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PANEL 15: LATIN AMERICA: FOOD SECURITY, DIVERSIFICATION  
AND RESOURCE MANAGEMENT

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**PANEL DISCUSSANTS**

Trade Liberalization and Agricultural Reforms in Brazil's Agriculture: Implications for Food Security and the Management of Natural Resources *Mauro de Rezende Lopes (Centro de Estudos Agrícolas, Brazil)*

Food Security, Resource Management and the Adjustment Plan in Argentina: Some Comments *Julio A. Penna (INTA, Argentina)*

Agricultural Development and Factor Markets: Some Notes about Peru and Ecuador *Gabriel Montes LLamas (IADB)*

Markets for Water Rights in Chile *Eugenia Muchnik, Marco Luraschi and Flavia Maldini (CEPAL, Chile)*

**RAPPORTEUR**

*Joaquim Bento de Souza Ferreira Filho\* (Brazil)*

Slow growth of agriculture is a consequence of several factors, a number of them associated with macroeconomic reforms, such as appreciation of exchange rates and increases in real interest rates. However, factor market distortions and imperfections are also important underlying factors. Tenure insecurity is pervasive and land legislation frequently restricts transactions in the land market, imperfections in the capital markets are often magnified by the lack of appropriate collateral legislation, labour costs are increased by ill-conceived legislation and water markets are not yet properly developed.

Countries are affected differently by these problems and it was impossible to do full justice to this diversity in the short time allocated to a panel. The analysis presented by the four invited discussants highlighted a wide range of issues which are at centre stage in Latin America.

*Aftermath of macroeconomic reforms in Argentina*

According to Julio Penna, farmers' real income in Argentina has dropped significantly since the initiation of the stabilization plan in 1991, as a result of several factors: high interest rates, tight labour regulations that keep the cost of labour at levels inconsistent with the other prices in the economy, high taxes on agriculture and, despite the reduction in the inflation rates, an increase of 30 per cent in the consumer price index between 1991 and 1996.

These changes have affected farmers differently. Large and medium-size operators took advantage of lower input prices, especially of capital goods, and upgraded their technologies, increasing the use of irrigation and new machinery as well as applying more fertilizers. This favourable development was facilitated by the relatively high levels of initial capital and education, and by the possibility of taking advantage of economies of scale. Small farmers, however, could not take full advantage of the lower input prices and were severely constrained by their lower scale of production. Starting from a high degree of indebtedness, the increase in the interest rate has further restricted their access to credit and constrained their capacity to improve technological standards and to increase their operational scale.

It is interesting to observe that Argentina's legislation apparently does not restrict the adjustments that are taking place through the land market. Even though the adjustment to the new set of relative prices is causing discomfort now, the adjustment process is probably less painful than it would be if restrictions on land transactions existed.

*Aftermath of macroeconomic reforms in Brazil*

The adjustment issues in Brazil have a similar macroeconomic background to that of Argentina, despite the fact that the exchange rate regimes adopted by the two countries are quite different, with the Brazilian system being more flexible and easier to adjust if the need arises.

The reforms in Brazil started with trade liberalization. The tariff reform of 1990–3 is a landmark in the process. A second important component of this process was the creation of MERCOSUL, together with Argentina, Paraguay and Uruguay. At the same time, several policies of domestic support were eliminated. In this regard the elimination of marketing boards for coffee, cocoa, sugar and wheat was important. Also significant was the discontinuation of other policies of domestic support, such as reduction (if not elimination) of interest rate subsidies, reduction of government expenditures on agriculture and discontinuation of the guaranteed minimum prices for several commodities.

The impacts on the sector have been large. First, high imports of commodities such as rice, corn, cotton, dairy products and wheat displaced domestic production and reduced employment in the sector. Second, the macroeconomic stabilization plan (*Plano Real*), with accompanying high interest rates, caught farmers with already high levels of indebtedness. Third, the process of squeezing farm income was exacerbated by the appreciation of the exchange rate with

its negative impact on exports and its positive impact on imports. It should be added that MERCOSUL (with zero tariffs for trade within the region) has contributed in an important way to higher imports of agricultural commodities from Argentina.

One political consequence of this process is the appearance of the landless movement which has gained strength in the last two years. This group is composed mainly (but not exclusively) of unemployed rural workers. The movement is politically important and is pushing the government to speed up the land reform process. However, since governments (federal, state and municipal) do not have funds to provide enough resources (besides land) to guarantee minimum profitability in the settlements, the economic results have been poor. This problem is further complicated by the fact that initial endowments are quite small. Lopes, quoting results of a survey by the newspaper, *Folha de São Paulo*, notes that, in those properties invaded by landless workers, 22 per cent were illiterate, 68 per cent had no formal education, 54 per cent had no income, and 67 per cent lived on donations.

Argentina and Brazil are still coping with consequences of the reforms and facing the challenge of further deepening the process. The discontinuation of past policies has indeed been a positive development. Nevertheless, the fact that the flow of resources reaching the sector has been reduced at a time when increased interest rates have put several farmers in a financially weak position. Pressures for backtracking in the reform process can build up in the wake of the adverse initial effects, but they are unlikely to succeed. Nevertheless, the government must be quick to develop the new framework for the sector. This must emphasize infrastructure development, factor market deregulation (especially for the labour market), technological change and natural resource management, even though the latter is not yet at the forefront of discussions. This agenda has not yet been fully absorbed by many producers and producer groups and there are bureaucratic niches that still fight for the status quo, even though it is no longer feasible. While the adjustment may be painful for some groups, the government needs to create policies, in addition to those noted above, to reduce the adjustment costs for the most vulnerable groups within agriculture.

#### *Land markets in Ecuador and Peru*

Gabriel LLamas noted that in Ecuador and Peru the land reform legislation enacted in 1964 and 1969 restricted property rights in land in several ways. Interventions such as prohibitions or restrictions to purchase, sales and rentals of land, existed in the two countries, but other land market distortions were also found, such as establishment of maximum and minimum sizes. This pattern of intervention was not peculiar to the two countries. Limits to property rights in land are common in the developing world. Countries such as Bolivia, Mexico and Honduras in Latin America have had similar patterns of intervention. But similar restrictions also exist in other parts of the world.

Several countries in Latin America have started the process of modernization of their agrarian legislation. Examples are Mexico and Honduras, which

began the changes at the beginning of the 1990s; more recently, Bolivia did the same. The change in Peru started in 1991 and was further advanced in 1995 with the approval of Law 26505, which eliminated plot size limits and confined expropriation only to situations related to the construction of public infrastructure and services. At the same time, Peru is improving the land administration system with a cadastral survey and modernization of the land register services. The change in Ecuador, although with a more limited scope, came with the Agrarian Development Law, in 1994. Among its provisions the law eliminated restrictions to land transactions, allowed corporations to own land and reduced the cases where land expropriation was allowed. In water management, development has been even slower. Earlier legislation did not allow any private ownership of water resources and water prices were insufficient to cover capital and operating costs. This has certainly induced uneconomic uses of this resource and, as LLamas notes, had its private benefits skewed towards large landowners. Some initiatives to improve the legislation are under consideration in the two countries.

#### *Chile: water resources*

According to Eugenia Muchnik and her colleagues, Chile has successful experience in the management of water. Private concessions of water have existed since colonial days. Some of the main features of the 1981 Water Code, which is still in effect, are as follows. Water rights are completely separated from land rights and can be freely transferred, sold and bought; applications for new water rights are not conditional on the type of use and there is no priority list for different uses of water; water rights are allocated by the state and, in the case of simultaneous requests for the same water rights, these are allocated to the highest bidder. There is no specific tax for holding water rights.

Nevertheless, at present, there are conflicts and issues related to provisions of the Water Code. One key issue refers to the need for more regulation of water markets on the grounds that water transactions usually involve externalities, that in some cases a natural monopoly arises (large dams, canal systems) and that water is in fact an intermediate case between a private and public good such as a free access good. But this view is opposed by others who argue that the system has worked well so far and that no major regulatory reform is needed. The speakers themselves defended this last position, given the advantages in terms of mobility and efficiency.

Water markets are vital to the development of a modern and efficient agricultural system. This is beginning to be understood by policy makers throughout Latin America. It can be noted that Chile has an advanced land administration system which permits land markets to work quite efficiently. On balance, the Chilean experience is remarkable and contains lessons for most countries, since it has created an effective system of water allocation which has largely avoided waste (despite the problems raised by speculation with water rights) of this increasingly scarce resource.