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The rural sector in the socio-economic context of Brazil

*Raúl Brignol Mendes**

In this article the author analyses the evolution of Brazil's rural sector in recent decades and some of its socio-economic effects both in the countryside and in the towns. Although only Brazil is considered here, the processes discussed and their repercussions are found to differing degrees in many other countries of Latin America.

Brazil has a great potential which is not fully used, and it achieved a high and sustained rate of economic growth between the 1950s and the 1970s.

However, during the last quarter of a century it has failed to resolve certain fundamental issues which have been steadily gaining in importance. As a result, there now exists a number of enormous interrelated problems in political, economic and social life. To confront these problems and diminish their intensity is the challenge for Brazilian society now and in the future which will test its capacity to consolidate the country's return to democracy.

The so-called modernization of agriculture in the recent past had many consequences: it concentrated the ownership of land, limited the capacity of the rural population to absorb production, reduced the per capita output of basic foods, and forced an extraordinary rural exodus which led to a massive increase in the redundant population of the towns. The problem of poverty and marginalization has not been solved in the countryside, and these same problems have grown worse in the towns. One of their end results is the worrying increase in violence throughout the country.

In these circumstances, and within a genuinely democratic and therefore non-repressive framework, far-reaching agrarian reform that seeks to do more than merely redistribute the land—something never achieved in Brazil—is perhaps the necessary and available option which will change the sign of the negative socio-economic effects of the modernization referred to above.

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I

The modernization of the agricultural sector

1. General goals and characteristics

Like other countries, from the mid-1960s Brazil adopted an agricultural model based on the principles of the so-called "green revolution". According to one interpretation,¹ with which we agree, the aim of this model, backed up by the use of technology "packages" with a high content of chemical and biological inputs, improved seeds and mechanization, was to boost farm production and productivity and adapt the products to the needs of agro-industry, achieving food self-sufficiency and generating an increasing surplus of exportable farm products. The basic argument was that the adoption of this model could speed up the economy with positive effects in all sectors, and break down the technological and socio-economic barrier between Brazil and the developed countries. Accordingly, although it was a model for the farming sector, it ought to have invigorating economic and social locomotive effects throughout the economy.

The application of the model in the modernization of the countryside was to be integrated with the national and international industrial complex and it could count at home on the support both of the rural oligarchy, which was worried about the growing strength of social movements in the countryside, and of the most modern sectors of urban capital, which wanted to extend their activities. But the model did not envisage altering the land distribution profile, despite the existence of the Land Statute since 1964. Of course, the basic goal of the Land Statute was "to promote the just distribution of property, with equal opportunity for all", fulfilling with its adoption "the international commitments assumed by the country in the Charter of Punta del Este".

¹G. Martine, "Efeitos esperados e imprevistos da modernização agrícola no Brasil", in G. Martine and R.C. Garcia, *Os impactos sociais da modernização agrícola*, Editora Caetés, São Paulo, 1987.

Since the rural oligarchy is one of the bases of domestic support for the model and since therefore it does not envisage changing the structure of land distribution, it is known as conservative modernization. The consolidation of this process, guaranteed by a combination of forces sufficient to suppress any opposition to its implementation, is the reason why it has been impossible to give effect to the Land Statute in Brazil in the past 21 years.

The modernization of part of the farming sector was concentrated mainly in the south-eastern and southern regions and, within these regions, on big and medium-sized farmers, who came to specialize in production for export. The tools of agricultural policy used by the State to put the model into practice were: rural credit, support prices, rural insurance, subsidy policies, both credit and fiscal, and a series of special programmes which benefitted certain rural activities and areas. However, there seems no doubt that rural credit was the most powerful tool for driving forward the process of conservative modernization in Brazil. It is therefore necessary to make some specific comments on this tool.

2. Rural credit

Rural credit underwent remarkable growth from 1966 to 1980. In 1969 its total amount represented about 45% of the farm product, increasing to 54 and 68.5% in 1971 and 1973 respectively. In 1975 it reached 102%, exceeding that year's farm product. Although we must acknowledge the relative lack of precision involved in a comparison of the amounts of credit and product in the same year, the comparison is still valid as an illustration of the enormous volume of rural credit. The farming sector's product increased six times between 1969 and 1975, while loans to the sector increased by a factor of 14 (table 1).

Although after 1975 credit came to represent a smaller proportion of agriculture's gross domestic product, the lowest level was still 70% in 1977, which was excessively high in comparison with the levels in other Latin American countries. In any event, while the farming sector's gross domestic product increased by a factor of 63 between 1970 and 1980, rural credit increased by 93 times. From 1979, with the

second oil price rise, the higher interest rates in the international market, the deterioration in the terms of trade and the acceleration of inflation, a tight monetary policy was introduced which led to stricter control of the budget, which in turn entailed a cut in the total amount of rural credit in constant values between 1979 and 1984. In this period (Homem de Melo, 1986) the total volume of lending fell in relation to 1979, and although there was an increase in 1985, that year's figure was only a little over half (53%) the 1979 level.

As for interest rates, in 1979 for example (Martine and Beskow, 1987) there was a negative real rate of 33.4% in financing contracts, with a total volume of lending to the farming sector equal to about 29% of the sector's domestic product at factor costs. In the period after 1980 interest rates were close to the inflation rate, standing in 1984 and 1985 at 3% above the total value of the monetary correction in those years. The rural credit subsidy was withdrawn in July 1987, and financing contracts were updated by the index of National Treasury Notes (OTN). The interest rates for rural credit were set at 7 and 9% a year above the OTN rates.

Table 1

BRAZIL: FARMING SECTOR GDP AND RURAL CREDIT

(Thousands of millions of cruzeiros)

Year	Farming sector GDP (A)	Amount of rural credit (B) ^a	$\frac{B}{A} \cdot 100$
1969	14.3	6.5	45.4
1970	17.1	9.2	53.8
1971	23.9	12.8	53.5
1972	30.6	18.7	61.1
1973	44.3	30.3	68.4
1974	65.7	48.3	73.5
1975	87.8	90.0	102.5
1976	137.7	130.2	94.5
1977	236.9	165.9	70.0
1978	320.7	233.9	72.9
1979	529.6	448.7	84.7
1980	1 085.3	859.2	79.2

Source: Luis Carlos Guedes Pinto, *Notas sobre a política agrícola brasileira*. São Paulo, 1978; and Dercio Garcia Munhoz, *Economia agrícola - Agricultura, uma defesa dos subsídios*, Petrópolis, 1982.

^aLoans made by the National Rural Credit System.

In addition to noting the spectacular growth of rural credit between the mid-1960s and 1979, it is important to consider its concentration by region and by type of property.

In 1980 there was a larger number of producers assisted with loans, in relation to the total number of producers, in the southern, central-west and south-eastern regions. These three regions exceeded the national average, while the northern and north-eastern regions were below the average. Almost one in two of producers in the southern region received loans; in the central-western and south-eastern regions almost one in three; in the north-east one in four; and in the north a little over one in five (table 2).

Table 2

NUMBER OF RURAL PRODUCERS WHO RECEIVED LOANS FROM THE BANK OF BRAZIL, BY REGION, 1980

(Thousands of producers and percentages)

Region	Total producers (A)	Total producers assisted (B)	$\frac{B}{A} \cdot 100$
North	306.6	70.1	22.9
North-east	1 976.0	511.3	25.9
South-east	1 000.9	322.5	32.2
South	952.0	426.2	44.8
Central-west	266.0	87.3	32.8
Brazil	4 501.4	1 417.4	31.5

Source: Dercio Garcia Munhoz: *Economia agrícola - Agricultura, uma defesa dos subsídios*, Petrópolis, 1982.

Other calculations of the regional concentration of credit (Pinto, 1979) indicate that in 1975, the year in which the volume of rural credit exceeded agriculture's gross domestic product, 38.3% of the loans went to the southern region; 37.5% to the south-east; 12.5% to the north-east; 10.2% to the central-west; and 1.5% to the north. This means that in those years the central-south (south-eastern and southern regions) received an amount equal to three quarters of the total rural credit, to the detriment of the north-eastern region, which is the least developed. Thus, the regional concentration of rural credit was also a factor in the intensification of regional disparities in the countryside.

Table 3 shows the concentration of lending by type of property, according to size. In 1970-1980, while there was an increase in the number of properties of all sizes with access to credit except for those larger than 10 000 ha, the volume of lending tended to be concentrated on big and medium-sized properties (between 100 and 9 999 ha). These properties, which represented a little over 10% of all farms, received in 1980 roughly 63% of loans. In contrast, small and very small properties (between 0 and 99 ha), which represented in that year about 90% of all farms, received barely 34.5% of total loans. With respect to their access to credit, it is important to reaffirm the assertion (Martine and Beskow, 1987) that, notwithstanding the large number of these properties, only 22% stated that they had been able to obtain some kind of loan in 1980.

Table 3

BRAZIL: SHARE OF TYPES OF FARM PROPERTY (BY SIZE), IN TOTAL FARM PROPERTY, IN LENDING AND IN THE VALUE OF THE LOANS MADE, 1970-1980

(Percentages)

Size (ha)	Property			Property with loans			Value of loans		
	1970	1975	1980	1970	1975	1980	1970	1975	1980
0-10	51.2	52.1	50.6	5.0	4.8	10.3	5.5	3.2	4.4
10-99	39.3	38.0	39.0	17.2	23.2	32.2	33.1	28.7	30.0
100-999	8.4	8.9	9.5	23.2	31.1	35.0	41.8	44.6	42.5
1 000-9 999	0.7	0.8	0.9	25.3	36.5	33.5	15.6	19.7	20.3
10 000 and over	-	-	-	23.1	33.9	21.7	4.0	3.8	2.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: G. Martine and P.R. Beskow, "O modelo, os instrumentos e as transformações na estrutura de produção agrícola", in G. Martine and R.C. Garcia, *Os impactos sociais da modernização agrícola*, Editora Caetés, São Paulo, 1987.

3. Modern inputs and tractors

It was stated at the beginning of this section that the conservative modernization was concentrated in the south-eastern and southern regions and, within these regions, on big and medium-sized farmers. This was so because rural credit, the main policy tool used to drive forward the modernization process, was concentrated in these regions and on these types of producer, with emphasis on export products or important industrial raw materials. This specialization also led to the concentration of lending by products. For example, coffee, soybeans, sugar cane and wheat received a volume of credit larger than their share in the value of production.

Accordingly, as a result of the volume of credit available, its concentration and the advantageous terms on which it was obtained—factors which encourage the purchase of more modern means of production—there was also a considerable increase in the use of inputs (improved seeds, fertilizers, herbicides, etc.), tractors and machinery and farm tools. The expansion of the demand for these items was stimulated by the increased availability of credit and its advantageous terms and, moreover, its use tended to reproduce the same concentration of credit, both regionally and by type of producer and by product. It is important to note, in order to prevent any misunderstanding, that this increased use of means of production is an effect and not a cause of the modernization process. To explain the processes of modernization merely in terms of increases in demand and in the use of means of production is to limit the analysis to effects without considering causes.

To take the example of what happened in the case of tractors, the mechanization indicator (ha/tractor) for 1985 gave figures on 52 and 57 for the southern and south-eastern regions respectively; 86 for the central-west; and 332 and 377 for the north and the north-east. The national average for the same indicator in 1985 was 80, as against 205 approximately in 1970. The total number of tractors rose by about 95% between 1970 and 1975; 69% between 1975 and 1980; and about 20% between 1980 and 1985. The stock of tractors almost quadrupled during the whole period (1970-1985).

4. General comments

The conservative modernization of agriculture which has taken place in Brazil in the past 20 years, especially in the 1970s, was concentrated regionally, by type of producer and by product. It is therefore an exclusive and unfinished process. Its main characteristic is that it has transformed the social relations of production on the modernized farm properties, consolidating there the capitalist mode of production, which uses modern technology to produce goods destined basically for export or for agro-industry. But this process exacerbated the existing socio-economic disparity in Brazil's agriculture. This fact and the inequality of the process become clear when it is remembered that in 1980 72% of all farm properties had not a single plough or even a traction animal. Despite the fourfold increase in the stock of tractors between 1970 and 1985, in 1980 only 7% of the properties had any kind of tractor.

Nevertheless, it cannot be denied that conservative modernization—in accordance with some of its original goals—has contributed to the increased output and yield of certain farm products, to the generation of exportable surpluses, and to the consolidation of the integration of agriculture and industry.

The output and yield of certain agro-industrial raw materials have grown considerably in the past 25 years; this is true of sugar cane, wheat, soybeans and maize. Some of these products have also helped to generate large surpluses in the trade balance. But, as will be discussed below, neither the per capita production or the yield increased in basic foods, nor was the goal of food self-sufficiency attained.

With respect to the integration of agriculture and industry, also one of the main goals of conservative modernization, it was achieved on the part of agriculture through the remarkable increase in the internal and external supply of agro-industry raw materials, and through the large increase in the internal and external demand for basic inputs and farm machinery and tools. In the case of urban capital—trade, industrial and financial—the integration was strengthened, *inter alia*, by the purchase of large additional areas of land, much of it for specula-

tive purposes, which remained mostly idle. This enhanced the integration between farming capital and national and international trade and industrial and financial capital, facilitating at the same time the consolidation of the agro-industrial complex and its grip on agriculture.

But this kind of agricultural-industrial integration is different from the traditional one in which agriculture *as a whole*, on modernization, produces basically foodstuffs for the urban sectors and raw materials for industry and requires, again basically, consumer durables and non-durables, inputs and farming machinery.

In the partial and unfinished modernization in Brazil the modernized agricultural properties

do not produce mostly foodstuffs, while those farms which are concerned mainly with such crops do not require so many consumer goods, inputs and machinery. This integration was not homogeneous in the two sectors and it was characterized by a division of labour which manifested itself, in the case of non-modernized small and medium-sized properties, in an abundant supply of foodstuffs and very little demand for industrial products; and in the case of modernized big and medium-sized properties, in the supply of agro-industrial raw materials for the foreign and domestic markets and a heavy demand for industrial goods produced in the country and abroad.

II

Some socio-economic problems

In the period 1950-1980 the Brazilian economy achieved sustained growth of the total gross domestic product at an average annual rate of 6.8%, which meant 3.9% per capita growth. Industry expanded by 7.9% and agriculture by 4.7% a year. Given that the period was three decades long, this was a very high rate of economic growth which is unlikely to have been exceeded by more than a very few countries of the world.

A very unfavourable period for the country began in 1979. The second big increase in oil prices occurred, producing a very sharp rise in interest rates in the international market and a considerable worsening of the terms of trade. As a result the gross domestic product fell 3.4% in 1981, 2.5% in 1982, and 3.2% in 1983. The per capita gross domestic product fell 10% in those three years; in the industry sector (Sao Paulo) output dropped 16%, employment 22%, and wages 36%.

In the next three years, from 1984 to 1986, the economy grew by 4.5, 8.3 and 8.2% respectively. In 1986 the per capita gross domestic product achieved a level only about 6% higher than in 1980, despite the recovery of the growth rate from 1984. In mid-1986 industrial employ-

ment in São Paulo was at a level roughly 4% below the high level of July 1980.

The recovery of the growth rate from 1984 has been accompanied so far by three important and interrelated problems: the inflation rate, the domestic debt, and the foreign debt. These three problems, among others, are a source of constant concern, and there is a constant search for better methods and tools for dealing with them.

There are also other problems more directly connected with the rural sector, and today Brazilian society must grapple with them as well; these problems were generated in recent decades and they have grown more acute, for their causes have not been tackled and they have grown steadily worse despite the high rate of economic growth.

The conservative modernization of part of the farming sector, which was concentrated in the southern and south-eastern regions and on big and medium-sized properties (analysed in summary form in the previous section), contributed to the attainment of some economic goals; but it also helped to generate or aggravate problems in other areas of the economy and it exacerbated social problems in particular. The economic and social difficulties are totally

interrelated, and the individual analyses which follow are intended only to facilitate the explanation. These problems also have major political effects not considered in this article.

1. *The concentration of landholding*

The concentration of landholding in Brazil is high by international standards and shows a long-term trend to intensify even further. The Gini index of the distribution of land between farming properties was 0.832 in 1940; 0.843 in 1950; 0.842 in 1960; 0.844 in 1970; 0.850 in 1975; 0.853 in 1980; and 0.854 in 1985. Thus during the last 45 years this index has always stood above 0.83 and it has risen from 0.832 to 0.854.² In regional terms, in 1985 the index was 0.795 for the northern region; 0.865 for the north-east; 0.766 for the south-east; 0.744 for the south; and 0.836 for the central-west. Although the concentration of landholding is high in all the regions, it is even higher in the north-east, followed by the central-west. The south is the region of least concentration.

Despite the variations there is a long-term trend for properties smaller than 10 ha to increase their share in number and in total area; those between 10 and 100 ha in size have declined in number and increased in area; those from 100 to 1 000 ha in size have declined in number and their share of the area has remained fairly constant; and those of 1 000 ha and bigger have seen their share fall in both number and area. The main point is that in 1985, for example, properties under 10 ha in size represented a little over half of the total number and a little under 3% of the total area. Moreover, properties of 1 000 ha and more accounted for less than 1% of the total number but occupied almost 44% of the total area (table 4). These figures demonstrate the heavy concentration of landholding in Brazil.

²The Gini index is a measure of the degree of concentration of a distribution which ranges from zero to one. Its value would be zero in the case of perfect equality, i.e., if all the properties had the same area; it would come close to one if a single property occupied almost all the area and there was a great number of properties with virtually no area at all. A figure above 0.8 indicates a high concentration. R. Hoffmann, "A concentração da posse da terra no Brasil", in *Revista Civilização Brasileira*, No. 7, Rio de Janeiro, 1979; C. Mueller, *Ensaio especial, "Censos Agropecuários"*, in *Agroanalysis*, No. 6, Instituto Brasileiro de Economia, Fundação Getúlio Vargas, Rio de Janeiro, 1987.

Figure 1 gives a clearer picture of the long-term trends and it confirms to some extent the figures from the Gini index mentioned above. Three main trends can be identified, corresponding to three periods. The first, from 1940 to 1950, is towards concentration of landholding; the second, from 1950 to 1970, is a period of slight relative deconcentration; and the third, from 1980 to 1985, shows a fairly sustained increase in concentration, especially around 1980. Having noted these trends in the concentration of landholding, especially in the 1970s, we must stress that the process of conservative modernization, which took place mainly in that period, has helped to accentuate this concentration, for it unleashed extensive land speculation both for production and for holding in other cases as a reserve asset.

Data from INCRA's³ Register of Rural Property indicate the same short-term trend towards concentration in the most intense period of conservative modernization. In fact (Martine and Beskow, 1987) the proportion of properties up to 10 and between 10 and 100 ha in size fell in 1972-1978. It is estimated (Alkcelrud, 1987) that in the 1970s in the central-southern States alone half a million small owners lost their land. It is currently calculated that in the regions of small owners some 100 000 families lose their land every year, which means roughly 500 000 persons. Furthermore, properties over 10 000 ha in size, which represented 0.1% of the total number, increased their share of the total area from 19 to 25% between 1972 and 1978. The same data also indicate an increase in the area of idle land due to purchases for speculation or as reserve assets.

Moreover, a longer-term analysis estimates that between 1967 and 1984 properties with more than 1 000 ha increased their share of the total area from 47 to 58%, while properties of less than 100 ha showed a decline from about 19 to 14%.

The problem of the concentration of landholding and the consequent inequality in the countryside can be appreciated in general terms from the following figures. The country has a potential of 500 million ha of land usable for

³National Institute of Settlement and Agrarian Reform.

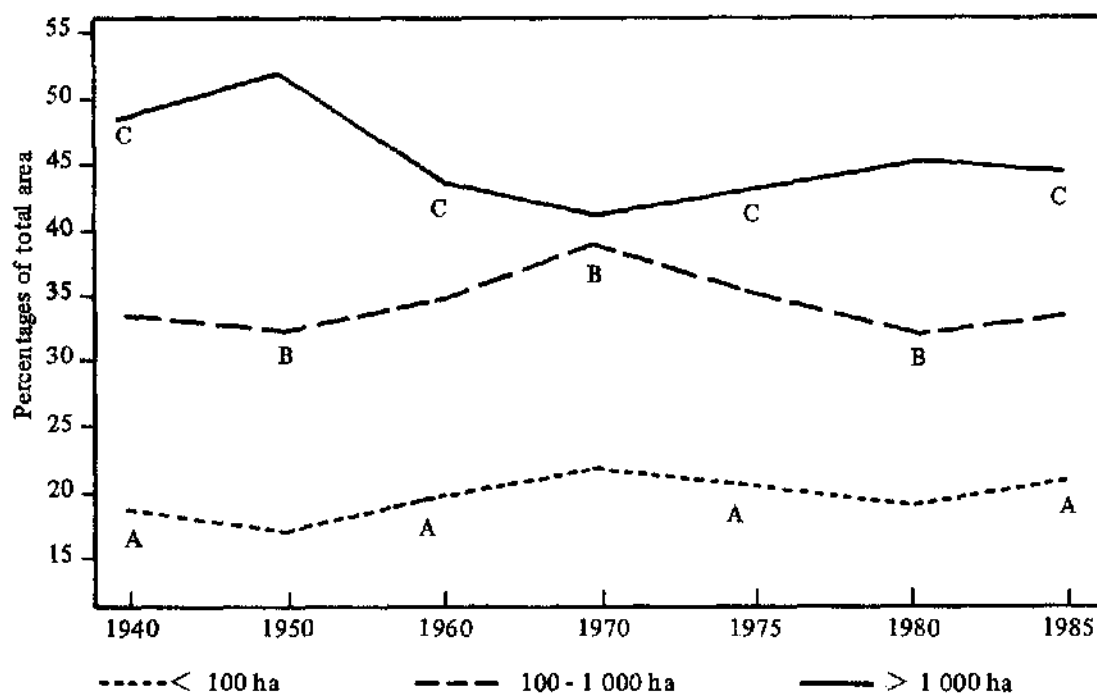
Table 4
BRAZIL: DISTRIBUTION OF LAND BY SIZE OF PROPERTY, 1940-1985

(Percentages)

Year	Under 10 ha		10 to 100		100 to 1 000		1 000 and over	
	Number	Area	Number	Area	Number	Area	Number	Area
1940	34.3	1.5	51.3	16.7	12.8	33.5	1.5	48.3
1950	34.4	1.3	51.0	15.3	12.9	32.5	1.6	50.9
1960	44.8	2.3	44.7	19.0	9.4	34.4	1.2	44.2
1970	51.3	3.1	39.4	20.4	8.4	37.0	0.9	39.6
1975	52.2	2.8	38.1	18.6	9.0	35.8	0.8	42.9
1980	50.4	2.5	39.1	17.7	9.5	34.8	0.9	45.1
1985	53.0	2.7	37.2	18.5	8.9	35.0	0.9	43.8

Source: G. Martine and P. Beskow, "O modelo, os instrumentos e as transformações na estrutura de produção agrícola", in G. Martine and R.C. Garcia, *Os impactos sociais da modernização agrícola*, Editora Caetes, São Paulo, 1987; C. Mueller, Ensaio especial, "Censos Agropecuarios", in *Agroanalysis*, No. 6, Instituto Brasileiro de Economia, Fundação Getulio Vargas, Rio de Janeiro, June 1987.

Figure 1
BRAZIL: SHARE OF PROPERTIES IN THE TOTAL AREA, BY SIZE, 1940-1985



Source: G. Martine and P. Beskow, "O modelo, os instrumentos e as transformações na estrutura de produção agrícola", in G. Martine and R.C. Garcia, *Os impactos sociais da modernização agrícola*, Editora Caetes, São Paulo, 1987; C. Mueller, Ensaio especial, "Censos Agropecuarios", in *Agroanalysis*, N° 6, Instituto Brasileiro de Economia, Fundação Getulio Vargas, Rio de Janeiro, June 1987.

agricultural production, but only 80 million ha are under crops, including large areas lying fallow owing to a defective system of rotation. The properties classified as large farms (*latifundios*) according to the criteria of the Land Statute occupy an area of 417 million ha (83.4% of the usable total), of which some 170 million ha (34% of the usable area) are maintained as usable but uncultivated land according to the owners' statements, and 125 million ha (25% of the usable area) are poorly farmed. As a result almost 60% of the country's total usable area which is occupied by large farms is either not cultivated (about 41%) or poorly cultivated (about 30%). There are also 12 million rural workers without land or with insufficient land, of which 8.7 million rural wage earners do not make a minimum wage equal to less than US\$50 a month (September 1987).

2. Food production and standard of nutrition

In the 1950s and 1960s there was a relatively balanced increase in food and export products, with fairly stable food prices. In the 1970s, owing to the conservative modernization which caused part of agriculture to specialize to some extent in export products and industrial raw materials, the per capita output of basic foods declined, except for onions and tomatoes. This decline was very sharp in the case of cassava and beans, and for potatoes as well. Rice remained relatively unchanged in both decades, with a per capita

growth rate of zero. In contrast, the per capita production of wheat increased, and there was a spectacular rise in soybean production. Wheat is traditionally imported and soybeans are produced mainly for export.

Between 1980 and 1985 the areas used for production of rice, wheat, potatoes and cassava declined by about 24, 14.5, 13 and 7.5% respectively, and the areas under beans and maize recorded almost the same growth as earlier. This indicates a continuation of the downward trend of the past decade in the per capita output of cassava, beans and potatoes, on top of the fall in rice and wheat production. Soybeans and maize were the only basic foods to record increased per capita output. Both these products are also used as a raw material in agro-industry and part of the output also goes for animal feed. Only 10 to 15% of maize production is available for human consumption in the country.

The foregoing analysis and the figures in table 5 underline the downward trend in the total per capita supply of basic foods of vegetable origin, particularly those such as beans and rice traditionally consumed by lower-income groups. The combination of these two foods is of great nutritional value in the diet and is a cheap source of calories, proteins, iron and vitamins. Cassava is also an important element in the diet of lower-income groups, mainly in the north-east.

The yields of these three basic products—beans, rice and cassava—for consumption by lower-income groups also declined from 1960 to 1984. In this period, however, there was

Table 5

BRAZIL: PER CAPITA PRODUCTION OF SOME BASIC FOODS, 1960-1984^a

(Kg/inhabitant/year)

Period	Rice	Beans	Cassava	Maize	Wheat	Soybeans
1960-1964	74.8	24.5	279.8	149.8	8.1	3.9
1964-1968	79.9	27.4	314.6	141.0	8.0	6.7
1968-1972	72.6	25.7	323.0	150.4	15.6	18.6
1972-1976	76.1	22.0	259.0	155.0	21.2	72.6
1976-1980	76.4	18.4	220.6	153.8	24.0	103.4
1980-1984	70.4	18.0	182.2	163.3	17.3	115.7

Source: G. Martine and R.C. García, "A modernização agrícola e a panela do povo", in G. Martine and R.C. García, *Os impactos sociais da modernização agrícola*, Editora Caetés, São Paulo, 1987.

^aWeighted averages.

increased output of other foods of vegetable origin —maize, wheat, soybeans and sugar cane— destined largely for agro-industry. The most important thing about this "basic food crisis" is that the decline in per capita production and yields occurred despite the expansion of the area cultivated at a higher rate than the population growth rate. Once again we see, now in the case of food production, the perverse nature of the process of conservative modernization promoted in the country.

When we consider the evolution of the contribution by properties, grouped by size, to the production of basic foods (table 6) the first important point to note about the most basic foods in the diet of lower-income groups (rice, beans and cassava) is that the contribution of farms of up to 10 ha to rice and beans production fell, while their contribution to cassava increased. In the case of properties with 10 to 99 ha, their share in the production of rice and cassava declined but their share in beans increased. When these two groups of property are combined —so that very small, small and some medium-sized farms are included— their production share falls for all three products; however, their contribution to beans and cassava production was very high, at about 79 and 87% respectively, in 1980; it was also high (68%) in the case of maize. It can be concluded that the typical products of smaller properties are cassava, beans and maize, although wheat and soybeans account for almost 50% of the production of properties with less than 100 ha.

Rice on the other hand is produced mainly on medium-sized, big and very big properties —from 100 to 1 000 ha and from 1 000 to under 10 000— with these two groups accounting for about 60% of the output. They were responsible for slightly over 50% of the total production of wheat and soybeans as well. Thus rice, wheat and soybeans are in relative terms the typical products of the medium-sized and big properties in the 100 to 1 000 ha group. The production of each of these six basic food products is almost insignificant on the very big estates (over 10 000 ha) but their increased share in rice and soybean production in 1970-1980 should be noted.

The explanation of the decline in the per capita production, yields, and shares of the smaller properties in the production of basic

foods of vegetable origin (mainly rice, beans, maize and cassava) is to be found in the government incentives for "dynamic" export or agro-industrial crops granted to medium-sized and big properties from the mid-1960s as part of the conservative modernization described in the previous section.

With respect to foods of animal origin, stocks of cattle increased faster than the population growth rate in the 1970s. Between 1980 and 1985, however, their growth was considerably below the population growth and as there was no significant increase in productivity, it can be concluded that the per capita domestic supply of beef and milk fell in the first five years of this decade; stocks of pigs increased between 1970 and 1975 and fell somewhat between 1975 and 1985, with a consequent decline in the per capita domestic supply of pork; stocks of poultry, after a spectacular rise between 1970 and 1980, saw their growth rate decline between 1980 and 1985 to only 4%, which also indicates a drop in the per capita domestic supply. The decline in the total per capita supply of food, of both vegetable and animal origin, since the beginning of the conservative modernization of part of agriculture has resulted in a systematic rise in food prices faster than the inflation rate.

The decline in the area used for certain basic food crops and in their yields, described above, contrasts with the surging growth in the area used, the yield obtained and the per capita production in the case of sugar cane. In the period 1975-1980, when the Government launched the PROALCOHOL programme, the main purpose of which was energy substitution, the area under sugar cane increased by 32% and the yield by 50%; the area increased even further, by almost 50%, between 1980 and 1985 and the yield also showed a further 50% increase over the 1980 level. Thus between 1975 and 1985 the area used for sugar cane doubled and the yields increased 140%. Sugar cane production, the per capita growth of which was about 57% between 1977 and 1983, receives a heavy subsidy under the PROALCOHOL programme which according to some interpretations is not justified in either economic or social terms, owing to the displacement of food production caused by the cultivation of sugar cane in areas intended for food crops.

Table 6
BRAZIL: SHARE OF PROPERTIES IN THE PRODUCTION OF SOME BASIC FOODS, BY SIZE,
 1970-1980

(Percentage of the quantity produced)

Size of property (ha)	Rice			Beans			Cassava			Maize			Wheat			Soybeans		
	1970	1975	1980	1970	1975	1980	1970	1975	1980	1975	1980	1985	1970	1975	1980	1970	1975	1980
0 to 10	19.5	19.3	13.3	32.9	34.0	26.9	34.5	42.0	37.9	19.9	18.5	14.8	5.6	2.3	2.1	14.5	6.8	4.0
10 to 99	35.3	30.1	23.8	50.4	48.8	51.7	53.6	47.2	49.6	55.5	53.4	53.4	43.9	41.2	44.8	55.2	48.6	42.2
Under 100	54.8	49.4	37.1	83.3	82.8	78.6	88.1	89.2	87.5	75.4	71.9	68.2	49.5	44.4	46.9	69.7	55.4	46.2
100 to 1 000	33.9	35.2	38.3	14.8	15.1	18.7	10.7	9.9	11.1	20.4	23.2	25.7	42.6	47.4	45.4	25.6	36.9	40.9
1 000 to 9 999	10.7	14.3	21.4	1.9	2.0	2.6	1.2	0.9	1.3	4.0	4.7	5.7	7.8	9.0	7.3	4.6	7.5	11.8
10 000 and over	0.6	1.1	3.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.4	0.1	0.1	0.3	0.1	0.2	1.1
Total production (millions of tons)	5.27	7.54	-	1.51	1.59	1.65	14.58	11.67	11.03	12.77	14.34	15.56	1.90	1.56	2.53	1.88	8.72	12.59

Source: G. Martine and R.C. García, "A modernização agrícola e a parcela do povo", in G. Martine and R.C. García, *Os impactos sociais da modernização agrícola*, Editora Caetés, São Paulo, 1987.

Table 7
BRAZIL: IMPORTS OF CERTAIN FOODS, 1970-1985

(Thousands of tons)

Year	Wheat	Rice	Dried legumes ^a	Maize	Beef	Powdered milk
1970	1 994	-	12	2	1	22.0
1971	1 739	2	11	1	6	15.0
1972	1 811	9	12	2	1	12.0
1973	2 960	11	34	4	1	14.0
1974	2 406	1	10	3	52	21.0
1975	2 109	63	15	2	24	14.0
1976	3 435	17	77	2	23	18.0
1977	2 758	-	70	1	31	60.0
1978	4 335	29	25	1 262	113	12.0
1979	3 658	711	30	1 526	111	10.0
1980	4 358	239	61	1 594	65	62.0
1981	4 363	143	19	9 020	60	8.0
1982	4 225	137	22	-	21	7.5
1983	4 182	315	21	213	23	19.0
1984	4 869	-	73	254	34	30.0
1985	4 048	340	31	262	48	31.0

Source: Prepared by the Joint ECLAC/FAO Agriculture Division from FAO data.

^aIncludes only beans between 1970 and 1974. In 1975 beans account for about 80% of total imports in this category.

At a recent meeting of the National Monetary Council (CMN) at the end of September 1987, at which new economic measures were adopted, there was much comment about the refinancing of the debts of sugar and alcohol producers owing to their serious repercussions on the increased public deficit. A line of credit equivalent to US\$280 million was opened to refinance 75% of the debts of these producers and *usineiros* with State and private banks.

In order to supplement the domestic supply to meet the demand, the country was forced to import foodstuffs. Apart from importing without any real need to do so—which can sometimes happen owing to problems of various origins—and indeed the apparent paradox of a country with Brazil's potential having to import food, these purchases reached quite considerable levels in some periods. Notable in this respect is the sustained long-term increase in wheat imports, which were consistently above four million tons between 1980 and 1985 (table 7); imports of rice, beans, maize, beef and powdered milk remained at the same levels, although with considerable variations from year to year. In 1985 the trade balance (exports less imports) in

basic foods showed a deficit for wheat, maize, rice and powdered milk; there were surpluses for the other foodstuffs.

The production incentives for "dynamic" non-food crops and sugar cane and the displacement of food crops brought about a reduction in the area used for basic food production and in the yields and per capita supply, with depressive effects on the domestic supply and expansionary effects on food prices. Hence the need to import these foods to supplement the domestic supply; hence too the trade deficit in some of these products. With respect to the domestic food supply, a fairly high population growth rate coincided with the long-standing process of income concentration, with a large segment of the population receiving very low incomes. In the circumstances it is impossible to be optimistic about the outcome of the food and nutrition problem affecting Brazilian society.

The most extensive and profound piece of national research on nutrition, carried out in 1975, indicates that in that year two-thirds of the population were undernourished (Martine and García, 1987). What is worse, the indices of the per capita supply of calories and proteins have

been declining since that date. According to other results published in the country in 1984, the food intake of 70% of the total population was below the minimum established in the World Health Organization's standards (PMDB symposium, Curitiba, November 1984). It must be noted, although with sadness, that 70% of the population of Brazil means almost 100 million undernourished people.

3. *The rural exodus and urbanization*

Just like other developing economies, in recent decades Brazil has undergone rapid urbanization as a result of a high and fairly sustained rate of population growth and, above all, a heavy flow of migrants from the countryside to the towns. This process of urbanization has transformed the country from a predominantly rural to a predominantly urban one. However, the rural sector has retained its relative importance despite the drop in its contribution to the total product, the total population, and exports. This is because, apart from other factors, according to the 1980 population census there were 22 million workers employed in agriculture, whereas processing industry employed seven million, i.e., less than a third. Brazil's annual population growth rate was 2.78 and 2.35% respectively in the 1960s and 1970s. According to the FIBGE,⁴ there was a little over 2.6 million births in 1985 (an average of 7 250 a day) despite abortions by some four million women, equal to 10% of total world abortions in one year according to the World Health Organization. Abortion leads to the death every year of an astounding total of 400 000 women in the country. The 2.6 million children born in a year is equivalent to almost the total population of Uruguay and a little more than the total population of Costa Rica.

The relative imbalance between the high rate of reproduction of the labour force and the fewer job opportunities in the countryside, with increased numbers of temporary workers and greater dependency on unstable types of work, in conjunction with the attraction exercised by the towns, have led to increasing migration from the

countryside to the towns on a gigantic scale. In the 1940s the rural exodus was about three million persons; it rose to seven million in the 1950s; in the 1960s it reached 12.8 million; and in the 1970s it achieved the record figure of almost 16 million. Although there are no exact figures (Martine, 1987), to give an idea of the magnitude in relation to other countries of the region, this is equivalent to the transfer to Brazil's towns in the last four decades of half the population of Mexico; or in the last two decades a number of persons in the order of the total population of Argentina or Colombia.

It is possible (Mueller, 1987) that the rural exodus of the 1950s was more intense in the north-east and also, from the interregional standpoint, from the north-east to the central-south (south-eastern and southern regions). But in the 1960s (Martine, 1987) the net migration from the countryside was more intense in absolute and relative numbers in the south-east than in the north-east. In the 1970s the south-east was joined by the southern and central-western regions, exceeding the north-east in relative numbers (table 8).

According to the National Agrarian Reform Plan, the economic integration of the large surplus of people in the labour market without aggravating the difficult urban situation would

Table 8

BRAZIL: NET MIGRATION FROM RURAL AREAS, 1960-1970 AND 1970-1980

(Thousands of inhabitants)

Regions and whole country	Net migration	
	1960-1970	1970-1980
North	-447	-1
North-east	-4 373	-4 990
South-east	-6 801	-5 038
South	-1 079	-4 395
Central-west	-135	-1 199
Brazil	-12 835	-15 611

Source: G. Martine, "Exodo rural, concentraçao urbana e fronteira agrícola", in G. Martine and R.C. Garcia, *Os impactos sociais da modernização agrícola*, Editora Caetes, São Paulo, 1987.

⁴Fundação Instituto Brasileiro de Geografia e Estatística.

Table 9
BRAZIL: POPULATION DISTRIBUTION BY PLACE OF RESIDENCE,
1940-1980

(Percentages)

Location	1940	1950	1960	1970	1980
Rural	68.8	63.8	55.0	44.1	32.4
Up to 10 thousand inhabitants	12.6	12.2	12.4	9.6	10.0
10-20 thousand inhabitants	2.6	2.9	3.9	5.3	4.0
20-50 thousand inhabitants	2.2	3.2	4.5	5.4	6.5
50-100 thousand inhabitants	2.0	2.5	2.7	3.5	4.6
100-500 thousand inhabitants	4.1	4.3	5.4	6.1	11.0
500 thousand and more inhabitants	7.7	11.1	16.2	26.1	31.5
Total	100.0	100.0	100.0	100.0	100.0

Source: G. Martine, "Exodo rural, concentraçao urbana e fronteira agrícola", in G. Martine and R.C. Garcia, *Os impactos sociais da modernização agrícola*, Editora Cactes, Sao Paulo, 1987.

require the generation of almost 400 000 jobs a year in the urban centres, in addition to the jobs needed for their existing population. Unless the rate of rural-urban migration falls, Brazil could have a total of 11 million unemployed by 1990, even with a growth rate of 5% a year.

As a result of the crisis, unemployment and underemployment increased in the towns between 1981 and 1985, and industry and civil construction (the traditional employers of unskilled labour from the countryside) saw their growth rate fall from about 10% in 1981 to an average of 1.4% from 1982 on. In the circumstances it is possible that rural-urban migration may have declined. With respect to underemployment, for example, a recent work (Tokman, 1986) indicates that the share of the informal sector in non-farm employment in Brazil increased from 24.1% in 1980 to 30.1% in 1985.

The failure to retain population in the countryside was due, among other factors, to the conservative modernization of part of the farming sector concentrated in the south-eastern and southern regions. Accordingly, the expulsion from the countryside was more intense in areas where mechanized modernization penetrated more intensely: at first in the south-eastern region during the 1960s, then in the 1970s in the south-east and, in relative terms, the south and the central-west.

The north-eastern region, where the absolute flow of rural-urban migrants was also

intense, saw amongst other developments an increase in livestock production and in crop substitution, driven forward by the powerful impulse of fiscal incentives; owing to the high level of poverty in the countryside, the region experienced understandable migration to the towns in search of better living conditions.

The northern region and part of the central-west, typical of the agricultural frontier, saw the private appropriation of considerable additional areas of land, some of which were acquired by transnational corporations. In many cases the acquisition of land in this way was fraudulent (*grilagem*) and for speculative purposes; this entailed, on the one hand, the displacement of the peasants and, on the other, areas of idle land. The main point in this case is that the process, fraudulent or not, has brought the expansion of the frontier to a halt, displacing the peasants and pushing many of them towards the towns or back to their places of origin. Above all, it is tending to prevent the use of the frontier as an escape valve to reduce the pressure on the towns by means of rural-rural migration. This means therefore that it is becoming increasingly more difficult for rural dwellers to find any option but the town.

The great scale of the rural exodus in recent decades has caused a sizeable increase in the number of towns. In 1940 Brazil had 51 towns with over 20 000 inhabitants; this number had risen to 85 by 1950, to 155 by 1960, to 257 by

1970, and to 419 by 1980. According to Ladislav Dowbor,³ of the 26 million homes recorded in the 1980 population census, the occupants of 40% stated that they had been living there for less than two years. This indicates an astounding level of mobility. Another process parallel with the proliferation of small and medium-sized towns was the concentration of the population in increasingly large towns (table 9).

This concentration is making the administration of the towns more difficult and is tending to aggravate a number of urban problems and other problems affecting the rural sector. In the urban areas, owing mainly to the increased requirements of physical infrastructure, which has to be built in increasingly more distant zones and therefore at higher costs, the State must acquire ever larger resources to equip the new urban areas with basic services such as drinking water, energy, schools, transport, etc. Where transport is concerned, for example, the people living in the 10 main cities—a population of almost 40 million—have increasing problems and are spending increasing amounts for this purpose. In São Paulo and Rio de Janeiro it is usually necessary to use two modes of transport to get from home to work and another two on the return trip. Apart from the time expended on these four daily rides and the fatigue they induce, it is estimated that the cost of transport for an ordinary worker amounts to almost 30% of his monthly earnings.

The problems of this concentration in big towns that affect the rural sector include the expansion of the big towns themselves, which usually swallow up in their advance the so-called green belts, which are highly valued by the rural sector but are worth less than urban land. In these areas, traditionally used for production of basic foods, mainly fruit and vegetables, output has been disrupted and displaced to more distant areas, with higher costs, by the advancing urbanization.

Another major effect on agriculture is the complexity which the growth of the towns brings to the food transport and distribution chains, which are becoming increasingly difficult

to manage and are tending to push consumer food prices up. Since the anti-inflation policies are designed to control consumer good prices in order to keep them as inelastic as possible at this level, the higher costs of transport and distribution are passed on to the producers in many cases, while producer price rises by the same amount as the increased costs are prevented or obstructed.

The great mass of people that the rural sector could not retain found that the towns were unable to generate steady jobs at the speed at which the new inhabitants were arriving from the countryside. Thus many migrants remained underemployed, marginalized and with inadequate living standards. The rural exodus has nevertheless not solved the problem of rural poverty. Accordingly, while the links integrating town with countryside were growing stronger, the economic and social problems of both locations were growing worse. As a result of this perverse socio-economic interrelationship many poor producers driven from the countryside have become perhaps even poorer consumers in the towns.

4. Other socio-economic problems

In addition to the three kinds of problem discussed above, there are other no less important issues which have also become more acute during recent decades and which, in conjunction with those other problems, constitute the great challenge which society and the State of Brazil must take up now and in the future.

These other issues, very briefly, are connected with the model of agricultural growth adopted in the recent past and its relationship with the rest of society. Two of these issues relate directly to this model: the price of land and the effect on people's health and the environment. The third issue, which may become increasingly troublesome in the future, is the failure to penetrate the international market for farm products. Lastly, there is the violence in the countryside and the towns, an issue also connected with the model introduced in the rural sector by virtue of one of its consequences: the dire situation with respect to jobs and wages and the great concentration of income, which have exacerbated rural poverty and marginalization.

³L. Dowbor, "O PNRA e as transformações da agricultura", in *Reforma agrária da nova república - Contradições e alternativas*, Editora Cortez, São Paulo, 1987.

Analysis of the modernization of agriculture throws into relief the primordial role of farm credit in this process. In the past in Brazil it was necessary to be a landowner to gain access to rural credit. In view of the very advantageous terms on which the subsidized loans were made, it was natural, in order to take advantage of these terms, that there should be increased pressure on the land market, with consequences for the price of land. Furthermore, in the period leading up to the most intensive modernization (1969-1971) the stock market underwent a considerable expansion as a result of the availability of resources (Martine and Beskow, 1987). However, owing to a very sharp fall in the securities market in 1971 these resources, in the form of financial surpluses, were diverted to "safer" uses in the real estate market, including the purchase of farming land.

The effect of these factors on the price of farming land is illustrated by the fact that from 1972 this price entered a sharply upward trend for all four possible land uses (table 10), coinciding with the onset of rapid growth in the supply of rural credit (table 1). Thus in just a few years,

from 1971 to 1977, land prices rose by factors of 3.5, 3.6, 2.9 and 2.3 respectively for use for crops, fields, improved pasture and forests. In the 12 years from 1966 to 1977, the extreme years with respect to land prices for crops, for example, were 1968 as the low point and 1977 as the high. Between these extremes the price of land for crops increased by 4.1. In 1976 the volume of rural credit in relation to the sector's gross domestic product began its decline, as reflected in the fall in the price of land for each of the four uses from 1977. As this is a very close correspondence of trends, it cannot be ascribed to mere coincidence. The rise in the price of land for the four uses in 1981 may have been associated with investment in less risky assets and reserve assets, for this was the first year in which the gross domestic product declined to negative levels (-3.4%) and the inflation rate rose —to 120%.

It is thought that part of the rural credit was used directly or indirectly to buy land, mainly in the period when credit was most abundant and cheap. In conjunction with government works that improved the rural infrastructure, this must have resulted in heavier pressure on the land market, fueling the upward price trend. Moreover, the sharp increase in land values in a short period must certainly have encouraged the use of fraudulent means (*grilagem*) of land acquisition and therefore the violence in the countryside; this situation involved the expropriation and expulsion of small owners who were powerless to defend their rights. The peasants had to cope with much harder economic conditions owing to the relative decline in their capacity to buy land caused by the rise in its price. In broad terms these were the main socio-economic effects of higher land prices in the most intense period of modernization.

Another series of effects of the same process affected people's health and the environment. The expanded use of agrottoxins (insecticides, herbicides, etc.) without sufficient knowledge of their correct application, as happened in many cases in Brazil, was not without consequences.

According to data cited by a group of researchers⁶ from studies made by the Biological

Table 10

BRAZIL: INDEXES OF THE AVERAGE REAL
SELLING PRICES OF LAND
(1966 = 100)

Year	Crops	Fields	Improved pasture	Forest
1967	99	94	92	92
1968	88	83	87	85
1969	89	90	80	89
1970	97	89	78	86
1971	102	101	89	91
1972	126	120	109	103
1973	222	223	168	148
1974	298	326	253	184
1975	339	384	286	211
1976	343	366	268	213
1977	362	367	258	212
1978	333	360	250	195
1979	315	358	240	185
1980	327	382	258	189
1981	365	417	280	206
1982	344	366	238	197
1983	271	285	185	152
1984 ^a	293	294	199	146

Source: M.C. Cavalcanti de Albuquerque, "Estrutura fundiária e reforma agrária no Brasil", *Revista de economia política*, vol. 7, No. 3, July/September 1987.

^aFirst half.

⁶E. Flores Ruegg, F. Rodríguez Puga, M.C. Martins de Souza, M.T. Ungaro, M.S. Ferreira, Y. Yokomizo and W. Almeida, "Impactos dos agrotóxicos sobre o ambiente e a saúde", in G. Martine and R.C. Garcia, *op. cit.*

Institute of São Paulo, there were 3 481 cases of poisoning by insecticides in 1967-1979, 208 of them fatal. An epidemiological monitoring programme directed by the State University of Campinas found that of 1 107 farm workers examined, 12% (133) were suffering from some kind of poisoning, due in 40% of the cases to phosphorated organic insecticides, and 36% of the patients had to be hospitalized owing to the seriousness of their symptoms. In Paraná State (southern region) 1 504 cases of poisoning were recorded between August 1982 and March 1983 (eight months), with 49 accidental deaths and 24 suicides. The researchers state that the lack of proteins in the diet of rural workers helps to increase the toxicity of chemical products and renders them more dangerous. These data are isolated examples, for regrettably Brazil does not have an efficient service to monitor and exercise some kind of control over the use of agrottoxins in the rural sector.

The rapacious nature of agricultural activities in the country in recent decades has had many and serious effects on the environment. There are studies and cases, which cannot be listed here, indicating effects on soil erosion in rural and urban areas, the clearing of large tracts of land, mainly in Amazonia, water pollution, and disruption of the hydrological cycle. The main point, according to Martine (1987) is that a modernization process which involves genetic and operational homogenization ends by eradicating large numbers of plant and animal species which previously existed in naturally heterogeneous conditions, many of them with a high productive and nutritional potential. It is estimated that every plant species that disappears takes with it 10 to 30 animal species, generating a trend which increasingly violates and disrupts the existing ecological balance.

As pointed out earlier, one of the goals of modernization was to generate surpluses of exportable farm products, and this has been achieved in part, to judge by the trade balances. But in view of the commitment to meet the foreign debt, the country will require enormous resources extracted from the interior, not only now but also in the future; and even supposing that the current crisis is overcome, the question arises: To what extent will it continue to be possible to generate sizeable surpluses in the trade balance by exporting farm goods?

One long-term analysis⁷ maintains that between 1960 and 1983 the annual growth rate of the volume of exports of the main farm products was 2.4% for the whole of Latin America; but this rate was 5.6% for the United States; 8.8 and 9.4% for the countries of the European Economic Community and the European Free Trade Association (excluding Portugal) respectively; 4% for Canada and Asia; and 4.6% for Oceania. These countries or groups of countries have achieved much deeper penetration of the world market for farm products than the Latin American countries; with the protection of national agricultural subsidies many of them have been generating large surpluses on a sustained basis and during this century they have become net exporters of farm products.

Furthermore, owing to the effects of the current crisis and the manipulation of the markets, the present decade has so far seen a drop in the international prices of farm products, which has compelled Latin America to export an increasing volume of goods to maintain the same total value.

There has also been, according to the *World Development Report*,⁸ an increase in tariffs in the developed countries as a means of protecting their agriculture. The report also notes a high coefficient of nominal protection for foodstuffs, beverages and raw materials, indicating producer support in the industrial countries, and a contrasting situation in the developing countries, where the impact of measures is to provide little in the way of producer support and much in the way of taxes.

Lastly, almost all the Latin American countries are taking steps to diversify their exports of farm goods, but they are all trying to penetrate the same markets with a similar group of products. This situation creates serious doubts about the possibility of Brazil's continuing with an agricultural model, the basic goal of which is to encourage the generation of exportable farm surpluses, even though the commitments with respect to the foreign debt impose a growing need to obtain foreign exchange in the international market.

⁷M. Figueroa and C. Talavera, "Desplazamiento y marginalización de América Latina en el comercio mundial agropecuario", PROCADES, teaching paper, series II, No. 56, Santiago, Chile, 1987.

⁸World Bank, 1986.

Given the possible limitation on continued deep penetration of world markets for farm goods, the focus of the problem will revert to the internal issue; thought might then be given to promoting the gradual reconversion of the big and medium-sized farms from the production of exports and agro-industrial raw materials to the production of basic foods, even with the present concentrated structure of land ownership. However, as it would be necessary to guarantee the profitability of these farms in the short and medium terms, food prices would tend to rise. Increased prices for basic foods — wage goods — maintained over a long period would force up costs throughout the economy and refuel inflation.

If the Government took steps to hold down the prices of basic foods produced in such circumstances, by means of subsidies for example, this could have a negative impact on the fiscal deficit, in which Brazil is at present trying to secure a sizeable reduction. This theory as to the possible limits to the reconversion to food production in the short and medium terms is an hypothesis which would have to be verified in a more detailed study. In any event, it is thought that reconversion would not be easy in the short term in the case of soybeans and sugar cane, owing to their profitability and the existing infrastructure for their production, marketing and industrial processing. But even if reconversion were possible, it would not solve the problem of poverty either in the countryside or in the towns. Nor would it satisfy the just demands for better living conditions which are perfectly valid in a transitional period in which an effort is being made to consolidate the country's return to democracy.

Violence has increased considerably in rural areas in recent decades and it has centered mainly on land disputes. Despite the heavy flow of migrants from the countryside to the towns described above, according to Reydon,⁹ in 1971 INCRA recorded 109 disputes over land, but in 1984 the figure was 950.

According to CONTAC,¹⁰ between 1970 and 1986 118 000 families of small producers, equi-

valent to about 700 000 persons, were involved in conflicts over land ownership. The figures indicate a worsening of this kind of conflict in the past two years. There are at present 30 camps of landless workers scattered throughout the country, with 4 000 families equivalent to roughly 24 000 persons. These data suggest the scale which land disputes and violence have assumed in the Brazilian countryside.

In the urban sector there were 640 stoppages over wage claims in 1985, double the number of the previous year, and in June 1987 there were 30 cases of looting by people affected by the drought in the north-east. In addition to the stoppages, nine supermarkets on the outskirts of São Paulo were attacked and looted in only three weeks in June and July this year; the same thing happened to four supermarkets in Rio de Janeiro in under a month. It is estimated that the number of assaults committed in the country averages a little over one every half hour.¹¹

However, the most worrying thing at present is the escalation of violence from individual action to collective action in both rural and urban areas. In the rural sector it is a question of groups of displaced people who, for want of any peaceful option, are forced to commit violence in an effort to survive and are confronted by the reaction of organized armed groups. In the urban sector, where private security firms are proliferating, it is no longer just a case of common crime in an individual assault but rather of large groups of people also seeking to survive; or even of the collective violent reaction of entire marginal districts, as in the case of the *favelas* of Rocinha (200 000 inhabitants) in Rio de Janeiro in mid-August this year or Cerro Santa Marta (11 500 inhabitants) at the end of August. In Rio de Janeiro, for example, on whose centres of marginal population the censuses have included a specific enquiry, the number of *favelas* almost quadrupled between 1950 and 1980 (Guimaraes, 1982) from 58 to 192. The population of the country's *favelas* has increased by 50% in the past five years from eight to twelve million persons, while the total population increased by 13.5% in the same period. This indicates an intense process of "favelization".

⁹B. Reydon, "Síntese crítica do plano nacional de reforma agrária", Editora Cortez, in *Reforma agrária da nova república*, *op. cit.*

¹⁰National Confederation of Farm Workers.

¹¹*Revista Veja* No. 979, June 1987, p. 41.

III

Conclusions

Brazil has a great potential which is still not fully used. Its gross domestic product of US\$280 000 million makes its economy the eighth largest in the world. However, its per capita gross domestic product of a little over US\$2 000 puts it in fortieth place out of 128 countries; if only the 101 developing countries are considered, Brazil occupies twenty-second place.

Brazil has grown faster than Latin America as a whole during the last 35 years. In 1950 its gross domestic product amounted to 28% of the region's total and it had risen to 36% by 1985. Its per capita gross domestic product, which was 80% of the regional average in 1960, was only slightly above that average in 1985. Still in relation to Latin America, the country has made much progress in scientific and technological development and occupies a leading position in the region, but it still has much room for improvement in these areas.

Its economic growth has been very high in recent decades but it is now faced by a series of economic and social problems. It is also passing through a very important and at the same time complex political stage which is testing its capacity to consolidate the return to democracy.

The crisis of the 1980s and the foreign debt have exacerbated the socio-economic problems while at the same time restricting access to means of coping with them. But they were not the cause of these problems even though they did make them worse. For many years now a part of Brazilian society has been contracting another kind of debt—a significant and growing internal social debt—distinct from the large public deficit which at present amounts to about US\$1 600 million. In this internal social debt, the size of which is uncertain, the creditors are another large part of the population and, paradoxically, they do not have the financial means to establish reserve funds that would enable them, occasionally, to meet unpaid debts; and in this case the interest rates have not been repeatedly raised, for they have always been negative in real terms.

The modernization of part of agriculture, which has not solved the problem of concentration of land holding by modernizing its distribution and making access to it more widely available, has been conservative, partial and incomplete, with repercussions on the whole of society. This modernization was carried through very quickly instead of gradually, by means of powerful government incentives and with technology inappropriate for the existing complement of factors; and it made maximum use of the relatively scarce factor—capital—and minimum use of the abundant factor—labour. It therefore restricted the capacity to generate jobs in the countryside, disrupted part of the existing peasant economy in the modernized areas, reduced the per capita output of foods, and forced a remarkable process of rural-urban migration which produced a massive increment of the redundant population of the towns. In Brazil this process has had negative effects which caused it to be dubbed (George, 1987) the "modernization syndrome". Apart from other equally important consequences, it has not solved the problem of poverty and marginalization in the countryside and it has aggravated these same problems in the towns. A final and serious effect is the increase of violence throughout the country.

Brazil is now confronted by a number of challenges and its ability to cope with them in the future will depend in part on the performance of the National Constituent Assembly and above all on the organization and participation of representative social groups in defence of their interests. The main challenges which society and the State must take up in economic and social affairs include: tackling the distribution conflict; adopting a firm stance of fiscal austerity to reduce the domestic debt and the public deficit; maintaining a high rate of economic growth; stimulating saving and private investment; cutting the inflation rate; taking a clear, sovereign and negotiable position on the foreign debt; and democratizing the State apparatus by decentralizing its management and

making it less bureaucratic. The main political challenges seem to be: consolidating the processes of democratization and effective separation of powers; modernization of the political system by increasing the social representativeness of the parties and the Government; and completion of the work of the Constituent Assembly by the establishment of adequate social legitimacy for the new Constitution.

A series of reforms in various sectors is being discussed with a view to tackling these economic and social challenges, reforms which are all integrated in an overall framework of restructuring of the development process. They include agrarian reform which, after the system of government and the term of office of the President, is perhaps the most important issue under discussion in society, the Constituent Assembly and important sections of the Government. All this indicates the complexity of the times which the country is living through and the enormous challenges which it will have to take up in the immediate future. These challenges must be seized with vigour and determination, jointly and immediately.

Brazil has never carried through an agrarian reform, and to do this without restricting it solely to the distribution of land, quite apart from being considered a priority task by the present Government, is perhaps the only necessary and available non-repressive means of calming the violence in the countryside; cutting back the rural exodus and the violence in the towns; improving living conditions and reducing poverty; satisfying the just claims of enormous numbers of landless peasants by giving them fair access to land; boosting food production and ensuring adequate supplies in the towns; expanding the domestic market and reducing international food dependency; and consolidating the legitimacy of the State apparatus and supporting the redemocratization process.

A relatively far-reaching agrarian reform that goes beyond the goal of land distribution might follow the lines set out in Decree 91 766 of 10 October 1985, which launched the National Agrarian Reform Plan (PNRA) in Brazil, although some people consider it conservative and very limited and others very ambitious. This plan envisages a set of programmes which have

different purposes and orders of priority but which are complementary and interdependent. It sets out a basic programme for settlement of rural workers on expropriated land or land made available by other means, which is centered on the socio-economic organization of the beneficiaries for production, marketing and industrial processing and affords assistance in the shape of economic and social promotional activities. The supplementary programmes which are to be fully integrated in and implemented in accordance with the requirements of the basic programme, include actions in the area of real estate regulation, land settlement and taxation. The additional support programmes include rural land registry, studies and research, legal aid and development of human resources. The plan includes a general description of the programmes, operational guidelines, and measures for immediate action; it specifies the bodies involved in the execution of each programme and gives an estimate of the financial resources required and an indication of the sources of financing.

The presentation of the National Rural Development Policy by three ministers¹² to the President of the Republic in October 1985 states that "the agrarian reform is not an end in itself but a means of securing social justice and increasing output; it does not exist in isolation nor does it include all the measures needed for social peace; it is part of a whole and should be viewed as such. The problems of the countryside will not be solved merely by better distribution of property but this can make a decisive contribution to better balanced rural development". When he approved the National Agrarian Reform Plan the President said that "no modern nation has developed without first dealing with the agrarian problem. It is not possible —it has never been possible and it is no coincidence that it has never happened differently in the history of the world— to build a democracy without three essential elements: consensus, courage and modernization".

Since 1985 the new Government has been carrying out some of the measures envisaged in

¹²Agriculture, Agrarian Reform and Development, and Planning.

the National Agrarian Reform Plan launched in that year. Progress has been very slow despite the great effort made. There is a number of obstacles in various areas, and positions are becoming increasingly polarized for and against the agrarian reform; this is helping to exacerbate the violence. At present everything indicates that those who are opposed to the implementation of the reform peacefully and within the law forget that their opposition increases the risk of uncontrollable violence which might result in a serious social upheaval. The fundamental problem of the rural and urban sectors in today's Brazil is that, regrettably, in the present circumstances the possibility of aggravation of the violence cannot be excluded.

Notwithstanding this complex, difficult and worrying socio-economic situation, the political room for carrying out the agrarian reform in Brazil at present has been contracting since the launch of the PNRA in 1985. On 21 October 1987 the Government promulgated Decree Law 2363. This decree orders the winding-up of the National Institute for Settlement and Agrarian Reform (INCRA), the body responsible for implementing the PNRA; and it establishes the minimum limits for expropriation at 250 ha for the southern and south-eastern regions, 500 ha for the north-east, 1 000 ha for the central-west, and 1 500 ha for the north. It also removes the possibility of expropriation of properties of any size when their land is considered to be an "area in production", without defining this term. It is estimated that the measures set out in the decree will exclude from the agrarian reform 97% of the country's rural properties, i.e., an area equal to 315 million ha. In short, this decree law undermines the institutional base and severely limits

the terms of implementation of the PNRA in the short and medium terms. It is therefore asserted that the plan implies the collapse of the agrarian reform in Brazil.¹⁵

If it does not prove possible to carry through the agrarian reform in a democratic framework at present—owing to the increased difficulties, the deterioration of the standard of living of large sections of the population, and the increase in rural and urban violence—it nevertheless seems that this reform will remain a requirement for the future, for it will not be easy to find an alternative to take its place which will be able to resolve the existing acute social contradictions without repression and in freedom. To postpone it means deferring to the future a worsening problem which will still have to be tackled, perhaps in different, more difficult and more complex circumstances.

On the other hand, carrying out the reform means taking up the challenge which has faced many other nations of the world in rationalizing the management of their natural and human resources, making a decisive contribution to a process of national pacification, and overcoming major social contradictions. In addition to achieving these socio-economic objectives, it will confer the right of citizenship on millions of people who now have only nationality. For Brazil it would mean superimposing modernity on the legacy of archaism and advancing into the future by the path of modernization in the conditions of relatively stable social balance which are necessary and sufficient for its development.

¹⁵"Decreto implode a reforma agrária", *Revista Exame*, No. 389, 11 November 1987, p. 11.

Bibliography

- Abramovay, R. (1987): Reforma agraria, desenvolvimento capitalista e democracia, in *Reforma agraria da nova república - Contradições e alternativas*. São Paulo: Editora Cortez.
- Alkelrud, I. (1987): *Reforma agraria - a luta pela terra no Brasil*. São Paulo: Global Editora.
- Albuquerque, M. (1987): Estrutura fundiária, in *Revista de economia política*, vol. 7, No. 3, July/September.
- Assembléia Nacional Constituinte, VI - Comissão da ordem econômica VI-C-Subcomissão da política agrícola e fundiária e da reforma agraria (1987): *Relatório e anteprojeto*. Brasília, May.
- Delgado G. da C. (1985): *Capital financeiro e agricultura no Brasil*. São Paulo: Editora da UNICAMP e Icone Editora.
- Dowbor, L. (1987): O PNRA e as transformações da agricultura, in

- Reforma agrária da nova república - Contradições e alternativas, op. cit.*
- Figuerola, M. and C. Talavera (1987): *Desplazamiento y marginalización de América Latina en el comercio mundial agropecuario*. PROCADDES, Teaching Papers, Series II, No. 56, Santiago, Chile.
- Fundação Getúlio Vargas, Instituto Brasileiro de Economia (1987): *Conjuntura econômica*, vol. 40, No. 7, July 1986 and vol. 41, No. 3, March.
- Ghai, D. (1987): *Economic growth, agrarian transformation and social progress*. Brasília, 1987.
- George, S. (1987): *Enferma anda la tierra*. Madrid: Iepala Editorial.
- Graziano da Silva, J. (1987): Reforma agrária, já?, in *Reforma agrária da nova república - Contradições e alternativas, op. cit.*
- Grzybowski, C. (1987): *Caminhos e descaminhos dos movimentos sociais no campo*. Petrópolis: Editora Vozes.
- Guimaraes, A.P. (1982): *As classes perigosas - Banditismo urbano e rural*. Rio de Janeiro: Edições Graal Ltda.
- Hoffmann, R. (1979): A concentração da posse da terra no Brasil, in *Encontros com a civilização brasileira*, No. 7, January.
- Homem de Melo, F. (1986): *The external crisis, adjustment policies and agricultural development in Brazil*. São Paulo, November.
- Lima Filho, O. (1985): *A questão agrária*. Brasília: Câmara dos Deputados.
- Martine, G. and R.C. Garcia (1987): *Os impactos sociais da modernização agrícola*. São Paulo: Editora Caetes.
- Ministerio da Fazenda (1987): *Plano de controle macroeconômico*. Brasília, July.
- Ministerio da Reforma e do Desenvolvimento Agrário-MIRAD (1986): *Brasil: desenvolvimento rural e reforma agrária*. Brasília, November.
- Ministerio da Reforma e do Desenvolvimento Agrário-MIRAD e Instituto Nacional de Colonização e Reforma Agrária-INCRA (1985): *Plano nacional de reforma agrária*. Brasília, October.
- (1985): *Estatuto da Terra*. Brasília.
- Mueller, C.C. (1987): Censos agropecuarios. Ensaio especial, in *Agroanalysis*, vol. II, No. 6, Fundação Getúlio Vargas, Instituto Brasileiro de Economia, Rio de Janeiro, June.
- Müller, G. (1987): A terra não é mais aquela: Mirad nela?, in *Reforma agrária da nova república - Contradições e alternativas, op. cit.*
- Munhoz, D.G. (1982): *Economia agrícola: agricultura - uma defesa dos subsídios*. Petrópolis: Editora Vozes.
- Paiva Abreu, M. (n.d.): *Política social no Brasil: a relevância dos paradigmas históricos e comparativos*. Discussion text, No. 127, Economics Department, Pontifícia Universidade Católica, Rio de Janeiro.
- Pessoa, D. (organizer) (1986): *Reforma agrária em debate*. Recife: Editora Massangana.
- Pinto, L.C.G. (1979): Notas sobre a política agrícola brasileira, in *Encontros com a civilização brasileira*, No. 7, January.
- Revista Exame*, No. 389 (1987): São Paulo: Editora Abril, 11 November.
- Revista Veja*, Nos. 978 to 996 (1987): São Paulo: Editora Abril, June to October.
- Reydon, B. (1987): Síntese crítica do PNRA, in *Reforma agrária da nova república - Contradições e alternativas, op. cit.*
- Sandroni, P. (1987): O PNRA, ou o reformismo conservador, in *Reforma agrária da nova república - Contradições e alternativas, op. cit.*
- Sautchuk, J., H.M. Carvalho and S.B. Guzmão (1979): *Projeto Juri: A invasão americana*. São Paulo: Editora Brasil Debates, Ltda.
- Tokman, V. (1986): *Creation of productive employment: a task that cannot be postponed*. Series Documentos de trabajo, No. 280. Santiago, Chile: PREALC, September.
- World Bank (1987): *World Development Report, 1986*. Washington, D.C.