

Growth, Efficiency and Equity: The Impact of Agribusiness and Land Reform in Brazil

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Abstract

This article first analyzes the nature of Brazil's modern agribusiness, how it emerged, its relative importance within the economy, and its impact on the country's distribution of wealth and income. It then examines the achievements of the Brazilian government's land reform program, the degree of continued property concentration, and the impact of the MST (Movement of Rural Workers without Land). It speculates on the degree of co-existence that is possible between the agribusiness sector and the MST, and the degree to which one side can only prevail at the cost of the other.

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The Impact of Agribusiness and Land Reform in Brazil

By

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Background

The forces of globalization which gained momentum in the 1990s and the early years of the 21st century also reached the agricultural sector of many developing economies. There were dramatic technological developments in agricultural inputs (improvements in seeds, fertilizer, agricultural machinery, disease control), in processing agricultural goods, and in marketing agricultural products. This led to the emergence and rapid expansion of large agribusiness complexes which increasingly dominated international trade in food products and which became an important earner of foreign exchange of these countries. At the same time, a large proportion of the rural population was living in poverty, producing food with the use of primitive technologies, and having

access to a small proportion of cultivable lands. Both international and domestic pressures for land redistribution, which have existed since the middle of the 20th century (going back even earlier in such countries as Mexico), were constantly present.

In former times, when Latin American agriculture consisted of *minifundia* and *latifundia*, and when the latter were often underutilized, it was thought that a vast redistribution of land would not necessarily result in a decline of agricultural output. Thus, there did not inevitably exist a trade-off between equity and efficiency.¹ A widespread view was that "...high inequality of land ownership...leads to inefficiency, because the most efficient scales for farming are family and medium-size farms. The result of these factors can be a lower average income, and a lower rate of economic growth, when inequality is high."² This changed, however, with the appearance of agribusiness complexes, which increased agricultural production at the intensive margin and which have had substantial forward- and backward-linkages. It now seemed that a stronger emphasis on land redistribution, with possible impingement on property rights, could imply a sacrifice of efficiency and growth for the sake of improved rural equity. In this article we shall examine these issues with respect to the case of Brazil.

Introduction

Traditionally Brazil's agriculture was perceived as a backward sector, whose output was growing mainly at the extensive margin, with stagnant productivity (i.e. output per hectare not growing), and whose earnings were distributed in a concentrated

¹ There has been considerable controversy about this in the literature. See, for instance: for a good summary, see: Franko (2003), pp. 322-328.; Sheahan (1987), ch. 6.

² Todaro and Smith (2003), p. 210.

manner, reflecting a pronounced concentration of rural land ownership and of access to credit and modern agricultural inputs.³

By the 1990s and early years of the 21st century, however, Brazil was experiencing an agricultural boom which was in large part based on a rapidly growing modern agribusiness sector. What were the main factors that produced the agricultural boom of the 1990s and early years of the 21st century? The boom was characterized as representing a change of Brazil's agricultural culture and institutions, transforming the sector from a traditional economic backwater to a dynamic agribusiness sector.

At the same time the 1990s saw the emergence of a radical movement which demanded a drastic redistribution of agricultural properties through an acceleration of land reform. The movement, called MST (Movimentos dos Trabalhadores sem Terra), promoted land invasions of both productive and unproductive lands. These invasions were supposed to put political pressure on the government to break up large estates and distribute titles of small properties to its members.

Thus, at the beginning of the 21st century two contradictory forces seemed to have emerged: on the one hand, there were the agribusiness groups, bringing modern technology to the agricultural sector and producing rapid rates of growth; while on the other hand there was the MST emphasizing greater equity in the distribution of land and its output. Could these forces co-exist? Could the development of a thriving agribusiness sector co-exist with a movement bent on redistributing the assets of the agricultural sector? What changes could those forces trigger with respect to Brazil's distribution of income and to its international trade policy?

³ See: Baer (2001), ch. 15; Dias et al (2000); Graham et al (1987); Mueller (July/September 1992); Schuh (1970).

In this article we shall first analyze the nature of Brazil's modern agribusiness, how it emerged, its relative importance within the economy, and its impact on the country's distribution of wealth and income. We shall then examine the achievements of the Brazilian government's land reform program, the degree of continued property concentration, and the impact of the MST. Finally, we shall speculate on the degree of co-existence is possible between the agribusiness sector and the MST, and the degree to which one side can only prevail at the cost of the other.

Agricultural Modernization and the Growth of Agribusiness

During Brazil's ISI (Import Substituting Industrialization) boom years in the 1950s and early 1960s the agricultural sector was neglected and occasionally discriminated against. Although the growth of agricultural output was slightly ahead of the country's population growth, this expansion occurred mainly at the extensive margin for most products.⁴ As can be seen in Table 1, output per hectare for some of the major crops either stagnated or grew at a very slow rate until the 1980s. By the 1990s and the first years of the 21st century, however, there occurred a substantial jump in the productivity of most agricultural crops. The total output of grains rose by 131% in the 1990 – 2004 period, while the area cultivated for those crops rose by only 16.1%. Indeed, according to Instituto de Pesquisas Economicas Aplicadas (IPEA), agricultural production grew at an average rate of 3.28% between 1975 and 2002 while its Aggregate Input Index (accounting for land, labor, pesticides, machinery, etc.) grew at negative rates.

⁴ Even growth at the extensive margin could not have taken place in Brazil without the government's road construction program in the 1950s. See Baer (2001), p. 373.

The dramatic rise of agricultural productivity was the result of a series of policy measures which began to be introduced in the second half of the 1960s. Among such measures, rural credit and investment in research and development stand out as the most important instruments used to stimulate agriculture in that period. From 1960 to the mid-1970s the real value of new agricultural loans increased more than six-fold, and while agricultural credit as a share of total credit rose from 11% in 1960 to about 25% in the mid-1970s, total agricultural credit as a share of agricultural GDP fluctuated between 65 and 9% in the 1970s.⁵ Most of the agricultural credit originated with the government bank, Banco do Brasil, but various measures were also taken to induce private banks to increase their loans to the sector. Most of the credit was made on a concessional basis, i.e. the interest rate charged was substantially below the rate of inflation, and the resulting subsidy to agriculture as a proportion of GDP grew from about 2% in the early 1970s to almost 20% in 1980.

Subsidized credit contributed to a substantial increase in mechanization and in improved farming techniques. However, the distribution of the subsidy through negative real interest rates was quite lopsided: the larger farmers usually received the bulk of the benefits. For instance, the share of total credit for crops allocated to small loans (less than

Table 1

a) Average Yearly Growth Rates of Real Agricultural Output

1947-50	4.3	1971-76	5.9	2000-03	5.4
1951-54	4.5	1977-81	5.0		
1955-58	4.2	1981-86	1.8		
1959-62	5.8	1987-92	2.9		
1963-66	3.2	1993-96	2.3		

⁵ Graham et al (1987), p. 21.

1967-70 4.7

1997-99 3.9

b) Agricultural Productivity, 1961-2003(Hg/Ha)

	1961	1982	2003
Coffee	5,084	5,054	8,190
Dry Beans	6,760	4,898	8,047
Corn	13,123	17,308	36,961
Rice	16,989	16,158	32,381
Soybeans	11,269	15,647	27,901
Seed Cotton	6,307	5,320	30,731
Oranges	148,359	196,591	206,344
Sugar Cane	434,477	605,151	722,895

Source: FAO.c) Average Yearly Rates of Growth of Area under Cultivation and of Productivity (1982 – 2003)

	<u>Area Under Cultivation</u>	<u>Productivity</u>
Coffee	1.14	2.33
Dry Beans	-1.72	2.39
Corn	0.12	3.68
Rice	-3.04	3.37
Soybeans	3.94	2.79
Seed Cotton	-7.44	8.71
Oranges	1.58	0.23

Sugar Cane	2.65	0.85
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Source: FAO.

5 minimum salaries) was 34% in the mid-1960s and declined to 11% in the mid 1970s, and for livestock loans the decline was from 33 to 12%.⁶

Although the credit subsidy, road construction and some government investment in marketing helped to increase and diversify Brazil's agricultural production in the 1960s and 1970s, government officials realized that a breakthrough in productivity could only be achieved through a massive amount of investment in research. To that end the Empresa Brasileira de Pesquisa Agropecuaria (EMBRAPA) was created. It promoted a substantial amount of investment in human capital, mainly through the foreign training of specialists in agricultural sciences; and it financed many research programs which were established to improve productivity. Considerable resources went into efforts to make technological innovations leading to increased yields in the acidic soils of frontier regions (the *cerrado*) of the southeast and central-west.⁷ According to IPEA, between 1975 and 2002, Total Factors Productivity (TFP)⁸ grew at an average rate of 3.3% (this same growth rate was 4.88% during the 1990's and 6.04% from 2000 to 2003). However, during this period land productivity (well known to be strongly associated to investments in research & development) was the main component accounting for the TFP growth.

⁶ The Gini coefficient for crop loan concentration was estimated to have risen from .600 in 1969 to .725 in 1979, and by the late 1970s 60 % of the total amount of agricultural credit went to 10% of the highest loan strata. See: Baer (2001) p. 374, and Graham et al (1987) p.24.

⁷ Graham et al (1987) found that there were some "partial breakthroughs...in several soybean and black bean varieties and improved practices for mixed farming in the 'cerrado' region. Still, the long gestation period characteristic of all agricultural research implies that the major impact of this investment will probably become apparent only by the mid to late 1980s." (p. 6).

⁸ The Total Factors Productivity is a relation between the index of all products and the index of all inputs. See: "Condiciones da Produtividade da Agropecuaria Brasileira". Garques and all (2004). Discussion Paper. IPEA.

While the average growth of land productivity was 3.82%, the average growth of labor productivity and capital productivity were 3.37% and 2.69 % respectively.

A significant impact of EMBRAPA's role can be seen in Table 1. It will be noted in part b) of the table that in the 20-year period 1961-82 output productivity declined in half of the major crops, while it rose only modestly in the other half. However, in the following twenty years (1982-2003) the productivity of all crops expanded dramatically. Part c) of the table shows that while yearly productivity expanded rapidly in all crops, the area under cultivation fell in three of the crops and was less than yearly productivity expansion in two crops.

As a result, Brazil's agricultural sector was remarkably successful in the 1990s and in the first years of the 21st century. While in the period 1999-2003 the GDP and industry grew at a yearly average rate of only 1.6% and 0.74% respectively, agriculture's yearly growth rate was 5.4%. The country's grain harvest rose from 58 million tons in 1990/91 to 123.2 million tons in 2002/03. In 2003 Brazil was the second largest world producer of soybeans (51.5 million tons, vs. 65.8 million tons in the U.S.); the third largest producer of corn (47.8 million tons, vs. 256.9 million tons in the U.S. and 114.2 million tons in China); it was the world's largest producer of coffee, sugar, alcohol and fruit juices. It was among the largest producers of beef, poultry, leather and shoes, and was on its way to be one of the main producers of cotton and bio-fuel made of sugar cane and vegetable oils.

The combination of the above mentioned policies resulted not only in the dramatic increases in agricultural productivity, but they also contributed to the growth of non-traditional exports. Whereas Brazil's share of world exports has fluctuated between

0.86 and 0.97% in the period 1990 to 2002, Brazil's share of world agricultural exports has grown from 2.34 % in 1990 to 3.34% in 2002. Most notable among the growth of non-traditional exports were soybeans (soybeans and soy oil amounted 7.3% of total exports in 2003), orange juice (1.2%), refrigerated meat and chicken products (4.6%). Many of these products were processed within Brazil prior to shipment abroad.⁹ It should be stressed that these accomplishments were obtained with substantially reduced government credit subsidies and within a trade liberalization framework.¹⁰

Measuring the Share of Agribusiness in Brazil's GDP

Using conventional ways to measure the share of agriculture in Brazil's GDP (Table 2 a) one notes a steady decline of the sector, from 24.28% in 1950 to 9.64% in 2003. There was also a decline of the share of the labor force in agriculture (Table 2 b), although that share is more than twice as large as agriculture's share in GDP. This is evidence that the rural labor force continues to be relatively inefficient.

However, if one takes into account that the above described growth of agricultural productivity was intimately related to the domestic expansion of the agricultural input sectors (fertilizer industry, agricultural implements, etc.), to the agricultural processing sector, and to the domestic and international marketing sectors, in other words to the development of an agribusiness complex, the initial impression of a decline of agriculture within Brazil's economy will have to be modified. Thus, the current impact of agriculture on Brazil's economy cannot be measured only by its direct contribution to the GDP.

⁹ Thus, for instance, in 2003 40% of soy projects consisted of soy meals and soy oil; all oranges were exported as concentrated juice; all of meat and chicken products were exported as industrialized products.

¹⁰ It should be stressed that the progress of world trade liberalization has placed Brazil in an advantageous position as Brazil's commercial agriculture is efficient and thus can easily compete in the international market, even with reduced government subsidies.

The broader concept of agribusiness seems to better capture the impact of agriculture on the country's economy. Although there is some controversy about the definition of agribusiness itself, Guilhoto and Furtuoso (2004) present a new way to measure the agribusiness GDP through the use of input-output analysis and the system of national accounts. As can be seen in Table 3, they point out that while the agricultural sector represented only 7.6% of the Brazilian GDP in 2000, the share of agribusiness in that same year was 27%¹¹. In 2003, agriculture's share was 9.6 percent of GDP, while agribusiness was estimated at almost 31% of GDP.¹² It should also be noted in Table 3

Table 2

a) BRAZIL: Sectoral Distribution of GDP

	<u>Agriculture</u>	<u>Industry</u>	<u>Service</u>	<u>Total</u>
1950	24.28	24.14	51.58	100.00
1970	11.55	35.84	52.61	100.00
1980	10.20	40.58	49.22	100.00
1995	14.00	37.00	49.00	100.00
2003	9.64	36.64	53.72	100.00

Source: IBGE.

b) BRAZIL: Sectoral Distribution of Labor Force

	<u>Agriculture</u>	<u>Industry</u>	<u>Services</u>	<u>Total</u>
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¹¹ The GDP of the Vegetal Agribusiness represented 20% of the Brazilian GDP, while the GDP of Animal Agribusiness corresponded to 8% of the Brazilian GDP in that year.

¹² Examining these shares for other countries in the late 1990s, it was found that agriculture as a % of GDP was: 5.6% for Argentina; 14.3% for Colombia; 8.5% for Chile; 3.2% for France; 8.1% for the US; while agribusiness' share of GDP was: 32.2% for Argentina; 32.1% for Colombia; 32.1% for Chile; 8.5% for France; and 16% for the US. Inter-American Development Bank (2003).

1939	65.9	10.4	23.7	100.0
1969	45.1	17.9	37.0	100.0
1995	22.8	21.0	56.2	100.0
2003	23.0	24.0	53.0	100.0

Source: IBGE.

Table 3

Share of Agriculture and of Agribusiness in GDP and Employment in 2002

	<u>Share in GDP</u>	<u>Share in Employment</u>
Agricultural Production	8.99%	18.8%
Agricultural Industry	9.07%	7.93%
Agricultural Commerce	9.24%	
Agricultural Inputs	1.90%	

Source: CAN/CEPEA-USP.

that while in 2002 the share of agriculture in GDP was 8.99%, its share in total employment was almost 19%. However the agribusiness sectors of inputs, agricultural industries and agricultural commerce which accounted for over 20% of GDP, made up only 7.93% of employment. This reflects the non-labor intensive nature of modern agribusiness.

Distributional Aspects of Agriculture and Agribusiness.

The distribution of land and of rural income has been very concentrated since colonial times.¹³ This situation did not change in modern times, despite various attempts at land reform (see below). Table 4 summarizes some recent measures. Part a) of the table shows that about half of agricultural establishments are smaller than 10 hectares, while only slightly over 1 percent are over 1,000 hectares. Part b) shows that establishments of over 1000 hectares accounted for about 45% of rural lands, while

¹³ See, for instance, Furtado

establishments of less than 10 hectares accounted for only between 2.2 and 2.6% of the land.

Table 4 Concentration of property by number of farm units.

	<u>1980</u>	<u>1985</u>	<u>1995</u>	<u>2000</u>
Less than 10 ha.	50.35%	52.83%	49.43%	31.6%
From 10 to 50 ha.	31.49%	29.68%	31.12%	42.1%
From 51 to 100 ha.	7.58%	7.55%	8.24%	11.5%
From 101 to 500 ha.	8.33%	7.89%	8.47%	11.4%
From 501 to 1,000	1.12%	1.03%	1.20%	1.8%
More than 1,000	1.13%	1.02%	1.54%	1.6%
	100.00%	100.00%	100.00%	100.0%

Source: IBGE; INCRA

b) Concentration of Property by Area

	<u>1980</u>	<u>1985</u>	<u>1995</u>	<u>2000</u>
Less than 10 ha.	2.47%	2.66%	2.23%	1.8%
From 10 to 50 ha.	10.18%	10.52%	9.97%	10.2%
From 51 to 100 ha.	7.50%	8.04%	7.76%	8.0%
From 101 to 500 ha.	23.74%	24.13%	23.57%	23.8%
From 501 to 1,000	11.01%	10.92%	11.36%	12.4%
More than 1,000	45.13%	43.74%	45.20%	43.8%
	100.00%	100.00%	100.00%	100.0%

Source: IBGE; INCRA

The growth of the Brazilian agribusiness sector has not resulted in a more equitable distribution of income. First, as was shown in Table 5, the core agricultural production sector is still the main generator of jobs within agribusiness, but the average income of a worker employed in the agriculture sector is much lower than the income received by a worker employed in other agribusiness branches. This is clear from the data in Table 5, where it will be noted that average income in agriculture is much lower than in related agribusiness sectors, and rural labor income, especially of employees, is quite inferior to that of labor in the urban sector. Second, the production activities of agricultural inputs, of agricultural industries and of distribution are capital intensive. This is obvious from Table 3, which shows that these three agribusiness sub-sectors contributed 20.21% to the GDP in 2002, while only contributing 7.93% to national employment. Finally, also contributing to the concentration of income is the fact that the production of agricultural inputs, of agricultural industrial products and of the distribution of such products are all taking place in concentrated sectors. For instance, one finds that of the 15 largest firms in the “Food, Beverage and Tobacco” sector, the five leading firms accounted for 85.7% of total sales; in “Paper and Cellulose” the top five firms accounted for 72.2% of the sales of the largest 15 firms; (“Maiores e Melhores”. Exame, 2004, p. 200, 236).¹⁴

Table 5

a) Brazil: Employment and Average Income in Agriculture and Agribusiness, 2002

Sectors (2002)	Number of Workers	Average Monthly	Share
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¹⁴ The market share of Brazil’s ten largest supermarket chains increased from 24.3% in 1994 to 46.8% in 2000. See: ABRAS, www.abrasnet.com.br

		Income	
Brazil: Total	66,373,200	5,934.66	100.00
Agriculture and Live Stock	12,508,400	800.06	18.85
Remaining Agribusiness Sectors	5,265,800	4,018.28	7.93

Source: IBGE. The average income includes that of both employer and employee.

Average income of only employee would thus be much lower, much closer to that shown in part b) of this table.

a) Brazil: Monetary and Non-Monetary Average Income Per Month in 2003 (R\$)

	<u>Total</u>	<u>Rural</u>	<u>Urban</u>
Total Average	1,789.66 (100.00%)	873.94 (100.00%)	1,954.43 (100.00%)
Labor Income	1,109.39 (61.99%)	466.28 (53.35%)	1,225.11 (62.68%)
Employee Labor Income	759.65 (42.45%)	218.50 (25.00%)	857.03 (43.85%)

Source: IBGE.

The MST Movement

The last years of Brazil's military regime in the 1980s saw the emergence of an organized movement of landless peasants called MST. At its first meeting in 1984 it was decided that the occupation of idle lands was a legitimate political tool to end the high degree of land concentration. Over the years the MST developed a broad political program, and besides drastic land redistribution, it also included an opposition to neo-liberal policies, to the privatization of state enterprises, to the repayment of the foreign debt, to child labor, gender discrimination, etc. In addition, its leaders were against many goals favored by agribusiness groups and considered commercial agriculture itself as a

threat to rural jobs and as contributors to the continuous rural concentration of income.¹⁵ For instance, the MST favors a limitation on the size of land holdings, no matter whether or not a farm is productive. Claiming that trade liberalization endangers Brazilian sovereignty, the MST opposes important items in the agenda of agribusiness groups, such as the liberalization of transgenic seeds, the Brazil's participation in the World Trade Organization (WTO), and the creation of the Free Trade Area of the Americas (FTAA)¹⁶. In the words of João Paulo Stedile (MST's main economic strategist) "...commercial agriculture only benefits about 100 thousand farms whose size is 500 hectares or more...In the last years, the expansion of commercial agriculture destroyed more than 600,000 rural jobs¹⁷."

Brazil's Land Reform Projects

Until the mid-1990s Brazilian governments made only sporadic attempts at improving the distribution of land. According to Mueller¹⁸, land reform was reinstated as a policy objective with the end of the military government in 1985, with the accession of President Sarney (1985-1990). His government introduced a National Plan of Agrarian Reform and a Ministry of Land Reform was created to implement it. The aim was to redistribute not only idle land, but also underutilized land, which was close to the market. However, opposition by large landowners and the country's growing macro-economic crisis (which limited resources for implementing many land reform projects) substantially reduced the land resettlement process. Table 6 shows that since the mid-

¹⁵ "For instance, while soybean production is capital-intensive, it requires very little labor. A 1,000 hectare soybean farm employs only three people. Two consequences of this type of production deserve note: first, the growing profits from soybean production remain in the hand of relatively few already rich producers, and second, soybean production fails to fill the social need for employment in the countryside and thus stem the tide of urban immigration." Patel and Cassel (2003), p. 28.

¹⁶ See: www.mst.com.br

¹⁷ Interview with Joao Pedro Stedile (Jornal Correio da Cidadania, 2005)

¹⁸ Mueller (2004), p. 15.

20th century until 1994, given Brazil's high Gini coefficients of income and land, only 176,033 families had been resettled on 21 million hectares of land.

Land reform accelerated during the administration of President Fernando Henrique Cardoso. In the 1965-2003 period 423 thousand families were settled on 22 million hectares of land. The total area involved in land reform projects until the end of 2002 amounted to 7.2% of Brazil's arable lands.

Table 6

Brazil: Land Reform Projects Carried out, 1994-2002

	<u>Number of Projects</u>	<u>Number of Families Settled</u>	<u>Total Area (ha)</u>	<u>Average Size (ha)</u>
Until 1994	953	176,033	21,043,013	76.3
1995	388	51,765	2,656,170	44.6
1996	461	64,312	2,411,588	41.1
1997	704	77,810	3,831,710	44.5
1998	875	90,341	3,889,456	42.6
1999	840	54,688	2,479,325	42.3
2000	700	37,024	2,286,454	52.7
2001	647	33,800	2,072,204	47.8
2002	485	14,073	2,398,873	81.0
Total	6,053	599,846	43,068,794	57.5

Source: MDA/INCRA/SD/Sipra, 20/12/2002

President Lula, whose mandate began in January 2003, launched a new agrarian reform plan in November of that year. Its aim was to settle 530,000 families by the end

of 2006. Unfortunately, due to bureaucratic delays and the lack of funds, only 36,301 families settled by end of 2003.¹⁹

MST vs. the Government

Since its creation in the middle 80s, MST has been organizing land invasions throughout the country in order to pressure the government to implement a broad land reform. The constant MST invasions in the 1980s brought on a lot of media attention and forced INCRA (National Institute for Colonization and Agrarian Reform) to take action. In 1985 INCRA began a new plan to redistribute land through the expropriation of unproductive land and to distribute it to MST members and their families, which were registered with INCRA. The problem for INCRA was that most of the large landowners were hiring lawyers to challenge the expropriations. They claimed that the price offered for the land was too low, that the land did fulfill social functions, that inspection was not done properly and that INCRA never directly notified landowners of the expropriation. The longer this process dragged on, the more expensive it became, causing INCRA to drop the proceedings. INCRA found that due to its limited resources and to restrictive legal rules its plan was not going to work.

As a response to the low pace of land reform under INCRA, the landless movement increased the number of invasions during the 1990s. Between 1992 and 1994 the annual average land invasions amounted 367, involving 214,653 individuals; this rose in the years 1995 to 1999 to 667, involving 214,653 individuals; in the years 1995 to 1999 there occurred 667 invasions, involving 508,507 individuals. In 1996 the FHC (Fernando Henrique Cardoso) government received congressional approval to amend

¹⁹ Superintendencia Nacional de Desenvolvimento Agrario.

Complementary Law 76/1993, known as the “lei do rito sumário”, which eliminates many of the legal manipulations which in the past had slowed down or even impeded the land reform process. The law also stated that expropriation must occur within 48 hours, even if the landowner decided to challenge it. This *rito sumario* law would enable INCRA build to build a base or follow up with their plans without any hassles. The only problem was that INCRA found itself only responding to the agendas set by squatters, such as those of the MST. Realizing this, MST began taking advantage of the situation and increased their invasions. This situation led the FHC government to pass a law (The 2000 Decree) which prohibiting INCRA from purchasing any kind of land, even if it was unproductive. According to Mueller (2004) “...as a result of this law, the number of cases of land invasions fell considerably, from 502 in 1999 to 158 in 2001 and 103 in 2002.”²⁰

Even though, as shown above, there has been substantial progress in land reform under the administration of President F.H. Cardoso (1985-2002), which is being continued under President Lula (2003 -), the MST has felt that land redistribution and the way it has been carried out did not go far enough (in the year 2000, 1.6% of farms occupied 43.8% of land under cultivation – see Table 4 a)) and it even questions the official numbers.²¹ Although the FHC administration had in its early years a pro-land reform agenda, the overwhelming number of invasions made that administration merely concentrate on the expropriation and settlement of invaded unproductive farms. After the

²⁰ Mueller (2004), p. 18.

²¹ INCRA claims that 331,740 families were settled in the years 1964-96. However, a Census carried out by the University of Brasília (1° Censo da Reforma Agrária - Incra/Crub/UnB) showed that only 159,778 families were settled in that period (mostly in the states of Maranhão and Pará).

settlements were completed no official technical support was given to most of the settlers. The latter were mainly individuals without any agricultural training; many of the MST recruits were from large cities. Therefore, many settlers sold their land shortly after receiving titles. Furthermore, despite the fact that the FHC administration created low interest credit programs (PRONAF), rural micro credit ended up reaching only a relatively small number of settlers who were located close to markets and had access to adequate infrastructure. When such credit was granted to settlers with no experience, many were unable to service their debts.²²

The location of settlements has caused disputes between the MST and INCRA. This is corroborated by the data in Tables 7 and 8, which show the regional distribution of land occupation by the MST versus the distribution of land reform settlements by INCRA. On a broad regional basis it will be noted that the regional distribution of land occupations in 2003 were not necessarily correlated with the regional distribution of land reform projects. Thus whereas 41.3% of land reform took place in the North of the country, the share of land occupation of that region was only 2.91%; the Northeast's share of land reform was 33.82%, while the occupation share was only 23.48%; the share of land reform projects in the Southeast and South of the country was less than 5% each, while their share of occupations was only 12.19% and 14.91% respectively. On a state level basis (Tables 9 and 10) it will be noted that large past share of land reform settlements has not influenced the pattern of MST occupations in 2003. For instance, the share of occupation of such states as Bahia, Pernambuco, Paraná, and São Paulo was much larger than their share of land reform. Taking the five states which accounted for

²² Mueller (2004).

the largest concentration of land occupation (61.22%) in 2003, one notes that they only accounted for 13.9% of the families resettled under the land reform program in the period 1985-2001). However, it is important to highlight that, except for Bahia, Parana and São Paulo, most of MST activities have not endangered the areas where the main exportable crops are located (such as Mato Grosso, Mato Grosso do Sul, Goias, Minas Gerais, Rio Grande do Sul, Santa Catarina). Furthermore, MST has few members in the North, a region considered to be the next agricultural frontier of Brazil, where INCRA has had most of its land reform projects²³.

MST vs. Agribusiness

In January 2003, with the inauguration of the President Lula – a politician who was thought to share many of MST’s views on land reform – the landless movement held 632 occupation camps throughout the country, involving 116,382 families. Until 2003 most land invasions occurred on idle farms according to the “Estatuto da Terra”²⁴. However, after president Lula’s inauguration the MST’s mood became more confrontational, and in 2004 its leaders called for massive invasions in what they called the “red April wave”, when only a small number of farms targeted for invasion were

²³ For instance, according to SECEX (www.fazenda.gov.br), in 2001, 85% of oranges were grown in São Paulo; 76% of coffee was grown in Minas Gerais and Espírito Santo; 65% of soybeans were grown in Mato Grosso, Parana, and Rio Grande do Sul; 51% of rice was grown in Rio Grande do Sul; 57% of cotton was grown in Mato Grosso; 46% of cattle was raised in the states of Mato Grosso, Goias and Rio Grande do Sul.

²⁴ This is an article in the Brazilian constitution, the government can only acquire idle land for purposes of land reform.

actually unproductive²⁵. Furthermore, MST began pressing for the abolition of the 2000 decree, a law that prohibited INCRA to use invaded farms for land reform.

Although Brazil still has large idle agricultural areas, many are located either in infertile regions (such as the Northeast's semi-arid areas) or in the remote Amazonian regions, which are far from markets. The MST has not shown much interest in those areas. Indeed, most of the recent episodes of land invasions took place in the more fertile regions with relatively good infrastructure.

This leads to the important question of whether this trend will endanger property rights and diminish investment in commercial agriculture. The fear has been expressed by a number of scholars that the activities of the MST may endanger the future of Brazil's agribusiness, as the land occupations place into question the sanctity of property rights. Alston et al claim that "...the growing use of violence to provoke expropriation has broad implication for the distribution of land and wealth in Brazil and possibly on the level of wealth, at least in frontier areas, by affecting the security of property rights, land values, and the incentives for investment."²⁶ Nonetheless the government's position on the "Red April Wave" was to state that the law had to be upheld, but promising better future support. However, there was and continued to be substantial disagreements on this issue within Lula Administration. For instance, over the first two years of the Lula government, there was no uniform vision of the performance of agriculture and the appropriate government policies. This was clear by the fact that the Minister of

²⁵ According to Mueller (2004), this was no coincidence because a significant portion of the stock of large idle farms were involved in the settlement programs of the 1990s.

²⁶ Alston et al (1999), p. 53.

Agriculture sympathized with the interests of agribusiness, while the Minister of Land Reform was openly sympathetic to the demands and actions of the MST²⁷.

On the other hand, on many occasions President Lula praised Brazil's agribusiness sector as an important contributor to the country's export growth. For instance, his administration is reluctant in abolishing the 2000 decree; since there is a general fear that its abolition would result in a substantial rise in land invasions. Although it seems that President Lula's government wanted to curb the radicalism that these invasions represented, the lack of clarity about the true inclination of the government (favoring agribusiness vs. favoring the MST) could send wrong signals to investors responsible for the growth of Brazil's commercial agriculture.

The landless movement did not demonstrate a fierce opposition in the first two years of the Lula government because their leaders believe that it would eventually converge to their position. However, it seems unlikely that the MST would tolerate this dubious position of the government in the long run.

Analysts who sympathize with MST and the Minister of Land Reform have not only criticized the slowness of land redistribution, but have also claimed that Brazil's neo-liberal policies of the 1990s and early years of the 21st century have hurt the small

²⁷ Two ministers stated opposite opinions about the conflict between MST members and farmers in Parana on July 05th. Miguel Rossetto, Minister of Land Reform, condemned farmers for forming militias to deter invasions: "Those are irresponsible people who will have to explain themselves in the courtroom". About the same event, the Minister of Agriculture, Roberto Rodrigues, stated that the farmers have the right to defend their land, even by using force: "Who has private property has to protect it". Later, after the repercussions of his statement within a leftist government, Roberto Rodrigues added: "The protection of private property must be done by the law". Estado de Sao Paulo (07/05/03).

farmers of Brazil. They have argued that the elimination of subsidized agricultural credit, of price support programs and marketing services since the late 1980s have hurt the small farmer more than others. Also, "...world prices for Brazil's major crops have been falling since the early 1980s...(and)...prices for crops on the domestic market have fallen almost as drastically..."²⁸ They argue that "...the continuing poor distribution of land is due to liberalization policies that favor large-scale, technologically advanced, export oriented agriculture rather than small farmers growing for local markets."²⁹ They blame the rural exodus which has taken place in Brazil for over half a century to the "desperate situation in the countryside(rather than)..a desirable one in the cities."³⁰

The critics of these statements point out that these declarations ignore certain facts. Their counterarguments are: 1) that the surge in agricultural production and exports has not hurt the domestic consumer; in fact, whereas the cost of living to the consumer stood at 268 in November 2004 (with an August 1994 base of 100), food prices stood at 214³¹ - thus there is no evidence that the growth of agribusiness has hurt the urban consumer (the urban population representing 80% of the country's total population, and the majority of poor Brazilians live in the cities); 2) the decline of rural employment is a phenomenon which most advanced industrial countries experienced and over the years most of the compensating growth of employment occurred in the service sector (thus migration from the countryside to large cities should be viewed as a positive phenomenon in the long-run), and it is in that sector that substantial gains in living standards have been

²⁸ Patel and Cassel (2003), p. 12.

²⁹ Patel and Cassel (2003), p. 18.

³⁰ Patel and Cassel (2003), p. 21.

³¹ Conjuntura Economica, Janeiro 2005, p. XXII.

obtained in many advanced industrial countries through a vast increase in human capital through widespread education.

Table 7:

MST Occupations (2003)

Region	Number of Occupations	Number of Families	Families per Occupation	Region Share (families)
North	21	3,385	161.19	2.91%
Northeast	372	27,327	173.3	23.48%
MiddleWest	59	17,357	294.19	14.91%
Southeast	99	14,191	143.34	12.19%
South	81	17,000	209.88	14.61%
Brazil	632	116,382	184.15	

Source: MST

Table 8:

Land Reform Projects 1985-2001

Region	Number of Projects	Area (ha)	Number of Settled Families	Area per Family (ha)	Region Share (families)
North	1,019	28,508,471	311,557	91.5	41.63%
Northeast	2,835	6,831,040	253,112	27.0	33.82%
Southeast	494	1,007,885	37,290	27.0	4.98%
South	935	650,880	33,526	19.4	4.48%
MiddleWest	770	6,070,518	112,889	53.8	15.08%
Brazil	6,053	43,068,793.7	748,374	57.5	

Source: MDA and IPEA

Table 9:

MST: Occupations in 2003

State	Number of Families	State Share
Bahia	20,000	17.18%

Pernambuco	18,884	16.23%
Paraná	13,000	11.17%
Sergipe	11,450	9.84%
São Paulo	7,914	6.80%
Mato Grosso do Sul	6,500	5.59%
Alagoas	5,165	4.44%
Mato Grosso	5,000	4.30%
Minas Gerais	4,182	3.59%
Goiás	4,000	3.44%
Rio Grande do Norte	3,000	2.58%
Rio Grande do Sul	2,500	2.15%
Maranhão	2,285	1.96%
DF e Entorno	1,857	1.60%
Piauí	1,540	1.32%
Pará	1,500	1.29%
Santa Catarina	1,500	1.29%
Ceara	1,380	1.19%
Rondônia	1,253	1.08%
Espírito Santo	1,124	0.97%
Rio de Janeiro	971	0.83%
Paraíba	745	0.64%
Tocantins	632	0.54%

Source: MST

Table 10:
Land Reform Settlement per State (1985-2001)

State	Number of Families	State Share
Bahia		5.3%
Pernambuco		2.4%
Paraná		3.0%
Sergipe		1.0%
São Paulo		2.2%
Mato Grosso do Sul		3.6%
Alagoas		1.2%
Mato Grosso		10.1%
Minas Gerais		2.7%
Goiás		2.4%
Rio Grande do Norte		2.5%
Rio Grande do Sul		1.6%
Maranhão		18.8%

Piauí		1.6%
Pará		19.5%
Santa Catarina		1.0%
Ceara		4.2%
Rondônia		4.5%
Espírito Santo		0.7%
Rio de Janeiro		0.8%
Paraíba		2.1%
Tocantins		3.3%

Source: MST

Conclusion

Basic agricultural production (without taking into account the sectors that produce agricultural inputs, that process agricultural products, and that market them domestically and world-wide) accounts for less than 10 percent of the GDP and thus the redistribution of its product through land reform will have little impact on the country's general distribution of income. It might thus be argued that if the MST invasions resulted in stepped up land reform, this may not necessarily have a negative impact on the growth of agribusiness. This assumes that basic agriculture will not decline with a such a redistribution and that the agribusiness sectors will in the case of input industries

continue to sell their fertilizers, insecticides, etc., and in the case of the processing industries continue to receive their basic agricultural inputs.

However, although an accelerated redistribution of rural property will not necessarily do much to improve the country's overall distribution of income, the capital intensive nature of the input, processing and marketing sectors, will continue to contribute to the concentration of the national income. We have seen that agricultural production makes up only 30.8% of total agribusiness, while the latter amounts to about 30% of GDP. But as the non-agricultural agribusiness is concentrated into just a small number of firms, which employ mostly capital-intensive methods of production, accelerated redistribution of lands will not represent a dramatic challenge to the general achievements of Brazil's agribusiness.

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