a very modest amount in relation to the agribusiness financial needs, whose GDP is of about USD 180 billion, and Brazil investment funds in September 2005 (USD 300 billion).

In conclusion, Law 11076 created a new “agribusiness financial roadmap”, a bridge to facilitate access to the financial and capital markets. In close cooperation with the private sector, the government has laid the foundations for a private system for the financing of agribusiness, approximately 40 years after the creation of SNCR. In this new system, the beneficiaries are not only farmers and cooperatives but the entire agribusiness sector (input production, farming, processing and distribution). The financial and capital markets have great potentialities of increasing their participation in the financing of Brazilian agribusiness.

The growth of the industry of new agribusiness notes depends on the reduction of interest rates throughout the economy, stable rules and respect for contracts. The government is confident that these new instruments will strength the Brazilian agribusiness competitiveness, by increasing marketing liquidity and reducing the cost of capital and operational risks.

¹⁰ Support Program for Irrigation and Warehousing.