

AGRARIAN REFORM IN THE
CONTEXT OF MODERNIZED
AGRICULTURE: THE CASE
OF BRAZIL

by

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Thesis submitted for the degree of Ph.D
in the University of London

University College London
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August 1990

To my wife Diana and my children Anna and Tomás

ABSTRACT

The main goal of this thesis is to investigate the process of Agrarian Reform in Brazil between 1985 and 1988. This process is set in the context of the agricultural development policies implemented in the years 1980-1988.

For these purposes, the relevant literature on Agrarian Reform in Brazil and in Latin America is examined, as well as the literature related to rural development and market liberalisation.

Before the current process of Agrarian Reform, the debate in Brazil on agricultural development strategy was highly polarized. One current of opinion defended small farm production and advocated a complete and radical Agrarian Reform. Others cast doubt on the efficacy of small-scale production and supported hence the model of agricultural modernization established in the 1960s and centred on commercial rural enterprises.

The changes introduced in agricultural policies and in the process of Agrarian Reform itself during the 1980s have raised new dilemmas. These changes are analysed in the thesis using recent data on rural credit and marketing policies.

Implementation of the Agrarian Reform programme is investigated using field data on six land settlements located in three different regions of the country: Ceará, Rio de Janeiro and Rio Grande do Sul.

The thesis demonstrates the viability of Agrarian Reform within the context of modern agriculture provided

that specific conditions are met ,such as: limitation of the scope of the reform exclusively to underutilised lands ,ex-ante transformation and liberalisation of the agricultural policies which provoked land concentration in the past, positive integration of the new settlers in markets, and access by settlers to state agricultural programmes .

The field research shows that market integration is the crucial determinant of economic success for the land reform settlements,together with access to specially targeted agricultural programmes.The particular form of organisation adopted by the settlers does not appear to be a significant factor in determining economic performance.

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ACKNOWLEDGEMENTS

I have benefited from the help and opinions of numerous people during the process of elaboration of this thesis.

I am especially indebted to Dr. David Goodman for his careful guidance as academic advisor, his brilliant comments and his invaluable reading of the text.

My deep appreciation goes to Candido Grzybowski, José Elí Veiga, Carlos Vainer and Anna Luiza Osorio de Almeida for inspiration and insights during the development of this study. They read different drafts of this thesis and offered important suggestions, besides taking a permanent interest in the development of my research.

I thank to MIRAD-Ceará (Ministry of Agrarian Reform and Rural Development), SEAF-RJ (State Board for land Issues) and CETAP-RGS (Centre for Alternative and Popular Technology) for their contribution with the field research.

I also thank all the farmers and peasants who accepted to be interviewed during my field research.

Im am particularly grateful to Teófilo dos Santos, Aloysio Asti, Betty Freitas, Aurea Monteiro, Carlos and Silvia Sprei, Monica, Jorge Nobua, Estrella Bohadana, John Wilkinson, Gervasio Rezende and Creusa Stephen for their help during my stay in Brazil in 1988.

I also thank my friends and colleagues Carlos Osorio, Nilson de Paula, Leonardo Lazarte, Shigeu Shiki, Paulo Costa, Paulo Vrobel, Vilma Mangabeira and Rosemary Pollock for their constant encouragement, friendship and important contributions to this work.

I am grateful to my friends Martim Smolka, Anna Luiza Osorio de Almeida and Alfredo Iusen who encouraged me to undertake the Phd.

This dissertation was made readable thanks to the efforts of my major advisor David Goodman and Mrs Sara Hartcourt.

I am especially grateful to CNPq (Conselho Nacional de Pesquisas) for their financial support which made this dissertation viable.

Most important to me has been the love of my family. I wish to express my gratitude to my wife Diana for giving so much help, support and love. Without her tremendous dedication this study would not have been completed.

Finally I want to thank my parents, Carlos and María Luisa, to whom I owe so much.

INTRODUCTION

The primary concern of this thesis is to analyse a process of agrarian reform taking place within the context of a modernized agriculture. Unlike other Latin American agrarian reforms (1), the aims of the Brazilian agrarian reform could not include creation of a capitalist class and the expansion of the internal market because this class already existed and the internal market had been fostered by forces other than land reform.

The classic task of generating a "regular flow of cheap food", usually attributed to small farmers and land reform beneficiaries, had also been resolved by the process of agricultural modernization which occurred in the 1960s and 1970s in Brazil. There is an extensive literature on the implications of the process of modernization for rural social development in Brazil. Since this literature provides enough material about the past process of modernization in the 1970s, this thesis will focus on the new dilemmas raised by the decline of agricultural modernization policies and the effects of these changes on the agricultural sector in the 1980s. (2).

(1): The aim of this thesis is not to evaluate the Latin American reforms as this issue has been sufficiently explored by many other authors, such as: CEPAL-FAO (1978), de Janvry (1981), Lehmann (1974), Preston-Redclift (1979), Gutelman (1974), Ghose (1980), Antezana (1979), WORLD BANK (1978), Barraclough (1984), Bell (1983), Sanderson (1984), Kay (1975), Thiesenhusen (1988).

(2): For more information on the past decade, see CPDA-BINAGRI (1979), Mendonça de Barros et al (1977), Da Silva (1982), Paiva. R (1973), Delgado (1985), Muller (1986), Dos Santos (1988).

The resolution of these economic issues-expansion of the internal market and a regular flow of food- without the implementation of an agrarian reform makes the "classical" idea that peasants and small farmers would provide the resources necessary for the development of the urban industrial economy outdated. The question of their economic role in society therefore is posed in a new context.

In our view , the implementation of an agrarian reform under these new conditions assigns a different role to small farm production . This is more related to their role as "subjects" of the process than as "objects" of a wider process of rural-urban transfers, as conceived in the past.

An agrarian reform, with small farmers at the core of the process (3), that is , as its subjects, can be expected to pursue different economic objectives: the improvement of the pattern of rural income distribution and the alleviation of poverty.

In Brazil, during the 1980s, attempts were made to tackle the problem of income re-distribution concomitantly with the gradual liberalization of agricultural policy. Since these policies are intimately related , the analysis of the transformations of the agricultural sector in the 1980s must take both issues into account. We are concerned in this thesis with selected aspects of the interface between agricultural policies in the 1980s and the programme of agrarian reform launched in this period.

(3) : Before the current process of Agrarian Reform, the debate in Brazil on agricultural development strategy was highly polarized. One current of opinion defended small farm production and advocated a complete and radical Agrarian Reform. Others cast doubt on the efficacy of small-scale production and hence supported the model of agricultural modernization established in the 1960s and centred on commercial rural enterprises .

A closer examination of this issue allows us to raise the following hypotheses:

-The mere implementation of more market-oriented agricultural policies alone will not induce a significant process of income re-distribution and land de-concentration.

-Agrarian reform is capable of initiating a process of income generation, despite the adverse agricultural policies which prevailed in the 1980s in relation to small farm production.

-There are varied factors underlying the process of income generation and these factors are more complex than was previously supposed.

In order to illustrate these hypotheses the following specific issues will be developed:

-The Brazilian process of agrarian reform will be placed in the context of the changing agricultural policies of the 1980s.

-An evaluation of the likelihood of economic integration of agrarian reform beneficiaries in the present context of market liberalization.

-An evaluation of the extent to which agrarian reform reduces income disparities and alleviates rural poverty.

-An analysis of the problems involved in the transformation of a landless population into small farmers or integrated elements of a modern capitalist economy.

The thesis, however, does not aim to enter the theoretical discussion about the differences between peasants, small farmers or petty commodity producers in terms of categorization. The thesis is mainly concerned with the study of a transitional situation, namely, the process of establishing the viability of small farmers, irrespective of whether they are labelled peasants or petty commodity producers. In fact, we are dealing with dispossessed rural people who might become either small

farmers integrated in the market or marginal producers(4).

The first two issues above are studied using recent data on rural credit and marketing policies, while the implementation of the Agrarian Reform programme is investigated using field data from six land settlements located in three different regions of the country: Ceará, Rio de Janeiro and Rio Grande do Sul.

The research on the process of agrarian reform between 1985 and 1988, despite its limited scope, allows us to assess some historical and social events, which might contribute to improve implementation of a future programme of agrarian reform.

Chapter One discusses the market-orientated agricultural policy, which was partially applied in Brazil in the 1980s in an attempt to re-direct the process of agricultural modernization. Since agrarian reform was initiated in 1985, when the agricultural sector was adjusting to the new policy orientation, we have attempted an integrated treatment of those events. In fact, agrarian reform and agricultural policies, apparently disconnected issues, are closely interrelated, as we shall see.

(4). The current debate about the peasantry is found in Bernstein(1979), Goodman and Redclift(1981 and 1985), Friedman(1978 and 1980), Shanin(1971 and 1982), Banaji(1977), Djurfeldt(1982), Harris(1982), Patnaik(1976), Vergopoulos(1978), Goodman(1985), Henfrey(1987), Kerblay(1971), Ellis(1988).

In Chapter Two, the debate about the programme of agrarian reform itself is explored. This debate raised several controversial issues in terms of the political viability of the reform. In this chapter we also return to some aspects already analysed in Chapter One. These include the prospects for reform beneficiaries in terms of positive integration in the market, and the impact of the new agricultural policies on this question.

To the extent that the land reform programme is a failure, this is attributed to its own internal contradictions and lack of a proper political strategy to guarantee its implementation. The programme of agrarian reform is thus placed at the centre of the process of agricultural change. From this vantage point, it becomes more clear that small farm production has been low on the agricultural policy agenda, thus affecting the likelihood of success of the agrarian reform programme.

Following the breakdown of the reform programme at the Federal level, events unfolded in accordance with regional structures of power and regional agrarian structures. The last four chapters examine these regional factors and the detailed development of selected land reform settlements using data collected during field research in Brazil in 1988.

Chapter Three examines three different regions of the country—Ceará, Rio de Janeiro, and Rio Grande do Sul—in terms of the political pre-conditions for agrarian reform and inherited agrarian structures.

In Chapter Four, the previous analysis is used as background to measure the real impact of the agrarian reform in the regions during the three years following the expropriations and establishment of land settlements. This analysis takes into account changes in agricultural output, and also shifts in the political and social structures of power resulting from the greater participation of the social movements.

Moving from the more global discussion ,Chapter Five examines in detail the different problems arising during the process of market integration of the landless population .Some of these problems are related to the re-organization of a rural space appropriate to the new conditions of production.However,organizational problems also emerged during the settlement process.In this chapter, the collective pattern of organization is contrasted with the individualized model in order to grasp the different dynamics embodied in each form of organization.

To complete the evaluation of the process of income generation and poverty alleviation,Chapter Six considers the settlers' individual economic performance and the economic determinants of success.

Finally we present some tentative ideas about the Brazilian agricultural policies and the kind of agrarian reform feasible within this structure .

CHAPTER ONE.

AGRICULTURAL POLICY IN THE 1980s AND SMALL FARM PRODUCTION.

1.1-INTRODUCTION.

Important changes have occurred in the agricultural policies in the 1980s due both to the economic crisis and the inefficiency of the former model of agricultural development. Permanent high rates of inflation led to full indexation of the economy, undermining, as a consequence, the basis of the former system of agricultural subsidies. During most of the decade the State has tried different alternative policies seeking to stabilize food provisioning and increase of exports.

Concurrent with this process, but not necessarily in the same direction, agricultural policies affect income distribution within the agricultural sector. Rural patterns of income distribution are strongly related to urban income distribution in countries such as Brazil, which still has one third of its total population in rural areas. One of the mechanisms linking both these patterns of income distribution is the labour market and the effect of changes in urban nominal wages. For this reason we have decided to examine more closely the relationship between the role of the State (agricultural policies) and changes in the rural income distribution, with particular emphasis on the evolution of the small farm sector.

However, rural income distribution also depends on specific policies of land reform, as we shall demonstrate in Chapter Six using the results of our field research. Nevertheless, without the support of other agricultural policy measures, the outcome of agrarian

reform would be rapidly diluted .The integration of new settlers and of small farming into the market and their adoption of modern techniques of production is closely related to the improvement of the broader "conditions of integration", that is, the improvement of market mechanisms .

Our main purpose in this chapter , therefore, is to analyse the agricultural policy context in which the land reform has been inserted .We attempt to outline the agricultural policies which preceded land reform(1980-1985) and those introduced after the launching of the agrarian reform process (1985-1988), looking for an explanation of the rationality of this programme. Was the programme launched during a period in which conditions shifted in favour of small farm development ?. What role was agrarian reform expected to play within this process? .On the other hand, were the agricultural policies in fact aiming to ensure the continuation of the same pattern of agricultural development (agricultural modernization) leaving the process of agrarian reform to revolve in a vacuum , without any economic logic?

Explanations of the launching of the agrarian reform and the failure of its implementation have been sought mainly in political events related to the balance of power within rural areas and the urban sectors. Although , changes in the political arena played a decisive role in the core of the process, such analysis does not explain why the dominant classes launched a national programme of this magnitude, instead of a regional programme or another variation of the traditional rural development programmes.

It is also naive to suppose that a national reform programme would alleviate social tensions in the countryside. The events that followed the simple announcement of the programme reveal that expectations had grown significantly, intensifying rural conflicts around the issue of land distribution which, in turn , have continued until today. Were the dominant classes not aware

that the consequences of such an announcement would complicate the possible resolution of some rural conflicts which existed before?

In fact, the pressure coming from the rural areas in favour of an agrarian reform was not as strong as in the 1960s under the government of J.Goulart. Yet, paradoxically, the government which emerged after the defeat of the military regime in 1985, launched a programme of land distribution several times bigger than the Goulart programme.

In our view, there are some indications that a project to develop and support small farming was on the agenda from the beginning of the 1980s. The aim ostensibly was to complement the modernization process of the 1970s, or even to correct its bias towards large landowners. This "project" although never implemented, reflected the need to resolve some of the problems inherited from several years of accelerated agricultural modernization. These include recurrent shortages of food supplies, growing and ineffective financial subsidies to large landowners, migration towards urban areas without conditions of absorbing it. In political terms, inherited problems included the decline of legitimacy of the old mechanisms of social control in rural areas.

The main goal of this chapter, therefore, is to examine the signs of change revealed by agricultural policies adopted during the 1980s, and to analyze the process and the causes which collaborated to defeat the initiatives linked to the development of small farming.

The first section examines the debate on the prospects of the modernization process for the 1980s, and the different proposals made to cope with the consequences of this process. Following this, we summarize the trajectory of agricultural policy from 1980 to 1988 in order to detect the shifts towards small farm development and, moreover, the attempts to liberalize rural credit

policies and price policy.

In sum we attempt to analyze the period by focusing on the integration of small farming in the market ,in order to assess whether or not there have been significant changes in this respect during this period.

1.2-PROPOSALS FOR THE POST-MODERNIZATION PROCESS IN THE EARLY 1980s.

The economic crisis suffered by the Brazilian economy at the beginning of the 1980s called into question the relationship between the state and the agricultural sector,generating a variety of proposals to reinstate this relationship under the new economic conditions .

The agricultural sector had been severely affected by the economic crisis in 1981/82,as a consequence of the following factors:

- Oil price increases (1974 and 1979): the agricultural modernization process demanded huge quantities of fertilizers, farm machinery(tractors) and transport,which in turn demanded intensive use of oil.The increase of prices therefore raised agriculture's costs of production.
- Greater instability and lower commodity prices in international markets: in 1980 the standard deviation of commodity prices doubled in comparison with 1970(CFP,1983-b-),and between 1980 and 1982 commodity prices in the international markets dropped by 30%.
- Lack of financial resources to sustain the same pattern of modernization which had taken place in the 1970s.

These constraints affected the agricultural sector by making working capital (credit)more expensive ,at the same time as farm input prices were higher and commodity prices were beginning to weaken .Climatic factors

aggravated the situation, provoking bad harvests in 1978/79, an important decline in the domestic food supply in 1979, followed by three years of decline in the sectoral trade balance (agricultural exports vis-à-vis food imports) in 1978 and 1980.

The initial years of the 1980s have been described by some specialists as a "slowing down of agricultural dynamism" (CFP, 1983-b-, pg 10), and by others as a "failure of the process of agricultural modernization". Oliveira.F (1989) pointed out that the crisis was not simply restricted to the agricultural sector but, in fact, mirrored the wider crisis of the "relationship between the state and the economy, calling into question the very pattern of financing of the Brazilian economy". (pg 36). Not only agriculture but practically all economic activities have been fostered, subsidized and protected by the state during recent decades, shaping this special type of dependent state-private sector relationship. But the public financing of private activities could not last for ever, and at the beginning of the eighties new and more liberal proposals began to attract the attention of economists.

The rural credit policy of keeping interest rates low or subsidized to offset distortions caused by currency overvaluation has been strongly criticized by many authors (Adams et al, 1984; Timmer et al, 1983), and mainly by the World Bank (1982, 1986) and IMF. They have pointed to several negative impacts of that policy on the agricultural sector, basically its effects on income distribution, on financial markets and on the fiscal deficit.

According to Adams et al (1984), "Attempts to redistribute income in favor of the poor through manipulation of financial markets increase, rather than lessen, income concentration" (emphasis ours, pg 6). Their central idea is that when interest rates are kept low, demand for credit will exceed supply, and therefore the banks, which need

to protect themselves against potential defaults ,will introduce higher collateral requirements to lend money at that rate of interest.This "rationing process" would channel the credit to farmers who have more assets to offer as a guaranty.That is ,the "well-to-do and the influential colonize the credit activities and only a few of the potential clients or members of the organizations receive loans", (Adams et al 1984,pg 17).This would be the first step in the income distribution process against the poor.

The second step in this process occurs when credit is applied to the rural activity.Large farmers would use credit to develop capital-intensive methods of production,through mechanization ,fertilizers, pesticides and herbicides which, with the exception of fertilizers,displace manual workers.If the price of capital(interest rates),becomes cheaper,then labour becomes relatively expensive to capital .Thus the utilization of capital-intensive methods becomes possible,despite the comparative advantage of labour-intensive methods of production in most rural areas if factors are priced at their social opportunity cost.

These substitution effects have been reinforced in many countries by tying credit contracts to the utilization of particular kind of techniques,basically tractors, and chemical inputs.

Furthermore a cheap credit policy affects income distribution when loans are diverted to purposes other than agricultural activity.Data from Brazil (WDR,1986,pg 98) shows that approximately 23% of agricultural credit in 1976 was diverted to other purposes.This happens because of the very nature of credit.As many authors have pointed out (Sayad,1984),one of the properties of credit is its "fungibility",which means that credit-money can be applied indistinctly in the production process ,to invest or to consume.

However, the mechanism which produces that diversion is not only a matter of fraudulent practice . The "diversion " to other activities is linked to the rate of return within agriculture relative to other sectors. If profitability in agriculture has decreased ,for example, when minimum prices have not been set at proper levels, farmers will accept the offer of loans at lower interest rates ,and probably will apply these in accordance with the loan contract. At the same time, however, they will transfer the maximum of their own funds to other assets or more profitable activities. (Sayad, 1984). Indeed, credit obtained at low interest rates and applied in the land market ,for instance ,strengthens the land concentration process, and apparently, this was the case of Brazil during the 1970's.

Finally, when loans are not being repaid ,and defaults are tolerated , a new flow of money increases the wealth of big landowners. Insofar as they have been the larger borrowers they also internalized the larger subsidies. This last step means a direct transfer of purchasing power from the credit system to borrowers; in fact, to the richer strata in the agricultural sector.

However, we believe that this dilemma can not be resolved solely by augmenting interest rates. Its resolution depends on structural changes, on the land tenure system ,and basically on the political determination of the agricultural policies.

According to World Bank data (1986, pg 99), credit subsidies in Brazil in the late 1970s exceeded 5 percent of GDP, becoming unsustainable by the end of the 1970s. The growth in the volume of credit and the gap between the interest rate and the cost of funds certainly contributed to inflation. For this reason ,the World Bank and IMF recommended the cuts in the volume of credit in the 1980s.

A "higher interest rates policy" would also stimulate domestic savings and thus domestic capital formation. Timmer

et al (1983) explain that "High interest rates are meant to reflect a financial policy that allows market-clearing rates to encourage savings and to channel capital to its most productive uses, thus promoting financial deepening and reduced segmentation of capital markets." (pg 239). The main idea is to develop rural savings, offering high interest rates to savers, and in this way augment the financial intermediation capacity within the agricultural sector. That is, rather than imposing obligations on the commercial banks in terms of having to lend preferentially to specific sectors (small holders, poor regions), the liberalization policy would facilitate rural savings which, in turn, would be allocated to the most profitable farmers. If small holders can not meet the conditions imposed by the commercial banks and the liberal credit system, they ought to depend on the moneylenders and on the informal credit market, or otherwise to manage their holdings without credit. This idea is explicitly defended through the argument that moneylenders are much better suited to lend money to small holders than commercial banks. As Bhatt (1983) points out: "Since informal market dealers operate largely on the basis of personal information and knowledge, they are in a much better position to identify new opportunities for financial transactions." (pg 47).

In summary, a credit system based on high interest rates would: 1) make landowners more conscious of the use of capital, leading them probably to use labour-intensive methods instead of capital intensive methods of production, 2) Large farmers would apply more of their own capital in production allowing the financial institutions to devote more financial resources to other customers (small farmers for instance), 3) The end of the bias towards large landowners would reduce their demand for land, and thus land prices would fall. Ultimately it would lead to land de-concentration. Finally 4) rural banks would have been in a better position to attract rural savings and to lend to

farmers, hence expanding the capital formation process in rural areas. The attractiveness of this policy was based on the idea that market mechanisms would facilitate the resolution of the dramatic income concentration problem which affects countries like Brazil, and thereby would "alleviate rural poverty." (WB, 1986, pg 61)

In Brazil, this idea rapidly caught the attention of the institutions formulating agricultural policy, and particularly the CFP (Company for Production Finance) by the beginning of the 1980s.

Nevertheless, the model was adapted to the specific conditions of Brazilian agriculture. Supposedly this sector has been operating at low levels of profits on account of the lower food prices. On this view, the new agricultural policy therefore would need enhance prices using the minimum prices policy.

By this time (1982/83), it was possible to detect within the Brazilian institutions some concern about the fate of small farm production, coinciding with some distaste about the role played by large farmers during the 1970s. In their own words "large farmers had embezzled the treasury, had wasted excessive energy and had not supplied the cities with enough food stuffs" (Indicador Rural, 1984). In fact, this assertion, which was an extension of arguments advanced by Sayad (1984) and World Bank, reflected the financial stress at the beginning of the decade and the necessity for new solutions.

According to this diagnosis, the main problem of Brazilian agriculture was its income instability. Therefore, the new policy would have to reduce the degree of farmers' uncertainty: "Unlike rural credit, which concentrated income by excluding small farmers, a policy of better prices would reach a larger proportion of farmers" (Fagundes, 1988, pg 3).

Supposedly policy intervention in the food and commodity markets alone would not be able to stabilize

agricultural prices due to the following specificities of agricultural production: seasonal supply fluctuations, output deterioration, price/income demand inelasticities, and short-term supply inelasticity. Therefore they were in favour of an effective programme of minimum prices complemented by agricultural insurance for bad crops (due to climatic problems).

The new policy of minimum prices (PGPM) would act as a "supply inducer". The government would try first to forecast the level of demand for the different products in the domestic market. Then, minimum prices would be established according to the projected demand; that is, higher prices for the products in high demand, and lower for the others. This policy, in fact, presupposes a functional relation between minimum prices and supply, hence farmers would respond to government signals by increasing their output in proportion to the increase in the minimum prices.

The severe food shortages which occurred between 1978 and 1983, and the consequent deterioration of food supply for the domestic market, led the government to target the minimum prices policy to the production of food crops. According to Melo (1985) the following foodstuffs should have priority: rice, beans, corn, manioc and potatoes, and these products ought to have constant real prices in the long term or three years at least (pg 174, 196). When market prices surpass the minimum price by more than 20%, he argues, the government should begin to sell from its stocks and, conversely, whenever market prices are 20% below the minimum price the government should start to buy products.

The supposed greater risk of producing domestic food staples, because of the lower income/price demand elasticities, justified the priority given to those products. At the same time Melo (1985) states that "Through greater stabilization of farm gate prices it would be possible to stabilize farmers' income,....taking into

account that the levels of risk aversion are greater for small farmers than for large farmers, the stabilization policies for foodstuffs would reduce the income variability (variance) more for small farmers than for the larger." (Ibid 174).

The **minimum price approach** finally implemented found the causes for low agricultural profits basically in problems affecting the supply side (low supply elasticities, seasonal supply, deterioration etc). Although this approach also recognises the existence of limitations on the demand side, these limitations are scarcely taken into account, probably because they relate to broader economic problems than agriculture itself.

Some specialists and Brazilian institutions opposed the elimination of the subsidized credit system arguing, as does Munhoz (1982), that it would disorganize agricultural production while all the other sectors of the economy remain subsidized. The implementation of "monetary policies disassociated from the real world" (Ibid, 69) would severely affect the rural sector "which does not have the conditions to assimilate higher financial costs, and as a consequence will transfer the burden to prices (consumers), with sensitive economic and social consequences" (Ibid 105)

Rezende (1985) although agreeing with the elimination of the subsidies, also noted the relevance of the credit policy adopted in the seventies, saying that it helped to avoid **risk and uncertainty**. According to this author, the problem is not so much **profit rates**, which are not so low in the agricultural sector, but rather the **risk of indebtedness**. Insofar as subsidized credit reduces this risk, it consequently raises the expected profit rate, thus stimulating the adoption of modern techniques, and hence, capital accumulation and the general development of the agricultural sector. He warned of the risk of slowing down the process of agricultural modernization if subsidies were eliminated without compensatory measures. Rezende (1985),

moreover, questioned the idea that subsidized credit had inflated land prices (and land concentration), saying that "rural credit has increased land prices not because, as usually is thought, land had to serve as collateral, but more precisely because it abandoned this role" (Ibid 7). That is, the increase in land prices was a consequence of its increased productive use due to the facilities given by the credit system and not because it was merely a guarantee for these credits.

Actually, credit subsidies were replaced by commercial policies and basically with minimum prices higher than market levels, which in turn implies a new subsidy to farmers, this time to be paid by the consumer directly, or by the state through its regulated storage policy.

So far the discussion has been related to the supply side and the different ways of enhancing production and productivity. Other authors, such as Delgado (1988), have highlighted the **demand side** as the main constraint to the production of foodstuffs: "The state power of regulation during the expansionist period (1969-1980) and also during the recession or stagnation periods was used to repress internal demand, lowering wages and employment, looking for the artificial generation of food surpluses in order to increase foreign trade and the trade balance." (pg 6). The agricultural sector was chosen as the main source for exports in order to pay foreign debt service, as occurred in 1985 when agricultural exports accounted for 75% of the interest paid to foreign banks. The data presented by Delgado (1988) shows that in practically every year during the current decade the government has accumulated surpluses (stocks) as a result of the steady income repression, therefore causing declining demand for foodstuffs.

From a more critical standpoint, Martine (1989) highlights the role of rural dominant classes in putting pressure on the state (lobbies) so as to achieve permanent

subsidies and favours : "During all the modernization phases ,the incentives and subsidies have fostered the use of seeds,fertilizers and machines ,making it possible for large farmers to generate profit and to mantain a deeply uneven social structure"(pg 26 and 27).

Ribeiro (1987) goes further in criticizing the subsidized credit system ,saying that " it has led to the excessive adoption of modern inputs.In the early eighties the model of conservative modernization became exhausted; the agricultural policies adopted afterwards were merely attempts to maintain the same agricultural model but now through subsidized prices instead of credit ."(pg 43 and 44).

All these approaches have interacted and influenced the agricultural policies adopted in the 1980s, as we see below.The attempt at the gradual withdrawal of subsidized credit overlapped with the minimum price policy and with some support for foodstuffs production at different times.

Nevertheless ,these policies did not represent real support for small farming as some authors argued in the early 1980s.Moreover,such support fell far short of inaugurating a new type of relationship between agrarian reform and agricultural policy.

However ,in our view, the bases for that particular relationship can be found in the core of the liberal approach.The very idea of eliminating price distortions that affect factor allocation can lead to a more liberal policy based on the elimination of all kinds of subsidies to large farmers ,with the purpose of promoting a more rational use of the abundant factors:land and labour, instead of the scarce factors(capital).This does not mean the abandonment of the modernization process;on the contrary ,it would represent the opportunity of developing it more "efficiently" from the economic point of view, in accordance with relative factor prices.Indeed ,the combination of a strong agrarian policy with the

liberalization of agricultural policies could have led to a steady process of land de-concentration with positive effects on rural income distribution.

However, the discussion in the early 1980s did not contemplate that possibility. Agricultural policy has always been thought of as something absolutely separate from agrarian policy which, in turn, represented the "social side" or was merely the "complement" of agricultural policy.

The liberal approach itself was not fully implemented and suffered all sorts of pressures and modifications in different periods during the decade. Its own limitations in solving the problem of income distribution, as we shall see in the next section resulted in its utilization just to "adjust" the agricultural sector to the main goals of generating surpluses for export and contributing to the anti-inflationary policy.

1.3-LIMITATIONS OF THE RECENT PROPOSALS FOR CHANGING AGRICULTURAL POLICIES IN BRAZIL.

As we have shown, agricultural policies were undergoing important changes at the beginning of the decade. Although there was a range of different proposals, the Brazilian authorities decided to adopt part of the liberal approach -cutting out rural credit and raising interests rates- combined with commercial policies, such as the minimum price policy. To justify these changes, it was argued that subsidized credit policies had not boosted total production on an adequate scale and, as a consequence, had benefited just a minority of borrowers, basically large landowners. Minimum price policy would reach to the heart of the problem - low profitability of the sector -due to its stabilizing effect on incomes, and consequently would reach most farmers. In the long term, it would improve income distribution in rural areas and resolve the problem of food supply to the cities.

Before examining the implementation of these policy changes, it is important to consider some of the problems and limitations of this approach in terms of the small farm sector, and therefore of the likelihood of improving income distribution in the rural areas.

Brazilian marketing mechanisms associated with minimum price policy have been set up using two different kind of contracts: Federal Government Loan (EGF's) and Federal Government Acquisitions (AGF'S). The first of these contracts allows farmers to hold their output until prices go up after the initial fall which usually follows harvests. Farmers deliver their output to the federal banks, as a guarantee for the loan, but when the output is sold they refund the EGF and keep the difference. In case prices do not increase sufficiently, they can transform the EFG contract into an AGF contract, which means that they are selling the product to the government at the minimum price.

This system, called marketing policy, is aimed to

resolve four different problems:

1)Income stabilization for farmers :they are being helped to wait for better prices ,instead of having to sell directly to the intermediaries for lower prices after harvest.

2)Food supply stabilization :Since farmers will sell their output at different moments during the year ,according to their needs, seasonal accumulation of supply is avoided.

3)Price stabilization: price fluctuations can be softened as a consequence of the more even distribution of sales during the year.

4)The government can change cropping decisions by increasing some prices more than others ,so as to orientate supply in accordance with urban demand .

Indeed, agricultural marketing becomes more easy with this policy ,as the state is practically responsible for the most delicate operation in farm business.However this type of credit has been ,and still is, an exclusive privilege for large farmers.

The same institution responsible for agricultural commercialization (CFP) explains why small farmers are out of this process.CFP's research (1986) on small farming in the South verified the existence of the following structural barriers to small farmers' access to the EGF system:

-Stocking facilities(silos,warehouses) are very rare ,placed far from small farms and have been built basically to store export commodities.

-Official cereal dryers and processors only operate with large quantities and not with small portions of output.

-Commercial and official banks deal basically with high value contracts because they earn a percentage of the total transaction value and their operational costs are constant .

In sum, the whole scheme has been arranged for large farming operations ,or at best for cooperatives ,but it is

inappropriate for small producers of domestic crops.

An official CFP report(1983-c-) written before that research had already pointed out that " Small farmers do not have access to the EGF system,which is a sophisticated mechanism of marketing involving financial risk and consequently it can only serve large and commercial farming where the rate of profit is higher. Due to the little volume traded by single small farmers it is not worth transporting output to the authorized warehouses ,and they finally are obliged to sell their output to intermediaries." (pg 29)

Despite the proposals by the CFP and other institutions(CONTAG,National Rural Workers Confederation) proposals to open these transactions to small farmers,such as the elimination of the classification process ,delivery without packing,less bureaucratic procedures ; the banks were not enthusiastic about accepting the risk of less rigid and secure operations.

The government created a new system more adapted for small farming(Pre-EGFS) but it did not work properly(just 10% of the total number of small farmers have had access to this mechanism) for the same reasons pointed out above .

Actually , small farmers can organize collective sales so as to increase the size of their operations.This might be done through cooperatives or informal associations ,such as the agrarian reform settlements , for instance.Nevertheless ,insofar as the official strategy is based on developing and supporting of the large exported-oriented sector, such initiatives will continue to be isolated within the whole scheme.

Obstacles to marketing always have existed for small farming in Brazil, affecting more severely those who wished to leave local transactions and subsistence cropping to become more integrated into the market and to produce the tradable cash-crops.Currently their situation is worsening because of the diminishing amounts of short-term "custeio"

or working capital credit offered by the government and by the higher interest rates .

Without credit to finance the costs of cropping(ploughing, fertilizers and other inputs) ,small farmers tend to accept intermediaries' proposals called "compra na folha" (purchase in advance).Intermediaries lend the money for the inputs ,obviously at higher interest than the official credit ,with the condition that the farmer afterwards will sell the output to him ,certainly at lower prices than the market.This tied-up scheme does not allow small farmers to take advantage of the benefits of the minimum price policy.As "custeio credit" is curtailed ,the minimum price policy turns progressively into an exclusive privilege for large farmers .In sum the power of the intermediaries and money lenders is strengthened by reduction of custeio credit .

Liberal policies , such as the policies recommended by the World Bank ,could have some impact on the use of factors of production -more use of abundant factors:land and labour- and ,moreover, would probably foster marginal adjustments in the pattern of land concentration (effect of higher interests rates).However those policies alone ,without a vigorous programme of agrarian reform ,would not bring about any significant improvement for small farmers,nor significantly improve income distribution.Although the institutions in charge of the agricultural policies were aware of this fact , agrarian reform policies were largely divorced from the whole apparatus of agricultural policy, as we see below .Insofar as agricultural policies have not fully followed the liberal approach ,because of price compensation and the delay in cutting out the subsidies,the effects on income distribution therefore have been much weaker than initially thought.

Promoting small farming has always been regarded in Brazil as the "social side" of agricultural development or,

alternatively, as a radical change towards an absolutely different model of agricultural development based exclusively on small farming structures of production. The dichotomy of large versus small is a mistake, in our view, which reflects lack of understanding about the real possibilities of expansion of small farming within the modern agricultural sector in Brazil.

The modernization process of Brazilian agriculture has not revealed any important scale economies in favour of large farming and land concentration has been a consequence (in part) of the biased agricultural policies adopted in the 1960s and 1970. However, the presence of modern agriculture is undeniable and it would be utopian to try to reverse this situation.

As far as the dichotomy "large versus small" prevailed, the idea of connecting agrarian policies with agricultural policies in order to facilitate the transition from peasant structures of production towards small, but integrated and capitalized farming, has been absent from the official proposals.

According to Ellis, F (1988) peasants' integration into the market is possible: "In the long term the spread of capitalist social relations means the disappearance of peasants, but not necessarily the end of household types of farm production." (Ellis, 1988, pg 238, our emphasis). Based on international experience, he adds: "Household production in agriculture remains important throughout the advanced capitalist countries, and this suggests that an alternative transition can occur: from peasant to family enterprises fully integrated into working markets." (Ibid 238).

In countries such as Brazil, the lack of integration of the peasantry and therefore its pronounced decline, happens in the context of markets (product and factor markets) **which are not fully formed.** (Ibid 234). The role of agricultural policies would therefore be to accelerate the transition of peasants toward commercial family

farms. According to Ellis (ibid 234) in order to drive peasants towards market integration agricultural policies must encompass the following mechanisms:

- 1) Improving the working of markets.
- 2) Increasing the use of purchased inputs.
- 3) Removing the social and economic constraints which distinguish peasants from other economic actors in the market economy.

As we explained before, in Brazil, the minimum prices policy (EGF's) and the credit system as a whole is aimed "to make markets work in certain ways for peasants and in different ways for other farmers" (Ibid 235) to use Ellis' words. Therefore, to avoid this segmentation, it is necessary to integrate agricultural policies and the so-called agrarian policies in a coherent way.

The key to a new model of agricultural development is the improvement of the working of imperfect markets. That is, to end the informal ways of financing, the role of intermediaries and all the mechanisms which do not permit the full integration of small farmers into the market, such as lack of storage, precarious roads and transportation facilities, lack of knowledge of how to use modern inputs, etc. That is, the elimination of distortions in the land market (agrarian reform and taxation) needs to be accompanied by improvements in the working of the other markets as well, basically the capital market (credit) and the input and output markets.

Obviously improvements in market operation would not guarantee the permanent survival of all small farmers. Their situation will be determined by several other factors such as their own capacity to face risk and the very behavior of the market. However, as Ellis predicts "The more peasants become locked into market exchanges, the more they must compete on the terms dictated by the larger economic system, and the less is their capacity to disengage from that system" (Ibid 238).

Although Brazil's agricultural policies have shown regard for some of these issues, it has not been enough to really integrate significant numbers of peasants into market production, as we see in the next section. In our view, this happened because of the very instability of the agricultural policy applied in the eighties and the lack of precise goals in this direction. In the next section, we focus the market conditions (implementation of liberal policies) and the role played by agricultural policies in integrating peasants into the market system.

1.4-PRINCIPAL CHANGES INTRODUCED IN THE EIGHTIES IN THE AGRICULTURAL POLICY.

The "leitmotiv" of this section is the role played by the state in creating better conditions for the integration of small farmers into the market. In the next section, we try to measure to what extent that integration really occurred, focusing on some indicators of output growth, productive efficiency and small farmers' income.

1.4.1-Antecedents.

Since 1965, with the creation of the National System of Rural Credit (SNCR), agriculture in Brazil became seriously dependant on the public sector.

The decision taken by the government to modernise agriculture reflected the need of the urban sector, consumers and industry to have stable and secure source of raw materials and food at a reasonable cost, which would be able to meet the growing internal demand created by industrialization.

Before the adoption of accelerated industrialization policies (1930-1960), agriculture was merely a source of

foreign currency (coffee), on one hand, and cheap food on the other, thanks to the peasants' and traditional farming practices. Although traditional landowners managed to internalize land rents during this period, the squeeze on peasants incomes, generated extra sources of income for industry (cheap food).

Nevertheless, in the 1960s and 1970s it became clear that expansion via the incorporation of land on the extensive frontier was threatening to constrain the industrialization process. These constraints were manifest as food shortages in the city and movements in the internal terms of trade against industry. (Goodman & Redclift, 1981).

In the political conjuncture following the military coup in 1964, agricultural development policies focused on the modernization of large farms rather than agrarian reform or other small farm strategies. The key instrument of modernization policy was the expansion of rural credit at subsidized interest rates. Until 1977 interest rates remained fixed at 15% a year without any indexation, despite the growing inflation in the years after 1973.

The credit system covered every aspect of the agricultural cycle, from cropping itself to marketing and long term investment. Credit for investment has been crucial for the creation of basic agricultural infra-structure, machinery and equipment.

Large holdings and big rural enterprises were the main beneficiaries of this policy, on account of their previous experience in dealing with credit and modern techniques, and moreover of their political influence during the military regime. Although some of the resources were used to enhance farms' productivity, an important portion were used to expand the farmer's properties, thus provoking more land concentration.

By the end of the decade it began to become clear that the credit policy was not having the desired effect in terms of food production. Total credit was growing

faster than output ,meaning that an increasingly larger proportion of the agricultural gross product was being financed by the rural credit policy.For each "cruzeiro" of output, 45 cents had been financed in 1970,82% in 1975 and nearly 60 % by 1979.In other words the sector was becoming dependent on the credit policy,not risking their own capital and ,as Sayad (1984) verified, diverting the credit to other purposes.

At the same time ,the bias in favour of foreign tradable production had reduced food output per capita significantly, (Melo,1985),posing the question of the internal market supply .After two reduced harvests in 1977 and 1978 and the break-down which occurred in the public finances ,the rural credit policy began to shift ,looking for more support from private banks(increasing their obligation to earmark resources for rural credit), and thus diminishing the participation of the Bank of Brazil.Interest rates started to climb ,inaugurating a"soft transition"(Rezende,G.1985,pg 20) towards a system no longer based on public subsidies but on the profitability of the agricultural activity.

From the standpoint of small farm production ,the situation was ambiguous .They had lost in part the access to the "custeio credit" which was more suited to their needs than the minimum price policy but, on the other hand ,interest rates differentiation for small farmers was more precise and favourable than before.From 1968 to 1979 ,although interest rates were lower for small farmers than large farmers ,the bulk of the subsidy came from the difference between inflation and interest rates,since no indexation was charged on the contracts.So ,for example, if the difference in interest rates between categories was 5% a year ,the subsidy from the lack of indexation was more than 40% a year ,and since large farmers had proportionally greater access to public funds they were able to take a bigger part of the subsidized credit than the smaller ones.

Nevertheless by 1979 ,under Delfim Netto's agricultural policy ,loan indexation began to be charged by setting up a system of differential percentages of indexation for large ,medium and small farmers ,and also for farmers in the Northeast region.Certainly between 1979 and 1981 this system had benefited small farmers ,whose output was supposedly important for the internal market.

1.4.2-Rural Credit and Minimum Prices Policy in the 1980s.

As we pointed out at the beginning of this chapter ,the Brazilian economy at the end of the seventies was suffering the consequences of the second oil shock,two bad harvests(1977 and 1978), among other economic problems.The need to reduce the internal deficit led the monetary authorities to introduce a range of important changes in the rural credit system.These included increased interest rates,less public participation within total rural credit and a reduction in the total financial resources allocated to the agricultural sector.The following table shows the declining tendency in the total amount of rural credit after 1979:

Table 1.1 Rural Credit by activity.

Year	Short-Term		Investment		Marketing		Total	
	Value	Index	Value	Index	Value	Index	Value	Index
1979	118.472	100	58.846	100	58.231	100	235.549	100
1980	127.597	108	42.301	72	55.606	96	225.505	96
1981	114.673	97	30.223	51	50.635	87	195.531	83
1982	121.758	103	24.825	42	42.701	73	189.284	80
1983	88.614	75	23.794	40	30.107	52	142.515	61
1984	61.546	52	10.746	18	15.023	26	87.315	37
1985	88.500	75	16.131	27	19.834	34	124.465	53
1986	103.827	88	59.476	101	22.292	38	185.595	79
1987	102.647	87	25.015	43	18.649	32	146.311	62
1988	69.294	58	14.055	24	15.525	27	98.874	42

Source: Central Bank of Brazil. Statistical data.

Note: Values are in constant June 1986 prices-IGP-DI.

Values are expressed in NCz\$ 1000.

Index =100 base 1979.

The table above shows clearly that the total amount of credit, including private, federal and state sources, has declined significantly since the end of the last decade. (1)

(1) The decision to curtail credit supply and subsidies came together with the dismantling of credit programmes to stimulate adoption of modern technology, abolishing the obligation to apply up to 15% of the farmer's budget in modern inputs. These tied-credit mechanisms were so rigid that official credit used to be delivered directly to the manufacturers of inputs. As Delgado (1988) points out, the end of this policy made the farmer more independent from agroindustry in terms of the decision about which technological package to use. That is, the technological package no longer was imposed and began to be purely the farmers' decision.

At the end of 1984, the government took another step within its anti-interventionist policies by eliminating one of the most important financial sources of the Bank of Brazil: the so called "Movement Account". This account was an open line that the Bank of Brazil used in order to get financial resources from the Treasury whenever its own resources were insufficient to finance rural areas.

The ratio Credit/Production has also diminished from 51% in 1980 to 29% in 1985. (CFP, 1987). That is, a lower proportion of the total output was supported with financial resources.

Three different periods can be distinguished within the series :1)From 1979 to 1984, when credit was reduced for all sorts of activities,2)1985-1986 when credit was augmented again,3)1987-1989 when a new phase of decline occurred .

Marketing and investment credit have fallen more sharply than short-term credit (custeio) which ,despite some poor years, still represented 58% of the 1979 level by 1988, while the other two categories have been cut to one quarter of the former 1979 level.

During the current decade "custeio" credit has increased its participation from 50% (1979) to 70% (1988) on account of the diminished percentages of the other two categories which each lost 10% ,ending the period with around 17% for investment and 13% for marketing .

Taking into consideration that credit for agriculture has been increased relatively to credit for cattle-ranching(Table 1.7) ,short-term credit did not decrease so sharply because resources which used to go to investment ,marketing and cattle-ranching ,were concentrated instead on crop production .

It must be noted that custeio credit involves a short-term contract(six months) and thus has only a short-term impact on production,fostering cropping every year without improving the long term conditions for production. (infrastructure,machinery ,etc).

Apparently,the total availability of credit and the number beneficiaries are inversely related ,as the following table shows:

Table 1.2 Total Number of Contracts and Average Value.

Year	Short-Term		Investment		Marketing		Total	
	Number	Aver	Number	Aver	Number	Aver	Number	Aver
1979	1375	36	563	44	435	56	2373	41
1980	1876	28	503	35	386	60	2766	34
1981	1944	25	435	29	234	90	2613	31
1982	1825	28	488	21	290	61	2604	30
1983	1670	22	640	16	159	79	2470	24
1984	1194	21	268	17	123	51	1585	23
1985	1805	20	424	16	43	193	2271	23
1986	2263	19	733	34	27	347	3023	25
1987	2242	19	373	28	45	172	2660	23
1988	n.i		n.i		n.i		1333	31

Source: Brazilian Central Bank. Estatistical Data.

Notes: 1- Averages values expressed in Cz\$ millions, 1985

(Cz\$ 1000.000 was roughly US\$ 160 in 1985).

2- Number of contracts are in thousands.

*: n.i: data not available.

The average size of custeio loans has been reduced significantly since 1979, as also happened with investment credit contracts. In fact, more farmers have had access to this kind of credit, apparently confirming Sayad's and Timmer's ideas that the higher the interest rate the less rationed credit becomes. Credit for marketing, on the contrary, has become more concentrated on fewer farmers as the average amount of loans shows, confirming the fact that this kind of credit is not feasible for small farming, at least as presently administered.

1.4.3-Rural Credit allocated to the different categories of farmers.

The fact that custeio credit has become less concentrated does not allow us to draw the conclusion that it has benefited more small farmers. The following table illustrates the situation of farmers with holdings of different size :

Table 1.3. Total Rural Credit: distribution by Farm Size.

	1982.	1983	1984.	1985.	1986.	1987.	1988.
Percentage of Credit							
Mini/Small	42	44	43	28	28	23	21
Medium	32	32	26	28	30	29	31
Large	25	23	30	43	42	48	48
Percentage of loans							
Mini/Small	86	88	85	81	77	77	73
Medium	11	9	10	14	17	17	19
Large	2	1	3	4	6	6	8
Average Value/Loan							
Mini/Small	11	7	9	9	9	7	9
Medium	66	51	42	54	46	42	53
Large	265	199	164	255	198	171	198
Average Values Yearly Increase rate:88/82.							
			mini/small:-3.4	medium:-3.6	large:-4.7		

Source: Bank of Brazil. Annual reports.
Values in CZ\$ million ,1985.

Note:1- The percentages shown above have been calculated only from data of the Bank of Brazil which is the principal source of rural credit and the only one which classifies credit loans according to farm size. The Central Bank has started to classify credit to producers by size recently (1987) including all sources of credit and the results of this classification are virtually the same as the Bank of Brazil's.

2-The above farmer categories were defined by the Central Bank (Resolution N°540,23/5/1979) with regard to yearly output values measured in MVR, which is an index (Higher reference value). The following are the brackets for each group of producers:

- Mini-farmer : output value below 200 MVR.
- Small-farmer: " " between 200 MVR and 600 MVR.
- Medium-farmers: " " " 600 MVR and 3000 MVR.
- Large -farmer : " " above 3000 MVR.

3-One MVR equals roughly to US\$ 20 (1988).

During this period, the ebbing supply of rural credit was shared between more farmers, obviously diminishing average loans value.

Despite the more restricted supply of credit large farmers' share of the total number of contracts has grown , passing from the 2% level to 8% while small farmers'

participation diminished even in the total number of contracts.

When the National System of Rural Credit was created (Law N° 4829, 5/11/1965) it assumed the commitment to "strengthen the economic situation of rural producers, mainly of mini, small and medium farmers" (item III), through the Bank of Brazil, which was in charge of fulfilling this obligation.

Nevertheless, as the table shows, the tendency over the last six years has turned in the opposite direction; that is, to lend increasingly larger proportions of credit to large farmers instead of the smaller ones as it was supposed to do. Large farmers have practically doubled (25% to 48%) their participation within the official credit, while small farmers' loans have been halved. (42% of total credit to 21%).

The average value of loans diminished for all categories, indicating that more farmers have been served but with less amount of credit. However, credit became more extensively distributed within the category of large farmers, as the following tables show.

Table 1.4 Rural Credit by Farm Size.

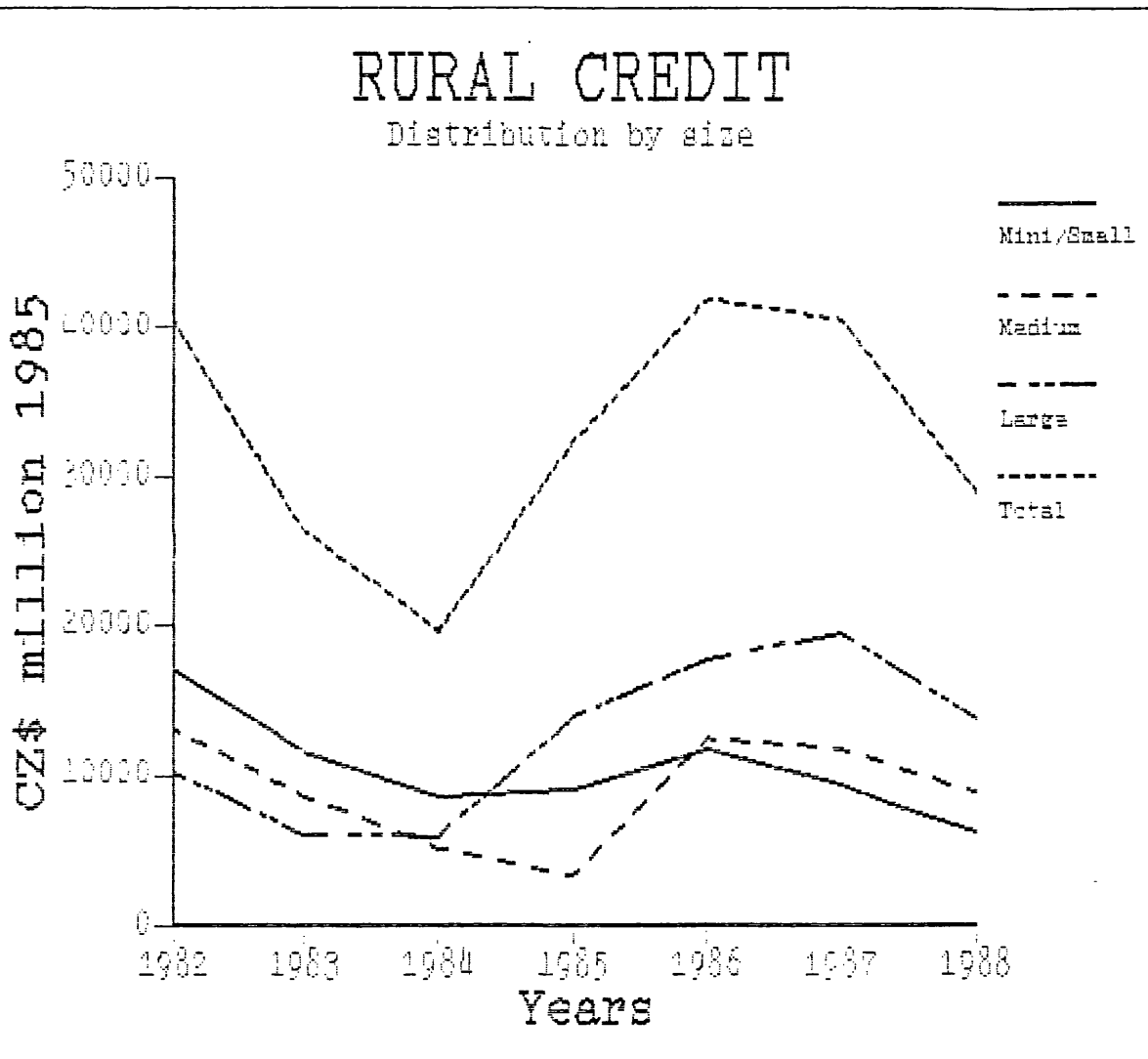
	Mini/Small		Medium		Large		Total	
	CZ\$	Var	CZ\$	Var	CZ\$	Var	CZ\$	Var
1982	17100		13106		10215		40422	
1983	11607	-32.	8659	-34.	6082	-40.	26348	-35.
1984	8535	-26.	5180	-40.	5991	-1.	19708	-25.
1985	9082	6.	3337	-36.	13940	133.	32360	64.
1986	11680	29.	12475	274.	17799	28.	41954	30.
1987	9315	-20.	11784	-20.	19472	9.	40531	-3.
1988	6250	-33	8916	-24	13852	-29	29018	-28
Increase rate(a/a)								
88/82	:	-15.4		-6.2		5.2		-5.3

Source: Bank of Brazil, Yearly reports.

Note: Values in CZ\$ millions base=1985, IGP-DI.

The categories are defined as in table 1.3.

Graphic 1.



Total credit supply has been cut down sharply since 1982 affecting most severely small farmers and, secondly, medium size farmers, whose yearly rate of increase is also negative. In fact, large farmers managed even to secure more credit during the period, both in value and in absolute number of contracts, as the next table shows:

Table 1.5 Number of Loans by Farm Size

	Mini/Small		Medium		Large		Total	
	Nº of Loans	Var	Nº of Loans	Var	Nº of Loans	Var	Nº of Loans	Var
1982	1472		197		38		1707	
1983	1558	6	169	-14	30	-21	1758	3
1984	961	-38	121	-28	36	20	1118	-36
1985	970	1	170	40	54	50	1194	7
1986	1214	25	268	58	90	67	1572	32
1987	1305	7	282	5	114	27	1701	8
1988	662	-49	168	-40	70	-39	900	-47
Increase Rate(a/a) 88/82:	-12.5		-2.6		10.7		-10.1	

Number of loans in thousands.

Source: Bank of Brazil, Annual Reports.

Therefore the idea of a supposed democratization of credit as a result of higher interest rates fails to reflect the reality of recent years. Actually, most large farmers accepted the new conditions of interest rates, augmenting their participation in the total amount of credit available at the cost of small farmers' participation.

Although it is true that commercial banks, and also the official credit system, prefer larger contracts to smaller ones, this can not be the only explanation of such a marked reduction in the small farmers' participation. In fact, high interest rates introduce a new and important variable, namely risk, to the agricultural business, and small farmers are much more sensitive to this than large farmers. These can usually draw on other resources, apart from their holdings, to face the consequences of a possible

bankruptcy. Small farmers are more "risk averse", because of their limited asset endowment, and thus prefer to reduce demand for credit rather than face financial disaster and lose their only source of subsistence. (2)

In sum, large farmers have increased their demand for credit despite the withdrawal of subsidies, contrary to the theory that states that higher interest rates would discourage large farmers from taking loans and thus credit would become less rationed. All the evidence shows the same outcome: large farmers' greater participation in the number of loans and in the total credit supply. Consequently, their participation in the number of hectares planted with the support of the official credit system also increased, as the following table shows:

Table 1.6 Total area covered with official credit (BB)

Year	Mini/Small		Medium		Large		Total
	Has	%	Has	%	Has	%	
1984	8518	47.5	4389	24.5	4938	27.5	17917
1985	7281	34.7	6245	29.8	7351	35.0	20942
1986	8685	28.9	9064	30.2	12167	40.5	29975
1987	7582	27.6	9095	33.2	10651	38.8	27389
1988	6216	22.3	9284	33.3	12298	44.1	27854
Increase							
Rate: 88/84	-7.5		20.6		25.6		11.6

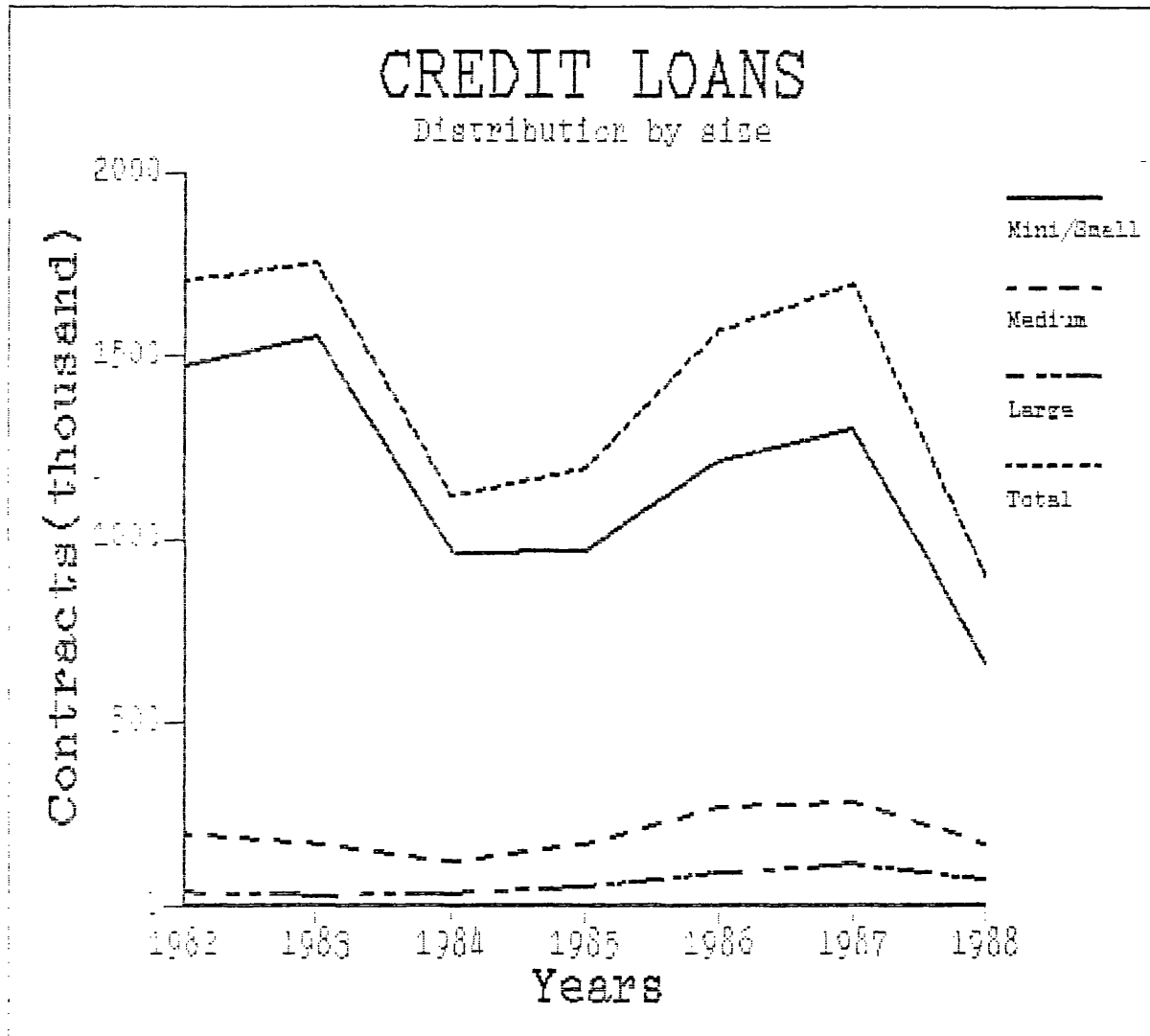
Source: Bank of Brazil, Annual reports.

Note: Sizes are expressed in 1000 hectares.

Total area includes pastures, crops and other rural activities.

(2) Inflationary rates of more than 200% a year and rural credit indexation at these rates, have required farmers to predict, before taking the loan, what will be output prices at the end of the harvest, and to make the calculations of their costs to be sure that they will be able to repay loans. Indeed, at this level of inflation, taking loans became a very risky activity, which most farmers were not able to manage properly.

Graphic 2



Although the total amount of credit available has followed a declining trajectory, the area it financed did not decline. In fact, it augmented in the same period for all categories, except for small farming as shown by the yearly rates of increase.

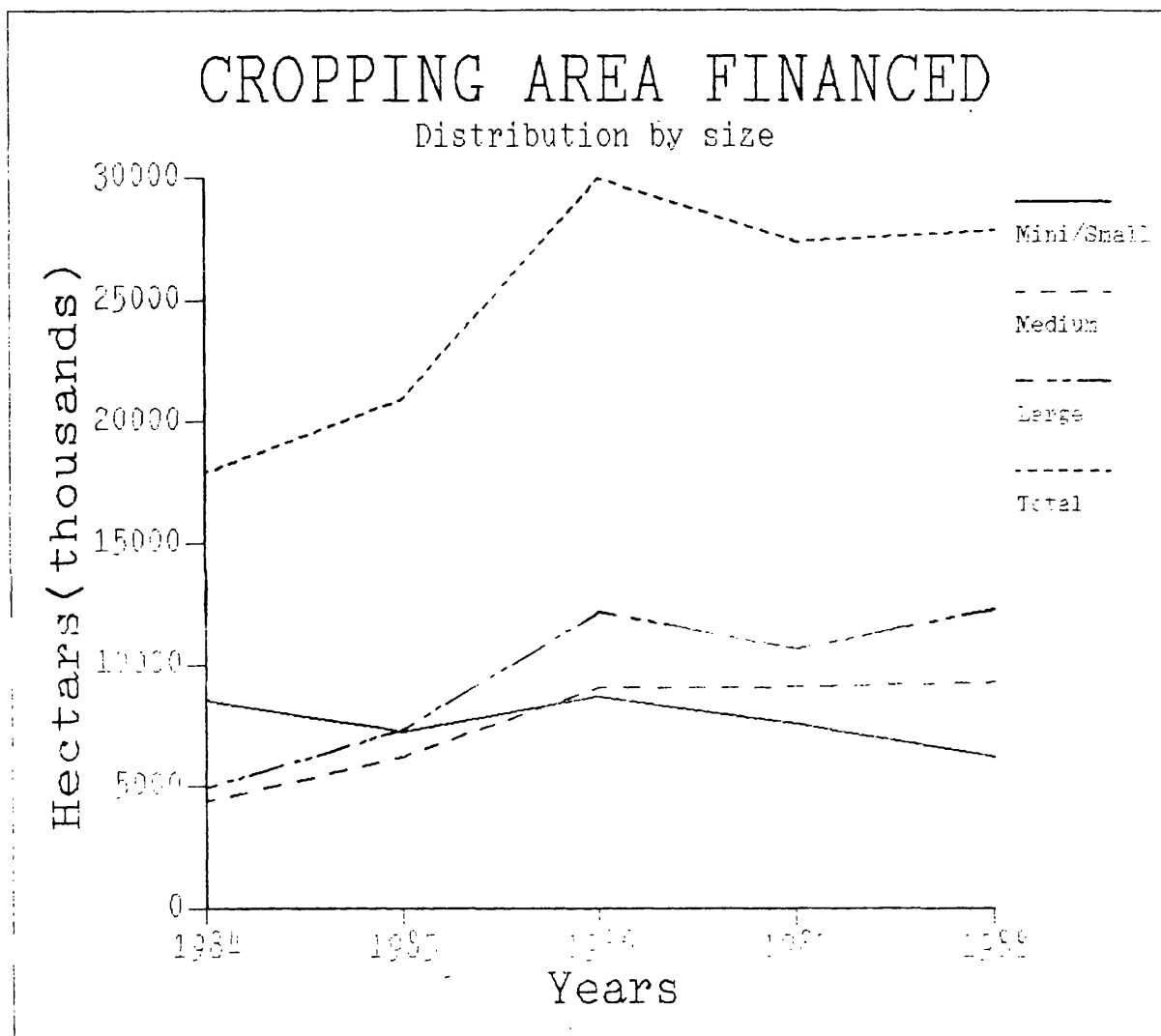
This paradoxical tendency has been explained by some authors (Kageyama, 1987) as a manifestation of the maturity achieved by the agroindustrial process, which, allegedly, have managed to invest their own financial resources in the cropping activity. Greater planted areas with fewer credit resources implies that farmers have applied less credit per hectare and more of their own capital. The fact that harvests have been quite successful in recent years and that the use of modern inputs has not decreased would appear to confirm this theory. At the same time, it is proof that the relationship between credit and production is quite complex.

Indeed, although credit has not had as major an effect on production as previously thought, large farmers still counted on credit to expand cultivation. Moreover, other policies such as minimum prices, devaluations and so on have been implemented during this period, possibly counterbalancing the effects of credit decline.

Certainly, the strongest consequences of the increase in interest rates were felt in the small farm sector, whose demand for credit fell in absolute terms.

It must be noted, however, that while the area planted with credit by small farmers was decreasing, the co-operatives significantly increased the areas planted with credit, passing from 772.000 has in 1984 to 5.832.000 in 1988. Although the data for co-operatives are not classified by size and therefore do not allow us to draw any definitive conclusion, it is possible that part of the area planted by small farmers was financed through the growing participation of co-operatives within the official system of credit.

Graphic 3



1.4.4-Rural credit according kind of output financed .

Concern about food production for the domestic market was one of the key questions which provoked the shift in the agricultural policies at the beginning of the 1980s ,on account of the food shortages which occurred in the late 1970s and in 1983. Although some efforts have been made to stimulate food-crops, the cropping profile , in terms of credit ,has not really changed during recent years, as the following table shows:

Table 1.7 Total Credit by product.
(Percentages per activity)

Year	A.	C	Soy-B	Coffe	Cotton	S. Cane	Beans	Rice	Corn
1980	81	19	16.7	10.5	6.8	4.4	3.6	10.0	8.3
1981	85	15	17.1	6.0	7.7	5.1	5.1	9.9	10.8
1982	85	15	16.8	8.1	7.9	7.9	3.4	9.5	10.0
1983	86	14	19.9	6.8	6.0	7.3	2.2	10.4	7.9
1984	89	11	19.3	5.8	8.6	5.2	2.9	11.9	9.5
1985	92	8	-	-	-	-	-	-	-
1986	80	20	12.1	3.7	7.3	5.9	3.2	11.3	11.7
1987	88	12	18.5	6.4	6.8	5.3	2.9	13.3	10.1
1988	90	10							

Note:A:Agriculture ; C:Cattle ranching.

Source: Central Bank ,annual reports.

In the wake of the foreign debt crisis, the Brazilian government was forced to export ,and hence ,it needed to stimulate especially production of tradable commodities,such as soy-beans,coffee for export, and also sugar cane as an import substitute (alcohol substituted for petrol).As the data above show ,the participation in total credit of these products has been maintained at the same levels ,or even increased as in the case of soy-beans ,which absorbs nearly 20% of the total credit.Rice ,on the other hand,has also been encouraged with more resources,mainly the irrigated rice sector which has shown higher rates of profitability in recent years.

At the same time ,increasing credit for these crops has been made possible at the cost of the falling share of livestock production.The percentage of credit for cattle-

ranching has been diminishing constantly since 1980, with the exception of 1986 when their former participation was temporarily restored. It must be recalled that during the Plano Cruzado period (3) livestock production fell sharply, threatening the anti-inflationary goals, forcing the government therefore to divert more resources to this sector. (4)

It is interesting to note that credit mechanisms have been used to change the crop mix, focusing preferentially on crops produced for the domestic and small farming. This can be illustrated by comparing the VBCs (custeio basic values) for beans and soybeans, as shown below:

Table 1.8 Proportion of Costs financed by the official rural credit system (VBC's) (*) by Farm Size.

	Mini/Small		Medium		Large	
	Beans	Soy-Beans	Beans	Soy-Beans	Beans	Soy-Beans
1981/82	100	100	70	70	50	50
1982/83	90	90	60	60	40	40
1983/84	90	90	60	60	40	40
1984/85	80	60	60	40	60	40
1985/86	80	60	70	50	60	40
1986/87	100	100	100	60	100	50
1987/88	100	100	100	70	100	50
1988/89	100					

Source: Instituto de Economia Agricola. Revista Prognostico 1982-1987.

Note (*): VBCs are the percentages of credit in relation to estimated production costs that can be allocated to each product.

(3) This programme of macroeconomic adjustment to control inflation was based on a price freeze, (including foreign exchange rates and wages) was introduced in February 1986 and abandoned in November of the same year. For further details, see next section in this chapter.

(4) Although the government has sometimes used its credit policy to promote exports, its main mechanism was the manipulation of foreign exchange rates. Just in the brief period of the aftermath of the Cruzado Plan (86/87), rice and corn were stimulated in order to supply the growing internal market, and thus to alleviate inflationary pressures. However the preceding periods and the following periods have been remarkably orientated towards exports.

Although the difference was narrowed slightly between 1983 and 1985, in general terms, priority has been given to domestic crops (beans) and small farmers, whose credit limits had been established always at higher levels than those for other categories. During the years preceding and following the Cruzado Plan, the government gave stronger encouragement to food production for the domestic market, as the following table shows in the case of the Centre-South of Brazil.

Table 1.9 Basic Custeio Values Centre-South (VBC'S)

	Rice	Beans	Corn	Soy-Beans
81/82	1989	3095	2350	2735
82/83	1988	2505	2138	2568
83/84	1904	2898	2162	2521
84/85	2213	3634	2496	3400
85/86	2538	3584	2889	3449
86/87	1662	2787	1686	2163

Source: Agroanalysis, October 1986, pg 2.

Note: Values are CZ\$/hectare constant to July 1986.

Although the harvests already mentioned (1985 and 1986) received increased amounts of credit, it did not result in higher production due to climatic problems in 1985/86, notably floods in the south.

Nevertheless as Table 1.7 has shown, farmers in general terms did not take too much notice of the government's recommendations and have insisted on taking more credit for the export commodities (with the exception of rice). Small farmers, pressed more severely by the higher interest rates, could follow neither the recommendations nor take advantage of their greater access to credit.

Therefore, production for the domestic market remained at roughly the same levels per capita of the beginning of the period, while export commodities showed significant increases, as the following table indicates:

Table 1.10 Agricultural Production
(millions of tons)

Product.	1980	1981	1982	1983	1984	1985	1986	1987	1988
1) Domestic Market.									
Rice	: 9.8	8.2	9.7	7.7	9.0	9.0	10.3	10.4	11.7
Potatoes	: 1.9	1.9	2.2	1.8	2.2	1.9	1.8	2.3	2.3
Beans	: 2.0	2.3	2.9	1.6	2.6	2.5	2.2	2.0	2.7
Manioc	: 23.5	24.5	24.1	21.8	21.4	23.1	25.6	23.5	21.7
Corn	: 20.4	21.1	21.8	18.7	21.1	22.0	20.5	26.8	25.2
2) External market									
Cotton	: 1.4	1.5	1.7	1.5	1.9	2.7	2.2	1.6	2.1
Cocoa	: 0.3	0.3	0.3	0.4	0.3	0.4	0.5	0.3	0.4
Coffee	: 2.1	4.1	1.9	3.4	2.8	3.8	2.1	4.2	2.7
Orange (*)	: 54.4	56.9	57.9	58.6	64.7	71.1	66.9	73.3	
Soy-Beans	: 15.2	15.0	12.8	14.6	15.5	18.3	13.3	17.0	18.1
3) Administered									
Sugar Cane (**)	: 1.5	1.6	1.9	2.2	2.2	2.4	2.4	2.7	2.8
Wheat	: 2.7	2.2	1.8	2.2	2.0	4.3	5.7	6.1	5.7

Source: IBGE, Yearly Estastistical Data.

(*): millions of units. (**): ten millions of tons.

Note: administered crops are those which benefit from special programmes, such as PROALCOL (Sugar and alcohol programme) or the wheat subsidized programme of prices.

Every single product in the second and third segments of the table increased significantly during the period. In fact these products were following other signals than the system of credit, mainly the higher international prices and the range of incentives to export which the government maintained since the previous harvest.

The export commodities are basically concentrated in the southern regions and, more recently, in the mid-west of the country. The following table shows the distribution of credit on the different regions of the country: :

Table 1.11 Total Credit distributed by Regions.
(Percentages per regions)

Year	North	Northeast	MidWest	SouthEast	South	Total
1980	3.0	16.6	10.5	34.1	35.7	100
1981	2.4	18.5	10.3	31.3	37.4	100
1982	2.0	14.4	10.3	34.8	38.5	100
1983	2.3	14.2	11.1	32.8	39.5	100
1984	1.6	13.7	13.0	31.0	40.7	100
1985	1.3	14.6	16.2	26.2	41.5	100
1986	1.8	14.2	18.1	28.2	37.6	100
1987	1.6	13.7	18.5	27.1	39.1	100
1988	1.5	13.5	18.0	20.0	47.0	100

Source: Brazilian Central Bank, yearly reports.

In recent years (1980-1988), when total credit have been more restricted , the available resources have become increasingly concentrated in the south and mid-west, the only two regions which have increased their participation. Resources to the North were halved and severely reduced in the Northeast and Southeast of Brazil.

As the data show , predictions about the possible effects of the higher interest rate policies have not been fulfilled. In fact , the hypothesis to which we referred initially , supposed that with higher interest rates more resources would be available for the rural sector , on account of an assumed increase in savings. Nevertheless , total resources have in fact diminished for investment and marketing and become more concentrated in the case of "custeio " activities

The model quoted at the beginning of this chapter also assumed that investment would become less capital-intensive since capital would be more expensive. The following table shows how investment credit was used in recent years:

Table 1.12 Investment Credit by Assets Financed.

Year	Permanent Crops.	Farm Improv.	Machine Equip.	Vehicle	Animals	Others
1980	20.7	38.1	31.1	4.4	1.5	4.2
1981	24.0	37.6	28.8	4.7	1.5	3.3
1982	12.9	43.8	33.5	4.4	1.4	3.8
1983	6.9	27.1	43.2	3.4	1.3	18.1
1984	10.6	29.7	51.7	2.5	2.2	3.3
1985	9.3	33.1	49.7	3.1	1.4	3.3
1986	5.9	46.2	42.8	1.0	0.8	3.2
1987	10.3	42.9	33.7	6.9	0.4	5.6

Source: Brazilian Central Bank, yearly reports/.

In fact it is not possible to draw any conclusion supporting that thesis (different factor composition) from these data. Apparently, farmers continued demanding credit to invest in machinery, much as they had done in the 1970s, not changing this pattern on account of the high interest rate policy. The only category of investment to fall was related to permanent crops, while farm improvements, machinery and vehicles increased. Input and tractor purchases have not declined as we see below. Therefore the idea that the modernization process could be halted, or even reversed, by curtailing credit is not substantiated.

In sum, the data on rural credit show the following tendencies:

- "Custeio" credit has not been reduced at the same pace as for other categories.
- Cropping activities have benefited relatively to cattle ranching in terms of credit.
- Total credit has become more concentrated, with increased large farm participation.
- More large farmers have had access to official credit, while fewer small farmers have demanded credit,
- The investment pattern remained unchanged, with still higher percentages allocated to capital-intensive methods of production.

-Credit remained concentrated in export commodities, despite the signals transmitted by the official credit system(VBC's).

-The available credit has been directed to the southern regions and the mid-west.

The combination of these tendencies has allowed the financing profile of southern large commodity producers to remain practically unchanged , if compared with the 1970s.

These factors certainly have contributed to the achievement of larger harvests and the so-called "agricultural success " of the 1980s. Although the agroindustrial complex has participated within this process with their own self-financing capacity, the official credit system still has had an important influence in the 1980s.

1.4.5-Terms of payment of the rural credit system.

As we already pointed out, the monetary authorities and the ministries in charge of agricultural policies have decided to undertake a "gradual elimination of the credit subsidies" so as to alleviate the pressure on public finances. During most of the 1970s , loans carried barely 15% indexation, despite accelerating rates of inflation by that time. The new measures were based on the assumption that these subsidies, and rural credit itself, have not fostered total production and therefore its withdrawal would not drastically affect the sector, which was considered to be sufficiently capitalized to face the change.

In fact, the complete withdrawal of all subsidies only became a reality after 1987 , as the following table shows:

Table 1.13 Percentage of Indexation and nominal interest rates charged on rural credit.

Date	Indexation Rate			Special regions	Interest
	General rate	(*) Credit for Small Investment farms	(**)		(***) General Rates
01/07/1980	60	(*)	40	40	5%
17/12/1980	45	35	45	45	"
22/12/1981	45	35	35	35	"
16/12/1982	60	35	35	35	8%
09/06/1983	85	70	70	70	3%
09/06/1984	100	70	70	70	3%
10/12/1984	100	80	80	85	3%
1985	100	85	85	85	3%
01/01/1986	100	85	50	85	3%
22/01/1986	100	35	35	65	3%
06/03/1986	-	-	-	-	3%
15/05/1986	-	-	-	-	10%-
01/07/1987	100	100	100	100	9%
1988	100	100	100	100	"

Source: CFP, Estudos Especiais, Vol 21-Set 1987.
Brazilian Central Bank: Resolutions N°: 1350.

Notes:

(*) These rates applied only for small farms.

(**) Special regions: Amazon (Sudam area), Northeast (Sudene area), Espírito Santo and Vale do Jequitinhonha.

(***) These are annual rates of interest.

Obs: - Indexation rate is the percentage of the annual rate of inflation that will be used to calculate the amount of capital to be re-paid.

The table shows that non-targeted farmers (General rate apply namely to large farmers in the south) lost their access to credit subsidies before the other categories. The 1983/1984 harvest had to be planted within the new system of almost complete indexation, and credit for the next two harvests suffered full indexation. Small farmers, although with increasingly higher percentages of indexation, remained partially subsidized until 1987. The other two special systems (for investment and for special regions) also maintained relative subsidies until 1987.

The new government elected in 1985 was firmly decided to eliminate subsidies on credit. Nevertheless, in the

following year (1986) the Cruzado Plan carried out a currency reform and implemented a complete price freeze, aiming to halt the inflationary process. Within the package of fiscal measures, the government included the elimination of any kind of monetary indexation on contracts after 28/02/1986. Therefore, rural credits in that year were charged only at a fixed interest rate equal to 10% for large farmers (8% for small, 3% for special regions). However, since the Cruzado Plan failed to hold inflation at low rates (at the end of the year the accumulated rate of inflation had reached 100%) and loans were not indexed, the subsidy turned out to be higher than ever before.

On the other hand, although indexation rates were gradually increased, the nominal interest rates charged in excess of that indexation were not representative of the free market rates. The following table taken from an official publication (IPEA), shows to the extent to which farmers were still being subsidized during the eighties:

Table 1.14 Difference Between IGP(Inflation) and Official Interest rates for rural credit

	Priority Regions	Municipalities /Drought	Rest of the country
1980	72.0	-	69.2
1981	81.0	-	75.0
1982	60.0	-	50.0
1983	68.6	112.3	43.0
1984	143.7	159.9	127.9
1985	18.2	56.3	3.9
1986	4.5	10.9	0.2

Note: Priority regions: Amazon, Part of the Northeast (Sudene) and Jequitinhonha Vale.

Source: IPEA (Institute of Economic Planning), Dados Cojunturais, May 1987. Special Edition.

The report concludes that : "subsidies have been superior to 40% between 1980 and 1985, being more than 100% in 1984.....in this way it was possible to offset the fall in prices through the cost reduction which occurred via subsidies.....It is possible to say that this kind of policy, during a period of limited credit availability, has had strong income concentrating effect, especially favouring large farmers who are always benefited more from subsidies" (IPEA, 1987, pg 20). Furthermore "the agricultural sector became viable during this recessionary phase due to the subsidies" (Ibid, pg 21). In fact, just when subsidies were really being cut, at the beginning of 1986, the Cruzado Plan ushered in a new period of huge subsidies. The following table shows the impact of this transfer of income in the 1986/87 harvest:

Table 1.15 Net Income and Income Transfer. Midlands and South. 1986/87 Harvest.
CZ\$/Hectare

Product	Net Income		Self Financing Capacity	
	With IT	Without IT	With IT %	Without IT %
Cotton Irrigated	3119.7	800.4	27.4	6.0
Rice	6049.1	3168.5	67.4	35.3
Dry Ground Rice	371.9	(701.2)	12.3	(23.8)
First Beans Harvest	21.4	(285.8)	0.1	(15.1)
Corn	1229.7	298.7	37.6	9.5
Soy-Beans	2329.5	1260.9	54.1	29.4

Source: Extracted from CFP(1988-b) pg 73. CZ\$ constant July 1987.

Note: IT: Income transfer provoked by credit subsidies.

Self Financing Capacity: this index reflects the farmers potential own resources obtained from one harvest to finance the next.

$$= \text{Net Income}_{c,t-1} / \text{VBC}_{c,t}$$

These data show the impact of subsidies, (income transfers) on net income and on the farmers' self-financing capacity. Credit subsidies have certainly increased farmers income, and some products, such as dry ground rice and first harvest of beans, have even become economically viable, thanks to the subsidy. Nevertheless, if the subsidy had not existed, producers of most products could also have afforded to self-finance their production costs and to generate positive incomes. The most remarkable examples are given by soy-beans and irrigated rice which appear in the table as profitable products even without the subsidy.

If, as the data reveal, agricultural production was profitable without the subsidy, it is possible to argue that these subsidies were absolutely unnecessary or, at least, could have been restricted to traditional deficitary activities or only to small farmers. Nevertheless, the subsidy conceded in the 1986/87 harvest was involuntary and unintended, appearing as a consequence of the failure of the anti-inflationary plan and not as an explicit agricultural policy.

Other sorts of incentives and subsidies were maintained, or even developed during this period, as Martine (1989) clearly explains: "the greatest growth of the period was registered by sugar cane, protected by the multiple mechanisms of the PROALCOOL, and wheat, soy-beans, cocoa, cotton, and oranges, all encouraged through the foreign exchange policy" (pg 8).

Nevertheless the large harvests after the Cruzado plan (1987/1988 and more recently 1988/1989) have not been really fostered by credit subsidies.

Finally it has to be recognised that small farming has enjoyed preferential conditions in terms of interest rates and indexation charges during this period. Although total subsidies have been withdrawn more gradually from this sector than others, they apparently have not been able

to take advantage of this situation, insofar as total credit allocated to the small farm sector has diminished. In all probability, the increasing indexation of loan contracts, although not fully reflecting market rates, restricted small farmers' demand for loans. An alternative explanation for their reduced participation within the credit system can be found, as Martine (1989) argues, in the fact that scarce credit resources have been rapidly absorbed by large farmers who, furthermore, had easier access to commercial and official banks.

To understand the changing conditions of the eighties it is necessary to consider some of the political determinants in more detail. In the next section raise some of these issues which, in our view, underlie agricultural policy of the eighties.

1.5- IMPLEMENTATION OF THE NEW AGRICULTURAL POLICY.

As we said above, most explanations of the launching of the agrarian reform and the failure of its implementation have been couched mainly in "classical " terms; that is, the analysis of the balance of power within rural areas and the urban sectors. However, such analyses focus mainly on the political struggle around the issue of land distribution. In so doing, they ignore the important point that the reformist project also embraced other far-reaching targets, namely, measures to complement the modernization process of the 1970s, or even correct its bias towards large landowners. This "project" although never implemented, reflected the need to resolve some of the problems inherited from several years of accelerated agricultural modernization.

Nevertheless, the attempt to improve conditions under which small farming is integrated into the market happened in the context of a severe economic crisis and a restrictive agricultural policy, which, as we showed above, was being purged of credit subsidies and other incentives.

The mixture of restrictive credit policies and liberalization measures, on the one hand, and, on the other, reformist projects, generated a remarkably confused and unstable conjuncture. Between 1985 and 1987 the government launched two strategic policies: the Programme of Agrarian Reform in October 1985 and the Cruzado Plan in February 1986.

As we show below, it is important to examine the interactions between these two major policy initiatives. This follows from the profound effects of the Cruzado Plan on the agricultural sector and, thus on the political balance of power in relation to the reformist process. In order to understand how the government's project to develop small farming was defeated, and the subsequent re-articulation of the dominant classes in opposition

both the reformist process and the more liberal ,market-oriented agricultural policies,we briefly summarize the main events preceding the announcement of the Cruzado Plan.

1.5.1. Inherited agricultural problems and the Cruzado Plan.

In 1984, before the end of the military government, the co-operatives and small farmers in the South organized a massive protest against the agricultural policy adopted in the first half of the decade .The protest, called "O Grito do Campo" , gathered several thousand farmers ,who addressed their demands to the government ,such as :return to the system of low interest rates,increased public funds for agriculture and better minimum prices.

In fact, high interest rates had seriously affected some sectors in the South,sharply increasing operating costs,which many producers were unable to assimilate.Apart from this immediate problem,farmers were attempting to restore subsidies and the role of the state in the agricultural policy.This protest was addressed by the presidential candidate, Mr. Tancredo Neves(who was later elected),and apparently influenced the elaboration of his future strategy for agriculture .

In his speech , he said that the former government had left the agricultural sector "with huge interest rates and limited credit",and that the privatization of the credit system had "withdrawn resources basically from the small farmer, who was responsible for food production"(Indicador Rural,1984,pg 6).To cope with this situation he promised to :1)give priority to food production ,2)restore credit subsidies,3) significantly increase official credit supply,4)establish "realistic" prices ,5) promote the use of modern inputs to increase productivity,6)enhance exports whenever these did not

endanger domestic supply, and 7) to distribute land among those who needed it.

In fact, the government inherited some conjunctural problems which required specific treatment, apart from the issue of structural change. Agricultural market prices were highly unstable and sharply reduced in some cases, while in 1985 the government was compelled to import additional food supplies. This State intervention in the market limited the effects of shortages on consumer prices, but at the same time introduced a new element of tension in its relationship with farmers.

Sales from public stocks and food imports pushed prices down just before the announcement of the Cruzado Plan, which introduced a complete freeze on prices. In that sense, the 1985 measures can be considered as the "Pre-Cruzado" plan for the agricultural sector. The price freeze policy profoundly affected relative agricultural prices and the relationship between this sector and the agroindustrial sector. (Guanziroli, 1986). Some prices had risen more rapidly than others before the plan was introduced. For example, meat and coffee prices were at high levels and corn, wheat, orange, beans, soy-beans prices were reasonable. Nevertheless, other products, such as rice, milk, cotton, pork meat, chicken and sugar cane, had been relatively depressed before the plan. Swine, chicken and milk production was practically paralyzed following the announcement of the Cruzado plan due to the squeeze on producers' returns imposed by the price freeze.

Moreover, the Cruzado Plan disrupted intersectoral relationships, and notably those between agriculture and the agroindustrial sector. The government delayed in announcing a proper list of input prices on the misplaced assumption that, if consumer prices were frozen, then intersectoral prices would adjust automatically. However, in the absence of an official list, control of input prices fell into the hands of agribusiness. Farmers were supposed to bargain over input prices with agroindustrial manufacturers, using their purchase invoices as the basis for setting current prices. Although large farmers and co-operatives made some arrangements to resolve this problem, the task became absolutely impossible for small and medium farmers, who usually do not keep, or are not provided with, legal invoices by the industries. In our view, this was one of the weaker points of the Cruzado Plan. Similarly not to allow the normal seasonal fluctuation of prices, created another problem for the government. Some sub-sectors, like horticulture for instance, whose products are more perishable and therefore more variable in terms of price, were severely affected by the idealistic full price freeze policy. Insofar as foreign exchange rates had also been frozen, the foreign trade sector began to lose international competitiveness. Although some farmers shifted towards the internal market, most of them did not believe in the success of the plan and preferred to put pressure on the government to liberalize the exchange rate.

Despite these negative aspects, the Cruzado Plan also had some positive consequences for agriculture at least temporarily. With the end of the monetary indexation of contracts, financial assets had become, for the first time in the decade, less attractive than investment in

productive activities. This gave an important boost to investment, mainly in machinery. At the same time, resources held in long-term saving accounts were transferred to current accounts, increasing banks' cash deposits. Since private banks, in Brazil, are obliged to lend a fixed proportion of their current accounts assets to the agricultural sector, the availability of agricultural credit was automatically increased.

The aftermath of the plan's announcement was characterised by the euphoric demand for inputs and all sorts of agricultural equipment. Farmers had decided to withdraw savings from the banks (due to the elimination of indexation on contracts) and to apply these productively. Within this context of euphoric expectations for the next harvest and the soaring demand for food, the economy meanwhile had to absorb the effects of the previous harvest which, as we saw above, had been very poor. Consequently the government resorted again to huge imports of food, mainly rice and meat.

Cereal growers protested strongly against the importation of food, arguing that government stocks were adequate, and therefore imports were redundant. Apparently, the government overestimated the extent of the last crop failure as a consequence of the dramatic information given by southern farmers in the middle of the summer. According to the government, farmers exaggerated the crop failure for two main reasons: firstly, to receive greater compensation from the crop insurance institutions (PROAGRO) and, secondly, to push prices up.

Consequently the government made "unnecessary" imports of food, aggravating still further the anger of farmers against the government and all its policies, including agrarian reform. (5)

(5) In the case of beef, the government had to cope with a boycott by cattle ranchers who reduced the total slaughter of cattle by 70 % in July 1986. This action seriously threatened the future of the programme and the government applied further measures against them, such as the release of meat imports free of taxes, suspension of transactions in the meat futures markets, suspension of meat exports, blocking of credit to this sector and, finally, the official seizure of cattle from ranches in São Paulo. Nevertheless, the situation only returned to normal when the price freeze policy was relaxed.

By mid-1986, the government faced opposition from another sector as a consequence of its policies: the coffee producers. The Brazilian Institute of Coffee (IBC) had made an agreement with Colombia, called the "Patricia Operation" to raise the international price of coffee by purchasing large amounts of this product simultaneously in New York and London. Apparently, Colombia did not respect the agreement and coffee prices fell sharply instead of going up as planned. The cost of this "operation" was approximately US\$200 million, and was shared between several Brazilian exporters and the government but, as the operation failed, the exporters began to claim their money back.

Apart from losing money, the falling prices severely damaged coffee producers, who are in part small farmers (ES, RJ.). They blamed the government for the damage and began to join the other farmers who were protesting against it.

For more information see Indicador Rural, 1986-b- pg 19; 1987 -b, pg 15.

In November 1986 ,in the aftermath of the nation-wide municipal elections,the government launched the second Cruzado Plan ,called Cruzado II,which was meant to alleviate problems created by the Cruzado price freeze policy .Prices had risen despite the first plan, and thus the government had to act again to halt inflation.The price freeze policy, although slightly relaxed ,was maintained ,but official interest rates were set free to follow market rates.

Inflationary expectations and high market interest rates meant that the loans farmers had taken from the private sector in the wake of the first Cruzado Plan would now suffer new indexation procedures and expose them to dangerous indebtedness.

This problem might have been attenuated by the government's minimum price policy if it had been properly executed, as Melo (1987) points out," the government failed to elaborate the new index in time .Despite its introduction in August 1986, the index(Index of Prices Paid) was only announced officially in February 1987 ,leaving farmers in the meanwhile without any explanation for the delay,and hence very distressed and irritated"(ibid 119)..

The last straw for the farmers was the decision to make the payments related to public wheat purchases(AGFs)) in three installments without indexation .This measure seriously depressed farmers' expected income,affecting no only large but also small and medium farmers.

Insofar as all these measures adversely affected small farmers, outweighing the beneficial effects supposedly associated with the Programme of Goals (6) and the agrarian reform, they again (remember the "Grito do Campo", October 1984) joined large farmers in a massive demonstration against the government's policies, including this time also the most fervent enemies of the agrarian reform process, the UDR.

This movement chose the name of "The Broad Agricultural Front" (Frente Ampla da Agropecuária) to reflect the different sectors included: UDR (Democratic Rural Union), CNA (National Confederation of Farmers), SRB (Brazilian Rural Society), SNA (National Agricultural Society), OCB (Brazilian Co-Operatives Organization), on the side of the large and medium farmers, and FETAG (Agricultural Workers Federation) on the side of the workers and small farmers. The protesters held several demonstrations with tractors and machinery in different parts of the country, ending with a big demonstration in Brasilia on 10/03/87. They presented all the farmers' problems, from those associated with the Northeast's drought to the coffee producers' indebtedness. Some of their claims were general, such as the immediate indexation of all prices, an end to food imports, export of surplus food imports (rice and corn), lower interest rates, more credit for investment, and increases in the public purchases of coffee (because of the failed "Patricia Operation").

(6) This programme (July 1986) aimed to increase food production by giving more credit and better minimum prices to small and medium food producers. Moreover, it recommended the creation of financial institutions within the agricultural sector in order to attract rural savings, which would be used to finance the rural sector itself.

After some negotiations ,in which the UDR, the most aggressive and right wing organization ,seized the leadership of the movement,the government accepted most of their demands .This victory also led the government to abandon the "Programme of Goals " ,since it was forced to index all prices(and not only food products as it stated in the plan) .As Melo (1987,pg 120) points out, this change meant the end of any rational attempt to give priority to food production.Despite the already adequate returns associated with export commodities, the government was forced to favour these products through the minimum price policy ,thus generating an important new subsidy .

A further government concession was its agreement to write-off part of the farmers' debts.In fact ,thanks to this amnesty , the UDR gained more support from small farmers in their struggle against the implementation of the agrarian reform programme, and therefore against the new agricultural policy.By that time, the programme of agrarian reform had been practically demobilised and these conservative sectors had taken the offensive .The so-called heterodox polices of this period and their counterpart policies in the agricultural sector subsequently were replaced by more orthodox economic policies and new policymakers in the government.

Despite these government concessions ,the farmers' organization (FAA) made still further demands ,including higher minimum prices ,and complete elimination of all traces of left-wing participation in the government.In the wake of this process, they also attempted to destabilize the BNDS(Social and Development Bank) and its social policies towards small farmer communities.

The government ,however , decided to put an end to these demands because, as the minister said "The minimum price policy is to guarantee farmers against losses, profits must be found in the market "(Rezende Iris,1987).The government conceded neither the 300%

indexation of prices nor the removal of BNDS' managers. At least with the maintenance of the BNDS, the government retained some of its original social policies for the agricultural sector, such as the possibility of financing agrarian reform settlements (PROCERA, see Annex 5.3), community storage, irrigation works and school lunch programmes. The foregoing analysis of this period (1985-1987) brings together the key elements which provide the context for the launching of agrarian reform.

The announcement in May 1985 of the Agrarian Reform Proposal, which caught most landowners and big farmers off guard, came at a very special moment for the agricultural sector. Most farmers in fact were expecting other "positive" changes in agricultural policy, like the restitution of subsidies, more credit and better prices (Grito do Campo). It is worth remembering that international prices were very depressed and credit had reached the lowest level in the decade (See Table 1). In that sense, agrarian reform sharpened the contradictions between the government and farmers, who felt that they were under attack on all fronts simultaneously. Apparently, the announcement of the reform proposal was used by Sarney (the vice-president) to gain popularity. He strongly needed to reject the image of being just a continuation of the military regime.

Although the landowners' response was mainly political, they also took some measures to prove that their lands were not idle, such as bringing some areas rapidly into cultivation and increasing productivity in the already planted areas.

The Cruzado Plan, and particularly its price freeze policy, was effective only in controlling farmgate prices rather than input costs, thus worsening the farmers' mood in relation to the government. Irritation among large farmers and cattle-ranchers was growing rapidly because, for the first time, they had lost the power to elaborate

the agricultural policy. Other government mistakes complicated the political scenario, making implementation of the agrarian reform programme more difficult. The incapacity of the left wing sectors to link agricultural issues with the land reform issue itself even led small farmers to support large farmers in their struggle against the government.

By that time, the lack of political will on the part of the government became clear. The Programme of Goals introduced in 1986 excluded "Agrarian Reform" both as part of agricultural policy and within its structural investment programme. A tiny reference to this issue appears in the chapter on social priorities, which also refers to such programmes as school meals, and food aid to poor people. The omission of agrarian reform from the Programme of Goals emphasises that this issue, in fact, was not even regarded as being complementary to agricultural policy.

It must be noted that the agrarian reform programme, as originally conceived, did exactly the opposite. That is, it placed agricultural policies in a complementary position to agrarian reform, along with other programmes, such as irrigation and colonization. Therefore the split between agricultural policy and the agrarian reform was total.

In our view, this apparent paradox of having two different policies for the agricultural sector was felt only in government circles. Large farmers' organizations regarded both plans as the same thing, that is, as a shift towards a new agricultural policy integrated with agrarian change, and therefore they started to attack every single aspect of the government's ideas. The following passage from the Indicador Rural (1987-c-) reflects very well the general mood among landowners by that time: "Large farmers did not like the government's change of language; in their view, the government should not talk about export agriculture

and internal market agriculture, or of large farmers and small farmers, it should just talk about agriculture in general terms" (pg.2)

1.6. CONCLUDING REMARKS:

The eighties has been characterized by some authors as the "lost decade", on account of the lost opportunities for development and social welfare. Although economic performance was poor, the analysis of this period reveals crucial issues which reflect the kind of transition Brazil was undergoing.

At the beginning of the "1980s", the traditional model of import substitution started to show signs of stagnation, posing the question for some economists of the model of economic development Brazil should adopt. The agricultural sector had previously played an important role in development, by transferring capital and labour from rural areas towards industry, and also through lower food prices, which allowed urban sectors to reproduce the labour force at low cost.

The model of import substitution, complemented by the "Ricardian" transfer of resources, via prices, from rural areas to the urban sector has indeed boosted industrialization during a quite considerable period of time. Nevertheless, when the urban sector exhausted its capacity to absorb the continuous waves of workers coming from rural areas, and the agricultural sector began to show problems of supply, on account of its diminishing rural population and low prices, the whole model has stagnated.

In fact, it is possible to describe this situation as

a typical "perverse Ricardian model", which played its role of transferring resources, via low food prices, but failed to increase simultaneously the demand for labour within the urban sector. The real Ricardian model would have made use of lower food prices to broaden industrial capacity, hence increasing demand for labour. But, as de Janvry (1981) explains, the income distribution profile of most Latin American countries has prevented its economies from making the transition to broadly based consumption, leading to "disarticulated patterns of development", which allow only its elites to share the benefits of the development process.

The agricultural sector itself started to impose barriers to such accumulation. As Kageyama et al (1987) points out, "The very transformation of the technical and economic base of the Brazilian agriculture changed the process of price formation, which became more rigid. Farmers do not accept prices lower than their costs plus a profit rate, because they must remunerate the capital engaged on production" (pg 114.).

The changing conditions of agricultural policies since the beginning of the decade reflected this process. The main characteristics of this decade are the following:

- Increased economic instability, and therefore profound instability in the implementation of the agricultural policies.
- Priority for short-term policies in order to cope with the macroeconomic constraints (foreign debt, inflation).
- Partial application of the liberal recipe, basically with the elimination of credit subsidies, the constant devaluation of the local currency, and the creation of self-financing possibilities for the agricultural sector.

During a brief period of time (1986/1987), the government attempted to re-direct the agricultural policies to achieve greater food production for the

internal market.

The attempt to combine the withdrawal of subsidies to large farmers with some structural policies like agrarian reform, however, produced a striking reaction within the agricultural sector, mainly from large farmers.

It must be recognised that the government's successive mistakes - the absence of lists of input prices during the Cruzado Plan, the failure of the coffee operation, the delay in the announcement of price indices and, lastly, the delay in rescinding its price freeze policy, have combined to irritate farmers increasingly, and probably unnecessarily .

Nevertheless, large farmers were resisting the underlying policy and not only the government's mistakes. The withdrawal of credit subsidies took some time to be assimilated by large farmers and, furthermore, it has to be negotiated with other compensatory mechanisms, such as minimum prices and mini-devaluations.

The programme of agrarian reform was announced in the wake of a very delicate political and economic situation. It happened at the beginning of the process of transition to democracy when important aspects of the power structure still needed to be carefully negotiated , and also when farmers were expecting very different policies, basically the alleviation of their financial situation after three years of credit shortages and high interest rates.

Further problems affected the implementation of this programme (agrarian reform), mainly those concerning its own internal contradictions and ambiguous intentions.

This is not to deny the ideological reaction which came from large owners and big cattle-ranchers to the programme, which would occur anyway , independently of the government's qualities . However, the lack of articulation of the agricultural policy with the agrarian reform programme, and also the instability which characterized all its policies have not facilitated the process.

The ups and downs of agricultural policy in the 1980s also reflect a phase of transition, in which no alternative model has yet been definitively established and, a mixture of policies has been applied. Liberal policies to accelerate Brazil's integration within the international markets have represented the mainstream in the 1980s, but these policies were introduced without any important preoccupation with the social side, nor with the integration of small farming into the market.

In our view liberal policies might have a positive impact on income distribution if it is possible to implement them totally and for a long period of time. The implementation of these policies ought to be combined and reinforced by measures to resolve the most important structural problems, such as land concentration, education, rural research, irrigation works, storage facilities, etc. Nevertheless, the solution of these issues requires federal intervention and credit subsidies for small farmers until a greater pattern of market integration is achieved in the rural areas.

Both policies (liberalization and structural intervention) are not contradictory, on the contrary, they can be complementary. For political and social reasons, it would be practically impossible to introduce the liberalization policies without social compensation (and thus structural intervention). Similarly, in order to implement social reforms, it would be necessary to allocate to this sector some of the financial resources which were previously channeled to support prices and subsidise large farmers.

In the meanwhile, the large-owners struggle shows the difficulties of implementing both the liberal policies and the structural reforms in countries like Brazil, where business men and enterprises are strongly used to depending on the favours of the state.

In our view, structural problems, namely the question

of small farm integration into the market will reappear in the near future ,for several reasons, such as:

-The lack of demand for labour in the urban sectors will not be overcome in the near future because of the profile of the industrialization process followed in Brazil (highly capital-intensive).

-The maintenance of commercial agriculture (for exports) requires permanent subsidies due to the low rates of productivity in Brazilian agriculture, which otherwise could not compete internationally.

-The same low level of productivity (Annex 1.2) allows the development of small farming in different areas of the country where it is not necessary to achieve high levels of economies of scale.

-Still today an important portion of national food supplies comes from small farming, and thus governments need to rely upon this sector to guarantee the urban provisioning of food.

-The liberal approach, rooted in the idea of the scarcity of capital and the abundance of labour and land, poses the question of the role of small farming in an improved allocation of scarce resources..

However ,the solution to this question will depend basically on the balance of power within the agricultural sector and also within the society, which would have to define more precisely which sector ought to be subsidized in the future.

CHAPTER TWO

AGRARIAN REFORM IN A CONTEXT OF AGRICULTURAL MODERNIZATION.

2.1-INTRODUCTION.

In October 1985 the Brazilian Government announced its first National Plan of Agrarian Reform (PNRA ,decree N°91.766) following wide ranging debates and innumerable proposals from different sectors of society during the previous months. In the first section of this chapter ,we examine the conjunctural circumstances which gave rise to the PNRA, the mobilization of counter-reform groups , and the slow implementation of the new land reform measures .The second section summarizes some controversial issues of the plan raised by different authors who have analysed the process of land reform in Brazil .The third section considers the place of agrarian reform within the current process of agricultural modernization in Brazil .The concluding section evaluates the prospects for agrarian reform in the present situation and the new proposals which have appeared incorporating the balance of the recent experience.

2.2-POLITICAL DEVELOPMENTS IN THE (COUNTER-) REFORM PROCESS.

The struggle of rural workers for more equal access to land, social justice , and the ideal of land reform have marked the political history of

Brazil. The main turning points of this history happened in the fifties with the creation of the first National Union of Rural Workers (ULTAB) and in the sixties with the development of the Peasant Leagues. The 1964 military regime conducted a repressive campaign of intervention and persecution of the state federations and local unions, disrupting the movement towards land reform of that time.

The history of these movements and their proposals of agrarian reform have been studied in depth by several authors (Medeiros, 1989; Martins, 1981; Camargo, 1981). For this reason, we will concentrate on the current political process of land struggle (1984-1989).

The Plan of Agrarian Reform announced by the "New Republic" in 1985 is a continuation of the route chosen by the military government after 1979, when the process of agricultural modernization began to show signs of exhaustion and financial crisis. From that time onwards, rural conflicts started to develop widely all over the country assuming progressively more violent and effective methods to take over land. Although in the early eighties, agricultural policies had shifted slightly in favour of small farmers, as we analysed in the previous chapter, this did not prevent the conflicts, which were mostly related to land issues. In 1983, president J. Figueiredo created a Special Ministry For Land Issues (Ministerio Especial para Assuntos Fundiários, MEAF) in order to handle land conflicts. In a short span of time (1983-1985), this ministry managed to give an impressive number of land titles to peasants, and to regularize legal and illegal occupations, surprising even some sectors of the church. (Ribeiro, I. 1987)

However, by the time the "New Republic" took power, the agrarian crisis was overtaken by an agricultural crisis of an insufficient supply of food for the cities. According to Da Silva (1985, pg 6) the process of agricultural modernization, instead of solving the

agrarian question of the 1960s, had worsened it in the 1970s. It is now exacerbated by waves of rural workers looking for employment in the cities, exactly when expansion in urban employment has diminished.

Therefore the Plan of Agrarian Reform announced by the civilian government of President J. Sarney could not restrict itself to the mere continuation of the MEAF's goals of regularization of conflicts, because the crisis was not only rural; it has spilled over into the cities, threatening the urban standards of living with the proliferation of favelas and all sorts of criminality and violence.

The idea of announcing a "Plan" and not just the continuation of measures to handle rural conflicts was an attempt to cope with several problems. Although some authors (Sandroni, 1986) have emphasised only the aspect of the plan to alleviate social tensions, the first proposal (May 1985) also aimed to increase food production, create new employment in rural areas (settlements) and reduce rural exodus. The definitive plan (October 1985) is more explicit on the issue of food production but also stresses the need to achieve "social peace" in the countryside. It predicts positive impacts on the urban question via reduction in the number of migrants from rural areas.

In May 1985, the government opened to public debate its Proposal of Agrarian Reform, which aimed to expropriate 43 million hectares in order to settle 1.4 million people in four years (1985-1989) and thus attain the goals of social justice and social peace stated above. Some authors (Grzybowski, 1987) see in this decision - which allowed some months for suggestions and counter-proposals to be made - as a major tactical mistake or concession, which gave the opposition time to mobilise and sabotage the reform process. Although the PNRA formally requires only an executive decree for implementation, in our view, the

tactical mistake was in not sending the plan immediately to the Parliament for discussion. In a democracy, the elected representatives should be able to analyse all presidential procedures. The final decision probably would have been better supported by the political parties if the congressmen had debated and backed the project. Since they were not consulted, at least formally, the decision on this controversial issue was left to the so-called "civil society" which, in fact, was polarized between both extremes: pro-radical agrarian reform and counter-reformists.

The proposal also encompassed several additional controversial issues, such as the diagnosis about the "agrarian question", the inclusion of the general concept of "latifundio" as the main target for expropriations and the lack of integration with agricultural development policy.

As many authors have pointed out (Sampaio, 1988; Goodman, 1987; Muller, 1986-a; Da Silva, 1987) the agrarian reform proposal repeated the same diagnosis of the agrarian question that was common in the sixties-latifundio & minifundio- failing to recognise the accompanying changes and modernization of the agricultural sector which have taken place in the last twenty years in Brazil.

Although many traditional latifundios are still present within the Brazilian agrarian structure, the dynamic of this sector is dominated now by capitalist relations of production and new forms of integration with industry and the financial sector (Muller, 1986-a; Delgado, 1985). Since most of MIRAD's newly established staff, advisers, and the social movements which supported the Plan (Catholic Church, CONTAG) did not recognise this change in rural social relations, their target became more general and ambitious, that is, the "latifundio" in general.

The programme defined "latifundio" as every property larger than three (3) rural modules (1) which was uncultivated or not giving a normal productive yield. This

category was labelled by the Land Statute as "latifundio por exploração" in contrast to the "rural enterprise" which being more productive would be excluded from expropriation. The other category of latifundio, according to the Land Statute (Law 4564/1964) was the "Latifundio por dimensão", which comprises all properties, cultivated or not, which exceed six hundred (600) rural modules.

The agrarian reform plan therefore threatened to expropriate a vast gamut of rural properties, with the only exception of the rural enterprises. The inclusion of all these categories together stems from the "Registration of Rural Properties" (Cadastro) elaborated in 1964 by the military regime to fulfill the requirements of the Land Statute. This "Cadastro", whose main purpose was to organize the system of property taxes, does not reflect the new social relations that developed in the 1970s and 1980s in the agricultural sector, and led to more confusion in the current process.

The inclusion of properties larger than 3 rural modules within the category of "latifundio por exploração" meant, for example, that farms of 45 hectares in São Paulo, 60 hectares in Rio Grande do Sul or 30 hectares in some parts of Rio de Janeiro, could be expropriated.

Note(1): Rural module, according to the definition given by the Land Statute (Law 4564/64), is the minimum size that a rural property should have so as to guarantee the subsistence of one family.

Although the president of INCRA tried to explain to the public that these properties would not be given priority (Da Silva ,Gomes .1985) the opposition took rapid advantage of this elementary mistake to attack the whole programme of agrarian reform,saying that it would affect small farmers together with large farmers.

The "latifundio por dimensão",that is,properties of excessive size represented the other extreme of the various kinds of properties affected by the plan.In Brazil, during the recent period of military rule, enormous farms in fact developed (some of them reaching absurd sizes of more than 2 million hectares) on account of the favours and incentives given by the authorities. There are some big farms (around 100.000 has) in the South and Midwest regions of Brazil which are mostly productive. The gigantic ones ,are those located in the frontier regions (Amazonia ,Para),which were thus outside the programme of Land Reform because it excluded areas of Colonization. Therefore ,some of the big and productive farms of the South and Mid-West would be affected by the expropriation process on account of their size alone .

Although many countries have imposed limitations on farm size ,in the case of Brazil ,such proposals were certain to engender strong reactions because it meant attacking properties where land was used productively .In our view, it was not necessary to include both extremes of the size distribution in the programme (the large productive properties and the small areas) when there are extensive underutilised areas belonging to large landowners,which can be expropriated with far more justification.

The third controversial aspect of the plan stems from its lack of integration with agricultural policy. The agrarian reform proposal announced in May 1985 , aimed to "transform land distribution in Brazil" (pg 11) and to give "absolute priority to land reform " (pg 11) in

relation to the agricultural policy. It is indeed to be expected that a programme of agrarian reform should concentrate its attentions on the issue of land redistribution. However, as some authors have pointed out (Muller, 1986-a), the task of transforming land distribution can not be attained just by land reform, mainly because the forces which had engendered land concentration in Brazil had been supported by agricultural policy including credit subsidies and fiscal incentives to buy land. Therefore, new peasants could emerge as a consequence of the plan of agrarian reform while, thousands of others (former small producers) might lose their land because of the lack of an adequate agricultural policy.

Actually, the emphasis given to the land issue within the plan is connected to the characterization of the "latifundio" and the flawed diagnosis of the current stage of agricultural development. The goal of transforming the "whole agricultural sector" emanates from the diagnosis of the agrarian structure of Brazil, which failed to acknowledge the existence of modern agriculture, and the need to have a specific policy for this sector. In fact, the MIRAD authorities were not totally unaware of this problem. They saw agricultural policy as something separate from agrarian reform and linked formally to another ministry (Ministry of Agriculture). The events which followed the announcement of the programme showed clearly how this separation became a useful weapon in the hands of the counter-reform forces.

Nevertheless, the route chosen by the government counted from the beginning on the support and pressure of the rural social movement and their organizations. The Confederation of Rural Workers Unions (CONTAG) organized a national Congress in May 1985 to discuss and define their own proposal of agrarian reform, which approved the following statement: "Agrarian reform must be anti-latifundist, extensive, massive and immediate, eliminating the

national and foreign latifundio" (Proposition N° 1). The CONTAG Congress also aimed to replace the current agrarian structure and the economic system in order to inaugurate a "new structure of land property". (Proposition N° 2 and 3).

Although the Congress of Rural Workers regarded the Land Statute of 1964 as an useful tool to start the process of agrarian reform, they manifested their commitment to an agrarian reform which would expropriate simultaneously "lands of latifundio and also the properties organized as rural enterprises" (proposition N° 23).

The Landless Movement (MST) did not differ substantially from the resolution adopted by CONTAG, although it disagreed with the reference made to the Land Statute. The main difference arose with regard to the tactics and strategies adopted by the different movements to attain their goals. (Da Silva, 1987, pg 50). While CONTAG emphasised the political practice within the State (MIRAD, INCRA) as the legitimate way to exert pressure for expropriations, the MST preferred "actions which would overlook the limitations imposed by the government". (Novães, 1987, pg 20). Soon after the announcement of the plan, the Landless Movement organized a huge land occupation in Santa Catarina with 4000 families. (Novães, 1987). This movement did not expect any support from the so-called "progressive forces", inaugurating the idea of the "agrarian reform from below" ("das bases"). It must be noted that this movement had significant portions of the Catholic Church on its side and other institutions of support. (Pastoral Land Commission, CPT).

Immediately after the CONTAG Congress and the announcement of the land reform proposal by the government, the landowners' more traditional representative associations organized their own Congress to analyse the proposal and to decide their future actions. In July 1985,

the CNA (National Confederation of Agriculture), SNA (National Society of Agriculture) and SRB (Brazilian Rural Society) organized a meeting called the "National Congress of Agrarian Reform". This Congress opposed the "anachronistic proposal of Agrarian Reform", which would not respect productively operated lands and the modern agricultural sectors. From that moment, a tortuous and exhausting discussion about the issue of "productive lands" caught the attention of practically all the sectors involved with the problem of Agrarian Reform in Brazil.

Behind the scenes, a more radical and ultimately more effective organization of landowners began to buy weapons and to set up private militias. In a short span of time, this organization, called "Democratic Union Of Ruralists" (UDR), attracted their first 5,000 members among landowners. At the end of 1986 there were 20,000 members spread over 13 Brazilian states, overtaking the traditional organizations which in the last 70 years had numbered no more than 20,000 members combined. (CNRA, 1988).

The UDR's first and more concrete actions were against the process of Agrarian Reform. From the beginning, they took advantage of some procedural mistakes contained within the expropriation orders to send them back to the Courts, delaying the whole process of agrarian reform. More violent actions were taken to halt the INCRA's legal "visits" (vistorias) to the properties and to expel peasants from lands which had been invaded, including assassinations of peasants, leaders, priests and rural trade unionists. (CNRA, 1988).

During the period of open discussion of the original agrarian reform proposal, dozens of suggestions for change were made by different sectors, including the army which made its own proposal (Guanziroli, 1985). On October 10, 1985 President José Sarney signed Decree N°91.766 initiating the PNRA. But by then, the PNRA was no more than a pale shadow of the land reform originally proposed by

MIRAD. The threat to private property, even when underutilized, was emasculated, shifting the main priority from expropriation and land redistribution to settlement on public lands. The following phrases from the PNRA show the government's extreme concern to reassure the landowners of their rights: "Agrarian Reform will never violate private property", "Expropriation will be avoided whenever it is possible", "It will not affect productive lands" (inc 1.3).

The replacement of the original criteria to determine the "priority areas" was widely criticised (Sampaio, Plinio. 1985; Fachin, 1985, Guanziroli, 1985, Dulley, 1985, etc). The initial proposal had established specific criteria to decide which areas would be expropriated, such as soil fertility, proximity to urban regions and local markets, incidence of land concentration and landless people, and so on. Without these criteria, any region of the country could be subjected to intervention by MIRAD. Despite these problems, the final version focussed strictly on underutilised lands as the target for expropriation, thus ending the ambiguity of the earlier proposal.

However, expropriations had already been delayed by the counter-reformist sectors, which exerted permanent pressure on MIRAD authorities to halt this process. The Minister and staff were changed repeatedly in response to this pressure and to put management of the reform process in the hands of people without any links with social movements.

During this period, that is, in the first two years after the PNRA was announced, 2.266.618 hectares were expropriated in order to settle 28.080 families (MIRAD, 1988). The total amount of land expropriated represented barely 15% of PNRA goals for this period, and the number of families settled in these areas was roughly 6% of the total planned. This period was characterized by

permanent political disturbances. In March 1986, bandits, apparently linked to the UDR, killed a very active priest in Maranhão, called Padre Josimo. This event was condemned not only by most Brazilian politicians, social movements and intellectuals, but also by the international community. On account of this fact the government again changed the Minister of Agrarian Reform, appointing a popular politician, Mr Dante de Oliveira, to the post. Although he tried to reverse the slow down in the process of expropriations, nothing significant really happened in this area.

Finally, in October, 21 1987, President Sarney issued a new decree (N° 2.363) aiming to withdraw definitively the threats to productively utilised lands. The decree established the minimum size subject to expropriations as 1.500 ha in the Amazon regions, 1.000 ha in the Mid-West, 500 ha in the Northeast, and 250 ha in the South and Southeast regions. At the same time, landowners affected by expropriation would be allowed to keep up to 25% of the area expropriated, and also given freedom to choose this area within the whole property subject to expropriation.

Furthermore, the decree abolished the institution in charge of land reform (INCRA), leaving all the responsibility with MIRAD. On the other hand, the decree strengthened the project of agrarian reform with more financial resources and by the emission of some 100 million new titles of the "Agrarian Debt", which are essential to pay for the land expropriated.

The decree has been widely criticized (Porto, 1987; Garcia, 1987; Sampaio.P, 1987) for creating a "perpetual reserve" for the landowners within their properties (25%), which obviously will contain the best soils or the area with permanent plantations. In that sense, the area left aside to implement the settlement will probably comprise poor soils, without infrastructure or water supply.

MIRAD authorities defended the decree, arguing that enough land will be available for land reform, and the government will supply credit resources to reconstruct or develop the necessary infrastructure. Nevertheless, the main purpose of the decree was to remove definitively the threat to productive lands.

Although this point of view can be justified in terms of the unfavourable balance of power, the very process of agrarian reform had already been halted completely by the shifting political conditions. By that time, the reformists and the counter-reformists were having preparatory discussions for the new Constitution, which could either reinforce or weaken even more the likelihood of agrarian reform in Brazil.

After several months of exhausting and tense debates, the new Constitution was finally approved by the Congress in October 1988. The section devoted to the agrarian reform did not include the proposals and projects from the reformist sectors. On the contrary, it reduced even more the legal instruments to implement a real process of agrarian reform. In fact, the counter-reformists, gathered by the UDR and its allies were tremendously successful in the Constituent Assembly, defeating all the reformists' proposals for the new Constitution.

According to Da Silva, Gomes (1988-a-) two points in the Constitution make a process of Agrarian Reform in the future practically impossible. First, the obligation to pay in advance the complete value of the land to be expropriated and, secondly the prohibition to expropriate any productive land. This second clause still needs to be defined in greater detail and conceptualized by a complementary law. Nevertheless, as Silva (1988) says, the government will probably define "productive" in terms of soil fertility and not in relation to the degree of current productive utilization. This means that all fertile soils will probably be excluded from land reform, leaving aside only soils without any fitness for agricultural purposes, like swamps, marshes, sandy areas, mountains and so on.

It is interesting to note that while some important labour rights have been conceded to urban and also rural workers, paradoxically nothing was allowed in terms of land reform. (Arouca, 1988). According to Da Silva (1988-a-), "the Constitution was brave against bankers and multinationals but was not able to face the native latifundio" (Ibid 17).

2.3-POLITICAL VIABILITY OF AGRARIAN REFORM IN BRAZIL.

Looking to the results achieved in terms of implementation of the PNRA in the last four years (1985-1989) one might think that the balance of power was never in favour of the forces committed to the reformist process. However, this question is not so simple. In our view, the balance of power in fact shifted to the counter-reformist sector during this period due in part to political and strategic errors by the forces which supported the PNRA.

In fact, when the issue of agrarian reform was included in the electoral programme of the "Democratic Alliance" in 1984, very few people quarrelled with it openly. As Da Silva, (1985) points out "there existed a real interest in the business sector, represented by some of the Industrial Federations of the peripheral states, practically all Trade Federations, the Association of Agricultural Machinery and Implements (ABIMAQ), and part of the financial sector, in conjunction with the military, who wanted to see the rural conflicts solved, and above all, the Catholic church was firmly behind the proposal of agrarian reform." (pg 15). In his view, the balance of power was more favourable for an agrarian reform in 1985 than in 1964, because of the support given by the two most important institutions of Brazil, that is, the Church and the Military.

In the rural areas, several important organizations had supported the process of agrarian reform since the beginning, basically the Landless Movement (MST), the Pastoral Land Commission (CPT) and the Confederation of Rural Unions (CONTAG).

The Landless Movement (Movimento dos Sem Terra) was officially created in 1985 at the time of its First National Congress. Nevertheless, it was already in existence from the late 1970s as "resistance actions and land invasions of groups of rural workers excluded from the

process of agricultural modernization in Rio Grande do Sul" (Grzybowski, 1987, pg 21). The movement has been shaped by the organization of "sons and daughters of small farmers, sharecroppers, tenants, temporary workers, people who lost their lands because of the construction of dams and a significant number of dispossessed people" (Ibid, pg 22)

Initially, several farms in Ronda Alta (RGS) were invaded in 1979-1980 which led to the formation of the roadside encampment of Encruzilhada Natalino. Afterwards the organization expanded to Paraná, with the creation of MASTRO (Landless Movement of West Paraná), which invaded lands in Paraná and Santa Catarina at the beginning of the 1980s. Then the movement expanded further, to the West of São Paulo and Mato Grosso do Sul. Most recently (1985-1986), the movement has attracted landless people in Rio de Janeiro and in some Northeastern States. (Grzybowski, 1987, 22-23). This author explains that the movement is organized in nuclei, municipal and state commissions and is coordinated by a national executive bureau. In 1987, some 15 states had their representatives in the national bureau, but the movement is more firmly established in the Centre and South regions of Brazil. They publish a monthly journal relating their principal activities.

In January 1985, 1,500 members of the Landless Movement met in a National Congress in Curitiba representing thousands of workers of different regions of the country. (Grzybowski, 1987, Ibid 22). In terms of agrarian reform their proposal is to conquer the land by their struggle, independently of the state and the political parties.

The other rural force, CONTAG, was created in 1963 to centralize all the rural unions of the country and its regional Federations. Since its foundation it has held five national congresses (1963, 1966, 1973, 1979, 1985), which progressively assumed the struggle for land reform, until

the last meeting in 1985 when 2.600 delegates of rural unions and 22 Federations approved the document to which we referred above. These are well established all over the country and include approximately 8 million rural workers.

However, CONTAG does not support land invasions as strongly as the MST and, in some cases, devotes its attention exclusively to welfare activities. According to Da Silva (1987) "CONTAG comprises more rural "directors" than real leaders, forming a bureaucracy which maintains its privileges over the time" (pg.53). Therefore, it is unlikely that this movement would effectively implement the resolutions supporting the struggle for agrarian reform that it approved in the Fifth Congress.

In our view, the resolution to make a "radical, immediate and massive" agrarian reform and to put an end to the "national and foreign latifundio", as declared in their respective documents, exceeds the real capacity of mobilisation of both organizations. In fact, the MIRAD proposal of May 1985 and all the euphoria which accompanied that moment within the rural movements, presented a greater threat to landowners (and all their lands) than these popular forces could effectively mount.

Nevertheless, the threat to the latifundio and productive lands was translated into action as soon as the plan was announced, worrying the authorities. As Ribeiro (1987) observes, : "land invasions and roadside encampments were located precisely within the regions (South and Centre regions) where it was more difficult to find "latifundio por exploração" (underutilised lands) because most lands have been devoted to modern agricultural activities in recent years. Although it is possible to find such lands there, they fitted only roughly and marginally with the Land Statute criteria". (Pg 117). Since most land invasions occurred in the South and on "productive" lands, the Church and other movements linked to the MST decided to

exert pressure on the government to include those lands in the agrarian reform programme.

This does not mean, of course, that in other regions, where most unproductive lands are located (Centre, Southeast and Northeast), there were no social movements or landless populations. As Martins (1981) points out, the social base for agrarian reform is heterogeneous and diversified, including traditional squatters (posseiros) in the North and Northeastern states, former sharecroppers expelled from properties, poor tenants and all sorts of unemployed and rural workers. In his view, this has created a wide base of people demanding land.

On the other hand, the MST approach to the land reform process (direct takeover without the intervention of the state) proved to be unrealistic. People expect the state to intervene because of the risk of expulsion and violence which comes after invasion. The ideal of Agrarian Reform from "below" alone is insufficient: State intervention always is needed, at least to conclude the process of expropriation and land re-distribution. This does not deny the fact that invasions have been effective in exerting pressure on the government to accelerate the process of expropriation.

The exaggerated target proclaimed by social movements and government at the beginning of the process surprised and provoked the reaction of landowners, who, in turn, took advantage of this fact, to overreact as well, in order to destroy whatever possibility there was of agrarian reform.

The balance of power began to change after the creation of the UDR. The rapid development of this organization among traditional and modern landowners has been explained by Bruno (1987) as follows "The Agricultural National Confederation (CNA) has been dominated since the sixties by an old group of directors which passively followed all the governments since then. On the other hand, the political

parties, even the conservatives (Democratic and Social Party-PDS- and Liberal Front Party-PFL) , did not fight to defend the landowners. These parties were very different from the old traditional parties of the sixties (Popular Republican Party-PRP, and Social Democratic Party-PSD) which were mainly sanctuaries for rural oligarchies. Currently, the PDS is dominated by the industrial bourgeoisie and the PFL is ambiguous in relation to landowners, namely , after the pact with the PMDB (Party of The Brazilian Democratic Movement) to form the "Democratic Alliance " , which included the commitment to agrarian reform in Brazil." (in da Silva, 1988-b-Ibid 8). Thus , the UDR fills the political vacuum in the struggle against agrarian reform left by the traditional landowners' organizations . These organizations (CNA, SRB, SNA) apparently have directed most of their attention to the discussion of problems linked to specific products (coffee, soybeans , sugar etc) , losing power to formulate global actions around common problems.

The creation of the UDR has been very useful to these organizations because "it played the dirty role (assassinations, expulsions, etc) while they could maintain their elegant image of civilized landowners living in the big cities". (Da Silva. 1988-b-Ibid 9).

Nevertheless, the UDR did not restrict itself to the issue of land reform. Soon after the programme of agrarian reform was approved, the government launched a new economic stabilization policy, called "Plano Cruzado". As we showed above the economic euphoria created by this plan lead innumerable small farmers to borrow money from the government to buy machinery and implements . When the euphoria ended, due to a substantial increase in interest rates , some highly indebted farmers began to lose their lands to the bankers and financial institutions. This problem was rapidly exploited by the UDR to expand within rural areas, whereas the rural workers' organizations (CONTAG and Federations) , as well as left-wing sectors in

general ,failed to become involved in this matter .At that time ,all popular organizations were still focussing on the issue of agrarian reform alone.

The UDR had found another vacuum to fill and did it very well.They denounced farm indebtedness and organized a big mobilisation of small farmers to demand for debt amnesty,which was finally conceded by the government in 1987,as we already noted in the chapter about agricultural policy.The problem of indetedness , in conjunction with the potential menace contained in the first proposal of agrarian reform to small farming and productive lands(expropriation of properties bigger than 3 rural modules), was crucial for the expansion of UDR support among small farmers .Actually the social movements supporting agrarian reform failed to anticipate the impact that agricultural policies have had on small farming in Brazil in recent years.One must bear in mind that these policies affect the future of more than 3.000.000 poor farmers in Brazil,a number far greater than that involved ,in the short term , in the process of agrarian reform.Instead of attacking the agrarian reform directly ,the UDR raised the issue of the agricultural policy.In the words of Ronaldo Caiado, leader of the UDR: "The issue of land settlements must not be seen in isolation from agricultural policy".(CNRA,Ibid 5))

With this support ,the UDR managed to mobilise even small farmers on other issues,like the defense of private property and the free market .From there it was but a short step to improve their image among business men and other urban sectors.Concious that to entirely reverse the process of agrarian reform in the country they needed the support of the big industrial federations of São Paulo,the UDR made important agreements with strong groups ,like Olacyr Melo Franco ,Bradesco, the Itau Bank and other sectors which , at the beginning of the process of agrarian reform,had been neutral in relation to this

problem. (CNRA.1988).

The UDR acted firmly to change their public image with the urban sectors as well. At the beginning of the process, the UDR was strongly identified with the image "latifundio", the "grilagem" of property rights, and violence against rural workers. UDR members therefore decided to change the popular vocabulary, saying, for example, that "the word "latifundio" under-estimated the efforts made by farmers to transform lands into productive "establishments" and also that they were just defending the right to work in a free society within the rules of free market. In fact, most of the lands of their larger members were acquired in the 1970s and 1980s through the federal system of fiscal incentives (SUDAM, PROTERRA). The same document previously quoted (CNRA, 1987) shows that the highest number of deaths by violence occurred within the areas eligible for fiscal incentives, basically Pará and Mato Grosso. It was in these regions that mining companies and cattle ranchers developed their activities in the 1970s, deforesting parts of the Amazon forest and expelling traditional squatters and poor tenants.

Despite these brutal actions, the UDR managed to grow and to take advantage of further mistakes by the INCRA authorities, leaving the process of agrarian reform in absolute stagnation. At the end of 1987, the UDR played a crucial role during the preliminary discussions for the elaboration of the new Constitution. Their great goal was to enlist the support of deputies who also owned land. A considerable number of landowners were in the Congress, as also within the federal government, starting with the president J. Sarney. In only a few months they created a group called "Centrão" (Big Centre), which agreed to vote against all the articles in the Constitution that could possibly affect the landowners' interests and, at the end of the process, this group was responsible for the chapter of the Constitution related to this issue.

The factors depicted above - basically the overestimation of their own power by the social movements compared with the challenge launched against the latifundio interests, and the lack of new proposals for agricultural policies from the left to help small farmers to survive the economic crisis - explain the shift in the balance of power which occurred in the second year of the programme of agrarian reform. Nevertheless, there are other factors to consider as well, notably the institutional aspects of the process. Many authors (Wollman, 1988) have pointed out that the institution in charge of expropriations (INCRA) was ill-prepared and lacked the financial resources to implement the programme. INCRA, according to Wollmann, has 9,000 employees, but only 1,200 work directly in the field. The remainder are devoted to administrative tasks and dealing with bureaucratic obstacles to the process of expropriation and settlement. In addition, the financial resources allocated to this institution were decreasing. In 1987 INCRA's resources were reduced by 18%, and in 1988 the situation remained the same (Wollmann, *Ibid.* 8).

In sum, changes in the political balance of power and inefficient institutional support coincided during the period of 1985-1989 to demolish the process of agrarian reform in Brazil. However, in our view, agrarian reform is still possible. The UDR has recently begun to decline in influence and the current presidential elections (November 1989) have shown more maturity among the democratic and left-wing forces with respect to this issue. Before describing more recent proposals for agrarian reform, we shall analyze some aspects related of Brazilian agrarian structure and how these affect the likelihood of agrarian change.

2.4-AGRARIAN REFORM IN A CONTEXT OF A MODERN AGRICULTURE.

The debate about agrarian reform historically has revolved around its economic consequences for the process of development. Although capitalist development has occurred in many countries and also in Brazil without transforming its agrarian structures, the most recent proposals of agrarian reform in Brazil have been defended by arguing that it could still play an important role in this development. As we saw above, the PNRA comprised some economic goals, such as food production and creation of new employment, but its primary concern was to alleviate social problems, such as rural migration, land conflicts, and even the question of employment. Nevertheless, given the fact that agrarian reform was being defended by many intellectuals and politicians as the solution for every economic and social problem, the plan itself gave rise to criticisms and misunderstanding from the very beginning. In order to clarify this discussion we shall highlight some of the criticisms of the plan related to the issue of economic repercussions.

2.4.1-Economic consequences of agrarian reform.

In the 1960s, the discussion focussed on the economic consequences of an agrarian reform, and most of the authors (Guimarães, 1963; CEPAL, 1964; CIDA, 1964; Furtado, 1965), with few exceptions (Prado Jr, 1979; Rangel, 1961), saw reform as a way of basing economic development on a vigorous internal market. Agrarian reform would destroy the feudal agrarian structure which was blocking the expansion of capitalism in the rural areas. However, the last twenty years of economic development and industrialization have shown clearly that capitalism was not dependent on agrarian reform in order to grow, nor even to modernize the agricultural sector itself, despite the widespread poverty and misery which it

has left behind.

That is ,the agrarian sector has been transformed and modernized,industry has multiplied its power, and the cities have grown enormously.Despite this new reality ,the marxist-structuralist approach nevertheless had some influence on the 1985 PNRA -diagnosis of the latifundio/minifundio complex- .Yet , paradoxically,this approach did not affect the main objectives of the plan ,which pursued social goals . In Brazil ,where a significant class of rural capitalists already exists ,the structuralist approach is meaningless.However ,there are at least three other theoretical insights to this issue -economic consequences-which cannot be ruled out so simply.

According to Lehmann(1978),the neo-classical reformist argument states that "underdeveloped countries are characterized by an abundance of labour and a scarcity of capital and therefore the objective of economic policy (land reform)should be to achieve the most efficient possible allocation of resources." In relation to this argument ,Lehmann says "it may offer elegant solutions to many technocratic problems ,but the availability of suitable conditions for those solutions to be adopted is left to chance ". (pg 341).

Although it is unrealistic, and probably achronistic, to try to reverse the model of development in underdeveloped countries,the neoclassical argument goes to the nub of the problem of these countries.That is, inefficient allocation of factors, which stems from the "use of technology which does not take into account initial factor endowments ,such as the broad disposition of internal frontiers within each big property and the existence of large numbers of rural landless workers". (Ferreira Dos Santos.1988,147).Economic policies have distorted the relative prices of factors in order to allow the scarce factors(capital or technology) to develop more rapidly.

Although agrarian reform could contribute to the reallocation of factors, the current trend among Brazilian specialists is to assign to the market the role of easing land concentration. They argue that subsidized credit and fiscal incentives in the 1970s provoked land concentration, and that, if these incentives were dropped, land concentration would therefore diminish. The liberalization approach (Timmer, et al, 1983) recommends the substitution of price incentives for cheap rural credit in order to enhance production instead of land speculation. This model has been applied during the 1980s but so far with only slight consequences for land prices and the agrarian structure. (1)

A variation on this approach is given by Vergoupoulos (1978) and other authors, who may be labelled as the "neo-ricardian argument". This approach states that small family farming units are more suitable to produce cheap food than large capitalist farmers, on account of their lower costs of production. Family farming supposedly does not aim to maximize profits and, in the case of the beneficiaries of a land reform no land rent would be paid. At the same time, they do not pay wages, and the members of the family accept lower monetary compensation for their labour than the wage paid for rural workers. Output then, can be sold at lower prices than capitalist farmers, who pay land rent, must earn a normal profit and pay wages in accordance with the legislation. Therefore small farming would be "functional" to industrial accumulation, via the mechanism of cheaper food, hence, which would allow lower urban real wages to be maintained.

Note(1): This kind of analysis, usually applied by neoclassical authors, is also used by other authors, like Shumpeter (1961), "The economic best and the technologically perfect need not, yet very often do, diverge, not only because of ignorance and indolence, but because methods which are technologically inferior may still best fit the given economic conditions" (15). (emphasis is our).

Certainly , in the long term accumulation process, rural sectors, and in particular the family farm and peasant sector, have financed industrial accumulation in many countries. In countries like Brazil , for example, the thesis about the "functionality" of small producers in provisioning the urban sector with cheap foodstuffs had an enormous influence in the late 1970s. (Oliveira, F, 1972).

In the present inflationary days , the distribution of surplus is taking the form of a constant bidding for resources , which it is reflected in the relative prices among goods, and between wages and profits. Inflation has been the principal mechanism of redistribution , basically from wages to profits and speculative gains in general. Therefore, keeping food prices lower and salaries lower too, has been one way to facilitate capitalist accumulation . Nevertheless, in our view, this it is not the only way to finance and promote industrial accumulation in contemporary Brazilian society.

The agricultural modernization process and the expansion of agroindustry demonstrates that the State has decided to promote forms of production other than just the family farm . Moreover there is no consensus about the family farm's capacity to maintain a constant and regular supply of foodstuffs at cheap prices. Thus, some sectors of the establishment , which did not trust this capacity, promoted the development of the so-called "modern sector".

Moreover, in the urban industrialized sector , capitalists have not fixed their strategy of accumulation only on the possibility of receiving cheap food and , in consequence , cheap or low-wage workers. As is well known, relative surplus value can be increased in two ways: 1-introducing revolutionary technology in the sectors which produce the goods that workers consume, 2-intensifying the rhythm and intensity of the labour process. Both mechanisms have been widely used in countries like Brazil, the first by

introducing new methods in the agricultural sector ,basically on large farms,and the second within the industrial process.

Family farm production ,obviously complements the task of accumulation ,but fits neither the first nor the second case described above .Indeed, producing cheap food and paying low wages has been for a long period,unfortunately,the main pattern of capitalist accumulation in Brazil.Furthermore increased food supply does not necessarily mean lower food prices due to the way internal markets are organized.There are important rigidities to take into account ,both in the trade sector and the productive sector,which tend to internalize gains in productivity.The agricultural sector is monetized and its production costs have to be covered by prices or, alternatively ,by subsidies.In addition ,the trade sector is also well-organized to halt price decreases whenever is necessary ,as the recent experience of the Cruzado plan has shown.

The main problem of small farmers is exactly the opposite,that is ,how to increase their prices,or at least to stabilise them.A strategy which involves maintaining agricultural prices permanently at low levels also would be unsuitable on political grounds.The modernization process in agriculture has increased the influence of producers' organizations(trade unions,cooperatives,etc) which are involved in the fight against inflation ,not only defending current prices ,but also attempting to restore former losses .

In practical terms, this theory of small farm "functionality" implies the generalisation of family farming in the agricultural sector ,involving therefore a massive agrarian reform to replace large farming(even productive units) by small family farming units .As we saw before, however,the complete transformation of the agrarian structure seems unlikely to occur under the current

political and economic circumstances.

Finally some authors emphasise the demand side as a way to solve the agrarian question (Sen, 1985, Delgado, 1988). They argue that economic development and income re-distribution within the urban sectors will increase the demand for agricultural goods, thus increasing prices; in turn this would facilitate the process of income generation in the rural areas. Nevertheless, if an increase in demand occurs without changing the present agrarian structure, the benefits of this improvement will be internalized by the actual landowners, probably provoking new waves of mechanization and agricultural modernization. This process typically leads to further out-migration from rural areas towards the cities, worsening the pattern of income distribution within the cities. This approach does not specify how income distribution in the urban sectors will be improved in the first instance. It appears also to ignore the fact that conditions of living must also change within the rural sector if improvements in the Brazilian income distribution as a whole are to be achieved.

Unlike these models, the marxist-revolutionary approach rules out the economic role of agrarian reform. In Brazil, the main criticism to the PNRA has come from this sector. Souza (1985) synthesizes in the following paragraph the position of radical marxists in Brazil "The State attempts to co-opt a mass of rural workers to make an Agrarian Reform, which is no more than a project of agricultural reorganization guided by financial capital. There is only one conclusion: it is a measure intended to guarantee the survival of capitalism and to delay any transformation towards socialism" (pg 16). This statement illustrates the ideological side which underlies some of the criticism of the process of agrarian reform. Since the discussion about political systems (capitalism, socialism) is beyond the scope of this

thesis, we shall concentrate on the social-economic side of the issue .

Well known and traditional arguments defending the role of small farming within the capitalist system recently have been attacked by Da Silva, Graziano (1987) . According to this author, the situation of small farming in Brazil is characterized by long hours of work, off-farm jobs to complement income, family underemployment, low incomes and productivity. As a result , the " future for those units that so far have not modernized is not promising. These units are on the way to being transformed into a sub-proletariat or lumpesinato".

In his view , the Brazilian rural sector ought to have two different policies: agricultural policies for modernized and capitalist farms, and agrarian policies to solve the problems of the landless, semi-proletarians and poor peasants. Agrarian Reform , therefore , would fill the second sub-sector, with emphasis on social issues, such as employment, health, education , and income generation. Then "Agrarian Reform fits better as a Social Policy than a productive one, since these latter today can be solved by giving an adequate agricultural policy to the capitalist sector " (pg 46). Another marxist economist (Sandroni. 1986) similarly concludes by saying that "we must agree that agrarian reform no longer is an economic necessity but merely a possibility". (pg 21). Muller, G (1986-a) rules out even the likelihood of the integration of small farming within the modern sector despite the efforts of the agrarian reform process to achieve this . When the PNRA was being debated in 1985 this author stated that "The oligopolistic economic system does not need these millions of small farmers in order to work properly ; therefore there is no social room for this old class within the new agrarian dynamic" (pg 45). Unlike the other marxist authors, Muller (1986) denies even the need for a social policy to develop or integrate small farmers and peasants

in the capitalist economy, on account of the inexorable tendencies to the proletarianization of this sector.

Although it is true that agrarian reform is no longer a economic necessity for the development of capitalism and the modernization of agriculture, in our view, it gives more scope for the integration of small farming and for its development within the Brazilian economy than was thought in the early eighties.

2.4.2-Small farming: efficiency and food production

The foregoing discussion inevitably raises the issue of the role of small farming in relation to food production and economic integration. Since exhaustive discussion by many authors in the international field (Friedmann, 1980, 1986; Goodman & Redclift, 1985, Bernstein, 1979) has clarified the different positions on this issue, we shall merely refer to their principal conclusions and those of some Brazilian specialists.

From the economic point of view, the concept of efficiency suggests a rational allocation of factors in accordance to the relative prices which, in turn, should reflect the natural endowments of the country. If relative prices are distorted in order to make the use of capital cheaper than land or labour, then possibly large landowners and capitalists will appear more efficient than small farmers. In that sense the concept of economic efficiency replaces the more widely used concept of technical efficiency, which measures the rate of productivity of each factor of production. Land productivity (physical yields), labour and capital productivity indexes are partial and measure separate dimensions of the productive process, which might reflect different methods of production. (Boussard, 1987)

According to Albuquerque (1987), who has extensively researched scale economies in Brazil, there is a sound empirical basis for saying that "all groups of farmers

are allocatively efficient, that is, their partial productivity rates are in accordance with the relative availability of factors" (pg 115). As farm size increases, land and capital productivity decreases and labour productivity grows (Albuquerque 1987). In other words, small farming can be as efficient as large farms when they devote their lands to production.

The existence of some scale economies in some sectors (soy-beans, sugar, orange) might reflect the distortion of relative prices engendered by the special programmes and subsidies introduced in Brazil in the 1970s and early 1980s.

Agrarian Reform therefore cannot be defended on the grounds of any economic superiority of small farming, but neither is it attacked by denying the possibility of economic integration of small units. The verification of the inexistence of scale economies within agriculture permits us to understand small farming better. As Gasson et al (1988) state, "too many producers have survived for too long for small farming to be seen as a transitory phenomenon, although the position of these farmers is certainly a vulnerable one" (pg 11). Referring to developed countries, Gasson also notes that "At the lower end of the farm size range, the family type of organization and family relationships may have become less relevant as a productive activity. It is not only economic pressures but also changes in family values which are bringing this about" (pg 32). Nevertheless, in countries like Brazil, where "changes in family values" are not so important because more urgent wants have not yet been met, small farming probably has lower thresholds (size) of survival.

The explanation for the survival and persistence of small farming is given by Goodman & Redclift (1985) "With this perspective, it is not necessary to accept that the family labour based farm is the *permanently* privileged

agroindustrial capitals, to concede that this form of production is well adapted to the prevailing patterns of surplus appropriation and technological innovation in agriculture" (242). That is, since the industrialization of agriculture is not yet a complete reality in Brazil, there are still important "niches" or sectors where small farming might find room to develop.

Newby (1985) enriches this idea by saying: "We can now see how small farmers have proved to be remarkably adapted to changing economic circumstances. The forms of adaptation: pluri-activity, part-time farming, **ability to find niches in the market which have not been or cannot be penetrated by large farmers**, specialisation in production which is not amenable to economies of scale, dependence upon local or specialised markets (pg 495, our emphasis).

The following table shows the participation of small farming in the total production of food in Brazil:

Table 2.1
Production of farms with less than 100 hectares
(percentages of physical output)

<u>Food for the domestic market:</u>	1970	1980
Rice	54.8	37.1
Beans	83.2	78.6
Manioc	88.1	87.4
Corn	75.5	68.1
Wheat	49.5	46.9
<u>Food for exports/industry...:</u>		
Coffee	53.4	55.2
Sugar-cane	22.6	15.3
Soy-Beans	69.7	46.2

Source: IBGE, Brazilian Census data.

It must be noted that these percentages of the total output have been achieved using roughly 20.1% of the total agricultural area in Brazil in 1980. The value of total output of farms with less than 100 has amounted to 50.7% of the total output (in value) in the same year. Large farmers (more than 100 has), on the other hand, control almost 80% of the total land (79.9%), but their production fails to reach half of the total value. (49.3% in 1980).

The smallest category (less than 10 has) has also contributed a disproportionate amount of output in comparison with the area they control. On less than 3% of the total area (2.4% in 1980), this category has produced 13% of the total output of rice, 27% of beans, 38% of manioc and also 2% of sugar-cane, 4% of soy-beans, and 15% of total corn production. (Guanziroli, 1986)

The percentages above on the performance of small producers in Brazil bring together the key elements for a discussion of the separation of policies (agrarian and agricultural, or social and productive) proposed by Da Silva (1987) in relation to agrarian reform. In our view, to exclude small farmers from the coverage of agricultural policy is to ignore their participation in the productive process, or even worse, to suppose that they will continue producing despite the adverse conditions arising out of agricultural policy. Without a proper agricultural policy (prices, credit, markets, technology) targeted for this sector all the so-called "social" efforts will rapidly be diluted and, a large segment of the rural population, given low rates of urban employment creation, would become permanent recipients of "welfare" payments.

Indeed, it was because this sector had inadequate access to agricultural programmes, and large farmers received most of their benefits that food production declined in the 1970s and their situation did not improve. As Grzybowski (1987) points out opportunely "Agrarian reform must not conceive a reformed sector

independently of the dynamic of the sectors already integrated. In order to respond to the interests of all rural workers ,the process of agrarian reform ought to solve the question of the new forms of integration, instead of deepening the current gap between integrated and excluded " (pg 79,our emphasis).

In sum, the separation of policies would lead to the gathering of small farmers and agrarian reform beneficiaries into "peasant ghettos" in order to benefit from "social policies" until they are in a condition to compete with large farmers. Since the authors mentioned above do not regard this sector (small farming) as capable of competing ,it would have to be protected eternally through these social policies in order to avoid "lumpenisation".

2.4.3-Other controversial issues of the PNRA:

The PNRA's goal of increasing food production through the process of land re-distribution has been questioned by many authors (Sampaio, 1988; Da Silva, 1987; Albuquerque, 1987). These authors reject the idea that insufficient food production in Brazil is a consequence of the lack of land in the hands of small farmers. That is, the old idea that the latifundio structure of production represents a constraint to the development of a capitalist agriculture. They defend the alternative view that the problem of insufficient food production in the country stems from the lack of effective demand in the urban sectors which, in turn, is a consequence of the profile of income distribution and the income elasticities of demand.

The income/demand approach is undoubtedly correct in its analysis of the determinants of food production. It is true that modern agriculture in Brazil has developed in a "distorted way" (De Janvry, 1981) more orientated to export production than for the internal market, and this does not imply any weakness of capitalist agriculture to produce "food". In fact, capitalists do not have any commitment to the "use value" of the commodity, they can produce the item which generates more profit. Since domestic demand has been depressed in recent years due to the recessionary economic policies adopted by the government in order to tackle inflation and the external market has apparently improved (higher prices in the mid-eighties), most farmers have preferred to produce goods for export.

On the other hand, the apparent high elasticities of income would guarantee more demand for food if the economic situation improved, with wages rising sharply and ahead of nominal prices. However, in this case the pattern of demand probably would change, with some items, such as meat and dairy products, being in greater demand than the traditional diet of poor people (beans, manioc and

rice).

Actually , the PNRA does not say explicitly that agrarian reform would provide a solution to the problem of food production, although this idea was present in the main stream of thought at the time this plan was being elaborated.

In our view this issue needs to be restated in order to gain a more comprehensive insight into the problem.

In the context of a modernized agriculture , the first impact of a vigorous increase in demand for food will probably be higher food prices for food, due to the normal rigidities of the sector (supply lags) and others that also exist (trade gap). Hence , rural wages , measured in real terms, will diminish in the same proportion worsening the situation of the rural poor. In the second round , when the next crop is planted , food production will probably grow to meet the demand , damping prices down. Farmers will receive lower prices for the output, or , alternatively , the government will subsidize prices, which usually benefits large landowners disproportionately , as we saw in the previous chapter . As Ghose (1980) says " Hunger and malnutrition has persisted even in countries where per capita food production has shown positive growth" (pg.4). Hence a significant increase in aggregate demand , without changing the other variables, might provoke the growth of agroindustry and large farming activities, on the one hand , and more landless people on the other .

Therefore this approach alone (increase in demand for food) does not solve the problem of rural poverty. The solution requires both agrarian reform and changes in the agricultural policy to allow small farming to integrate within the market. In that sense , the PNRA's goal to increase food production must be interpreted as one possible effect of agrarian reform , and not as a solution to the problem of food supply for the cities, as some authors have pointed out . That is , neither production nor

demand alone solve the problem of rural poverty in the countryside.

The programme of agrarian reform should, however, ensure that at least the same level of food production before the reform is maintained, in order to avoid disruption in the flow of production.

According to De Janvry (1981) "the production effect of land reform is sought through the development of capitalism principally in the non-reform sector ... because patterns of extensive land use are discouraged through threats of expropriation" (pg 214). Data collected for the case of the only two important land reforms in Latin America (Bolivia and Mexico) show that in Bolivia during the process of land reform (after 1952) "the average annual per capita increase in the production of potatoes and cereals was 2.3% and 0.5%, respectively." (pg 216). In Mexico, "between 1934-1938 and 1950-1951, total agricultural output increased 4.3% annually; between 1948 and 1963, 6.3% annually; and between 1960 and 1970, 5.8% annually" (ibid 217). In other countries, where the family farming system of production has been adopted, production also improved significantly. Binswanger et al (1988) shows that "under China's Responsibility system, between 1978 and 1984 output increased by 61%. Other research studies of the impact of agrarian reform on production (World Bank, 1978; FAO-Arroyo-1979) show that in most cases "land reform did not attain the production targets foreseen in the short term" (pg 50), but none of these studies show evidence of any negative impact of land reform on production.

In sum, land reform sometimes has enhanced output in the nonreformed sector, but, in most cases, at least it did not disrupt the current levels of food production.

2.5-AGRARIAN REFORM AND INCOME CONCENTRATION.

According to the research already mentioned, the impact of agrarian reform on income distribution depends on the type of agrarian structure that existed before the reform process began. Although some authors pointed out that this effect has been ambiguous (de Janvry, 1981) most authors believe that, in a general sense, it has been positive. Ghose (1980) analysing recent experiences of agrarian reform says that "the most clearly observable immediate effects of the reforms have been on the pattern of income distribution and on the levels of poverty" (pg 22). The process of income re-distribution has followed different patterns "In Kenya, West Bengal, Ethiopia and Nicaragua it was brought about by land re-distribution and in Perú and Chile income re-distribution stemmed from the rise in employment and wages engendered by the transformation of haciendas into state farms and co-operatives" (ibid 21). The extent of income re-distribution which agrarian reforms have achieved has varied directly with the degree of pre-existing inequality. For example, in Perú and Chile the land reform process benefited primarily the permanent workers. (Lehmann, 1974).

Brazil is rather different from most of the cases mentioned, since a significant class of capitalist farmers already exists and, in conjunction with agro-industry, dominates the dynamic of the agricultural sector. For this reason, permanent rural workers and small farmers integrated in this process probably will not be affected by agrarian reform. Nevertheless striking inequalities still characterize the process of modernization. As our field research demonstrates (chapter 3), the agrarian reform in Brazil has affected mainly migrant workers, unemployed, temporary workers and, in some cases, poor tenants and sharecroppers, which overall are in the lowest ranks of the income distribution. Actually, the

heterogeneity of classes within the rural sector in Brazil gives land reform the opportunity to improve their standard of living significantly. At the same time there are considerable numbers of migrant workers, semi-proletarians and unemployed who can not expect to be absorbed by the process of urbanization because of the crisis that still affects the Brazilian economy.

It is important to bear in mind that the development of capitalist agriculture has neither integrated all the lands into market production nor most of the regions of the country. There are still some hundreds of millions of hectares without any kind of economic activity, either modern or traditional. The following tables illustrate this issue with the data available from the Census and Cadastro of rural properties

Table 2.2. Use of Land in Brazil.

	Hectares	Percentage of Total.
Area under cultivation		
Temporary crops	48.046.000	13.0%
Permanent crops	13.674.000	3.7%
Area of grazing land		
Natural pasture	129.355.100	35.0%
Improved "	77.613.000	21.0%
Area of Forests		
Natural forests	92.396.000	25.0%
Reforestation	8.500.000	2.3%
Total	369.584.100	100.0%

Source: IBGE, Census 1980.

Note: The Agricultural census includes only those areas where an economic activity is taken place irrespectively of properties rights. The basic unit of the census is called "Rural establishment". The Cadastro of Rural Properties instead encompasses all the rural properties and the basic criteria is the property of the land.

Table 2.2 above gives a general picture of the degree of land utilisation in Brazil. Firstly, it is

possible to say that "agricultural " activities occupy scarcely 21% of the total area(temporary plus permanent crops).Even if all this area were under the so-called "agroindustrial domination",it does not represent too much in terms of land use.Part of the total area in pasture,the improved grazing areas(21%),could be added to the later percentage ,thus making 42% of the total area under modern exploitation.

Natural pasture in Brazil is devoted to extensive cattle ranching,and thus can not be regarded as a modern activity,nor can the exploitation of forests,which is mainly an extractive activity.

The distribution of the idle unexploited land among the regions ,obviously is not equal.In some states ,like São Paulo or Paraná,around 40% of the surface is under cultivation.Elsewhere , in states such as Rio de Janeiro,Minas Gerais,or Bahia,less than the average percentage (20%) is being used for agriculture.Nevertheless,this above total number of hectares (369.584.100 hectares)barely accounts for the land registered as "business activity" for Census purposes .We have to bear in mind that Brazil's total area is more than twice this amount (845.121.400 hectares),and therefore most of its territory is outside these categories .Even if rivers,lakes,cities ,roads and others are left aside,significant area would appear to be absolutely idle and thus,possible for occupation.

The rural property survey (cadastro) elaborated by INCRA, includes all rural properties, and therefore encompasses more lands than the IBGE Census, as the following table shows:

Table 2.3: Distribution of Lands according to their productive utilisation.

a-Total Area	601.981.522 hectares	100%
b-Area with reasonable conditions for use :	428.913.079 "	71%
c-Area under cultivation or other uses :	243.961.668 "	
(percentage c/b)		57%
d-Area totally idle :	184.951.411 "	
(percentage d/b)		43%
e-Area totally idle of more than 500has :	118.650.000 "	

Source: INCRA, 1986.

This table reflects with more accuracy the land utilisation profile in Brazil. Almost half (43%) the area with reasonable conditions for agriculture or cattle ranching is not being used productively. Even when small and medium areas (less than 500 has) are excluded there are still 118.650.000 hectares without any economic activity. The cadastro also provides data on areas that, while not being totally underutilised, still fall below the productivity rates of the region. Adding these areas, the total amount of unexploited or underutilised land would be around 266.000.000 hectares. It has to be remembered that most of this land is still private property (only 20% is public land). In this respect, the PNRA was aiming to expropriate just 43.000.000 hectares of those idle lands

,hence not affecting the "developed agricultural sector" at all.

Apart from other considerations (agricultural policy) the mere integration of these lands into productive activity would indeed amplify the income generation profile, improving the total allocation of factors within the economy.

In our view, there is a sound empirical basis for saying that agrarian reform represents the best way to really improve income distribution in Brazil, and this process will not come about as a normal consequence either of market liberalization or of increased demand for agricultural goods. The social problem within rural areas is not something that is merely marginal, to be sorted out by market forces in the long term. There are almost 50 million people earning less than one minimum wage in Brazil in conditions of unemployment or casual work. Furthermore, industrial demand for labour has slowed down in the last decade due to the radical changes which have been introduced in the production process by information technologies. Therefore, the main target of the agrarian reform process will be to "liberate the tremendous potential for development embodied within small farms, which so far has survived by the means of their own struggle, but without any official support". (Da Silva, 1985, pg 8).

In sum, our main hypothesis is that income re-distribution among the poor would be the main economic consequence (2) of the agrarian reform process. Although this idea sounds obvious, it has been questioned by many authors (de Janvry, 1981; Alburquerque 1987; Rangel, 1986) who, in the light of some failed agrarian reforms in the past (Mexico, Bolivia) affirm that agrarian reforms have had slight or even ambiguous effects on the process of income generation and re-distribution. Our intention is to demonstrate the opposite; that is, that land reform, in fact, has had positive effects on income in Brazil, despite the adverse conditions in which it has been executed and its minimal extension in the country. However, before doing so, (chapter 6) there are some theoretical considerations to take into account.

Agrarian Reform is basically a mechanism to transfer propertied wealth between income groups which, as a "one shot measure", creates a new source of income for the beneficiaries. In order to produce these transfers the State intervenes in the land market through the extra-market mechanism of land expropriation. The passage of land from one hand to another means that the transfer of land title has taken place, but does this mean that income re-distribution has occurred?

Note(2) Income re-distribution, however, can be misinterpreted as being a social task instead of an economic one. Nevertheless, the recent experience of Latin American countries (Sachs, 1988) has revealed a clear relationship between the feasibility of economic liberalization ("adjustment programmes") and the previous pattern of income distribution. That is, the existence of inequitable patterns of income distribution and chronic poverty in most Latin American countries imposes a barrier to the implementation of free-market orientated programmes.

Strictly in terms of a static distribution ,yes,but in terms of assuring a steady process of income generation in the future it is still a polemical point .

We believe that the necessary and sufficient condition to guarantee that this process will occur is the "positive integration " of the new settlers within the agricultural sector,which means the use of the mechanisms of agricultural policy and participation in the market .

The modernization process which has taken place in the Brazilian agricultural sector in the past two decades has imposed some limitations on the very concept of agrarian reform.In the 1960s ,the agrarian structure was still very polarized between under-utilized "latifundio" on one hand and peasantry on the other.Consequently any transfer of property from the traditional latifundio sector would easily have improved the total productivity of the land factor.However, since the modernization process started, productivity in the agricultural sector has come to depend on additional variables , such as credit ,technical advice,use of modern inputs,price policy ,public stocks ,and so on.These factors, which can collectively be called "the agricultural policy", give rise to a much more complex situation for the new settlers in land reform programmes.Indeed, they need to understand how this policy works,the best ways of obtaining credit, what technology to use and so on ,if they want to survive within the sector as viable commercial farmers.

In our view, " positive integration" means the process of transition which might occurs from being landless to the status of small market oriented farmers during the process of agrarian reform.The adjective "positive" means that the new settlers must develop forms of organization and cooperation which enable them to defend themselves in periods of adverse market conditions and to compete with other farmers in normal times.

The idea of integration is related to several factors

such as :the use of modern techniques of production, the generation of tradable output, and the knowledge of how to adjust to the variations in the agricultural policy, (prices, stocks etc). By achieving this threshold of production ,small farmers (3), might have transcended ,in our view, the status of peasants ,being able therefore to interact with the economic environment and to maintain the process of income generation.

In the period immediately after land has been distributed a new set of problems arise for the new settlers ,such as financial resources, infrastructure ,land improvements, technology and trading .Overcoming these problems involves a struggle for favourable conditions of access to the credit market and therefore immediately raises the whole issue of agricultural policy. The State should intervene to improve "the working of these markets" (Ellis, 1988) in order to sustain this process of integration.

The current economic crisis in Brazil ,with the lack of opportunities for employment ,and the problems which arose within the modernized sector after the withdrawal of credit subsidies ,have created the proper conditions for Agrarian Reform. As Castro et al (1986) points out "Agrarian Reform would complement and adjust the pattern of the process of modernization, aiming to transform traditional agricultural units-small or large- into productive agricultural units according to modern patterns of production, and hence fully integrated into the market economy" (pg 28).

Note(3):As we said in the introduction of this thesis the exact categorisation of this sector has arisen exhaustive debates among european authors. For more details about this issue see bibliography quoted above .

Apart from the supposed "functional" role within the economy, this integration will depend basically on the bargaining power the new settlers have achieved during the process of agrarian reform. They have learned during this process that in order to take over the lands they must strengthen their organization and, in their new situation, as small farmers, the need for this organization becomes more important. They are now fighting for the continuation of the process of income redistribution, which means not only access to favourable conditions for production, but also the demand for education, health care and all the basic needs which define the normal conditions of citizenship.

The pattern of income distribution is not a constant nor something granted by economic laws as the neoclassical economists suppose. As Henfrey (1987) says, "the questions about hunger and social justice in Brazil are not so rigid and its solution is more related to the issue of political action than to schematic processes." (pg 47). Different social groups are continuously defending economic advantages or claiming new concessions and all kind of subsidies. Therefore, the new agrarian reform's settlers must insert themselves within this context if they are to guarantee the continuation of the process of income redistribution.

2.6-NEW DIAGNOSIS AND NEW PROPOSALS FOR AGRARIAN REFORM.

The past decade in Brazil has witnessed the crisis of the model of agricultural modernization and the attempts to shape a new pattern of development in rural sectors. This model was examined in the first chapter, and the new pattern of rural development is the main object of this and the following chapters. For the sake of simplicity, we can say that these two events have been accompanied by an overall economic crisis and, in the agricultural sector specifically, by the dismantling of the former structures of relations between the State and the productive sector. In that sense, the "modern" diagnosis and characterisation-agroindustrialization- has been already overtaken by the new events of the 1980s. Consequently it would be as inappropriate to rely on this more recent diagnosis as its predecessor-the latifundio/minifundio complex- to explain the current economic and social situation in Brazil.

In our view, the following are the main parameters to describe the current situation :

1) **International economic context in food production:** in recent years international food production has been increased dramatically both in the North and the South. In the North this is due to the protectionist policies of the EEC, basically the CAP, (Goodman & Redclift, 1989). In the South, production has expanded to increase exports to repay external debts. Large food stocks have provoked sharp reductions in the world prices of the principal commodities which, despite some recovery in 1986 and 1987, still are lower than in the late 1970s and early 1980s. Large stocks and falling prices exert more pressure on governments to sustain farm gate prices, bringing subsidies to unbearable levels. (In the USA subsidies amount to US\$ 30 billions annually, Buttell, 1989)

2) **Domestic economic crisis :** the 1981/82 foreign debt

crisis remains unsolved, seriously affecting Third World countries. These countries are obliged to export more cereals each year at lower unit prices, despite their own economic crisis. Large public deficits have made it impossible to continue to supply agricultural credit at subsidized interest rates. The supply of rural credit has been reduced and interest rates have increased. Recessionary policies have been followed by growing unemployment in the cities, impeding the entrance of further migrants into the urban employment. That is, since the crisis began, the absorption of surplus rural labour has been halted.

3) Agricultural crisis: Since subsidized credit was the main factor in stimulating the use of modern technology in the agricultural sector its drastic reduction in recent years has led most farmers to reduce the consumption of fertilizers or, alternatively, to restrict their use to export commodities. As we showed in the first chapter, food production stagnated in the 1980s, while the urban population has grown more than 20% in the same period. Moreover insufficient food supply has exerted pressure on internal prices (inflation).

4) Technological impasse: in many Brazilian regions, namely in the South, where Paraná is the best example, soils have become exhausted after permanent use of chemical fertilizers, fungicides and insecticides, and also excessively compacted by the use of heavy machinery (huge tractors and harvesters). Soybean monoculture has to be displaced to other regions (Mid-West) in order to avoid further soil erosion in this southern region.

5) Colonization and Rural Development policies: the main stream in the 1970s was to open the Amazon regions to colonization so as to prevent social tensions in the already-occupied coastal regions. Nevertheless these policies brought about serious ecological problems (deforestation), huge financial costs due to the

lack of infrastructure(roads,housing,etc) and human costs because people succumbed to disease and either died or returned to their original places.With the exception of some parts of Rondonia ,and possibly Acre ,the rest of the colonization projects can be regarded as a complete failure. (Osorio de Almeida,1984).

The foregoing range of problems brings together the key elements needed to understand the agrarian crisis which still is unresolved in Brazil.Although the current situation might last for some time ,it would be practically impossible to launch a new wave of agricultural expansion under present circumstances .At the same time ,it is unthinkable to reinstate the conditions of abundant credit and subsidies of the 1970s to sustain a new wave of modernization.

As Ribeiro(1987) states, the new wave of economic and agricultural expansion ought to be more rational,basically making better use of the abundant resources,directing the credit and subsidies to family farmers and peasants,and making great investments in transport and trade.According to this author "It does not mean that there is no solution without Agrarian Reform,but the way out of the current crisis would be socially perverse and more complex economically if it is not executed."(Ibid 90).Agrarian Reform would provide productive employment for people who otherwise will be unemployed or trying to migrate to the cities ,and also would help to increase food production.

After the failure of the last programme of Agrarian Reform(PNRA) , new reform proposals have been published.With few exceptions,most researchers and intellectuals agree that a total agrarian reform including all lands,either productive or not, would be impossible for political reasons ,and probably undesirable and achronistic with respect to the current pattern of agricultural development .

Some authors(Rangel,1986,Da Silva,Gr(1987)have proposed

an agrarian reform with social targets or, as Da Silva states an "emergency agrarian reform". This reform would merely distribute "small plots of land, of around 1/20 hectare (500 m²) to locate the house, domestic vegetable gardening and small place for livestock" (Rangel, 1986). The main objective of this "reform" would be to maintain "the unity of the boia fria (3) and his family, whose members will have the possibility to march united towards the large farmers for work" (Ibid 5). In his view, the small plots of land would guarantee the "union" of the family by means of "recreating the conditions for natural production and self-consumption". Da Silva (1987), as we said before, agrees with Rangel's proposal in view of the necessity to avoid further "lumpenisation" among peasants and rural workers. That is, an agrarian reform with "social" goals, independent of agricultural development policy, would serve to maintain the rural family and to avoid its disintegration.

Although a "reform" of this type might have some effect in São Paulo, because of the boias frias, in the rest of the country it would be meaningless to give 500 m² to a family of squatters or sharecroppers who are fighting for their own land, and sometimes already cropping areas of 20 or 30 hectares. Furthermore, it will leave untouched the political power of landowners and large farmers, who, due to this power, usually manage to manipulate the whole apparatus of the agricultural policy. (subsidies, prices, incentives).

Note(3) Boia fria is a popular name given in São Paulo mostly to temporary and casual rural workers usually employed in sugar cane and orange plantations for specific tasks, such as harvesting or weeding.

The separation of agrarian policy (for the small) from agricultural policy (for the large and medium farmers) is meant to maintain "coexistence" between these sectors as if they were not interrelated. As Ribeiro (1987) emphasises "without co-ordination between both policies, the credit system will continue to benefit large landowners who, in turn, devote themselves to accumulating land, while the peasants sector is excluded, isolated and left aside in the peripheral regions" (pg 110).

Between these two proposals (complete Agrarian Reform or merely "social") there is a more rational possibility. Sampaio (1988), based on Cline's simulations (1970) of the impacts of different agrarian reforms in Brazil, concludes that "the strongest positive effects (output expansion and improved income distribution) will happen with a partial agrarian reform" (pg 119). This type of agrarian reform would expropriate only the largest properties, namely, those which are underutilised and of low productivity. The utilisation of those lands by new settlers would "increase self-consumption and also expand the tradable surplus, provided that capitalist activities are encouraged, with the use of modern inputs and credit." (Ibid 120).

In fact, this type of agrarian reform is, from the legal point of view, the only possibility, since the new Constitution prevents expropriation of "productive lands". However, the Constitution is not clear on the definition of this term, and presents further obstacles, such as the need to paying indemnity in advance. Therefore, even to implement this type of agrarian reform, the Constitution will have to be changed.

The use of "underutilised lands" to settle new small farmers does not present major economic difficulties, in our view. It is true, overall, that underutilised lands are actually those with lower fertility and with less infrastructure. For these reasons, it would involve more public spending, such as drainage, deforestation,

irrigation, roads, housing, recuperation of soils, etc, in order to make ready these lands for cropping. Nevertheless, the recent experience of the Mid-West (Cerrados), where millions of hectares of uncultivated land have been brought into production, proves that this it is not an impossible task for the government. Furthermore, the federal government will save money by expropriating these lands instead of the more fertile soils, which obviously are more expensive (and conflictual). That is, the resources saved with the expropriation can easily be devoted to improving the property.

Therefore, the primary concern of the land reform will be to bring areas and sectors of low natural productivity into production, which is an economic task and not merely a social activity, as some authors have argued.

Nevertheless, as we said before, agrarian reform must be integrated with the agricultural policy. This point is crucial for the prospects of integrating small farmers and peasants into the market. In our view, due to the existence of a modern sector, the reorientation of agricultural policy should come ex ante and not after launching the land reform. In the mid-1980s, some attempts to withdraw subsidies and to give more preference to small farming occurred, but the process suffered several interruptions and delays, which affected its effectiveness. Finally, the adjustment of the agricultural policy overlapped with the launching of the PNRA, antagonising all sort of farmers, and ending in complete failure. Moreover the measures to support the new settlers with a special system of credit (PROCERA) came about almost two years later, that is, after the beginning of expropriation.

The transformation of the agricultural policy into a more "liberalised" and market-oriented policy, should have come before, in order to create conditions favourable for the introduction of land reform. The reformist process

would then have appeared within a totally different conjuncture, when landowners were already accustomed to using market mechanisms, and when land concentration had been halted or at least slowed down. Without credit subsidies, most landowners would "remove themselves quietly to urban real estate speculation or liberal professions" (Lehmann, 1978, Ibid 343) leaving the rural sector much more accessible to implement the land reform. As we already pointed out, the main opposition to the PNRA became mixed up with the opposition to the changes in the agricultural policy that the government was trying to implement concomitantly with land reform.

So far we described the main characteristics of "a rational approach to agrarian reform", that is, partial agrarian reform and ex post to important changes in the agricultural policies. However this approach does not include any reference to the use of modern technology. Although treatment to this issue would involve a specific study, it can not be totally excluded from our discussion. Actually small farmers in Brazil are increasingly interested in the use of modern technology, notwithstanding its problematic effects on the ecological environment. However, some institutions have achieved interesting results with the introduction of so-called "appropriate technology", including the use of biogestors, biological control of pests, contour tilling, and so on.

Some recent biotechnological innovations might be very useful in reducing costs of production and expanding agriculture to new regions hitherto regarded as unsuitable for cropping. New species of plants equipped genetically with the capability to fix nitrogen or with stress tolerance to pests can replace the use of fertilizers and insecticides, possible with dramatic effects on costs of production. (Goodman et al, 1987). Other research is under way to create commercial new species

with drought resistant genes, which could allow the development of agriculture in arid areas. Although it is not yet known to what extent these technologies will be accessible to small farmers, this probably will be easier than the former chemicals-based technologies, basically because they would be embodied in new seeds.

In our view, the introduction of biotechnologies might increase the possibilities of an agrarian reform. Potential innovations, such as biological nitrogen fixation, drought resistance, and stress tolerance to pests would allow the development of agriculture in arid and acid soils, which probably will exist in abundance within the unproductive lands to be expropriated. Developments in animal genetics and the production of high fructose corn syrups will affect the profitability of cattle-ranchers and sugar-cane plantations, respectively, which are the most important cases of latifundio still remaining in Brazil. Therefore, the elimination of land in the organization of these activities might liberate important areas for agrarian reform. Landowners would sell their lands, and hence land prices might fall, making the expropriation process cheaper and more feasible.

Nevertheless, in the long term, with the continuing of the industrialization of agriculture, food prices might fall sharply, leaving even small farmers uncompetitive in relation to the industry. By the time that happens, a new agrarian question will be opened to debate and also new solutions will have to be discovered.

CHAPTER THREE

3-REGIONAL AGRARIAN STRUCTURES AND THE STATE STRATEGIES FOR CHANGE.

3.1. INTRODUCTION

The foregoing chapter described the political process of agrarian reform which took place in Brazil from 1985 onwards. It has revealed how the balance of power shifted on account of the landowners' reaction to the plan, and how the government progressively adapted its proposal to the new situation.

Although in 1988 the process of agrarian reform still was controlled by the federal authorities; the initiative changed of hands after the breakdown of the original proposal and passed to local and regional forces.

The specific political composition of State governments, the history of its social movements and the characteristics of the regional agrarian structures overwhelmed, in certain periods, the policy directives from the federal government. Therefore, the agrarian reform was determined by these local specificities, giving new shape to the whole process.

For this reason, we have decided to study the process of agrarian reform by taking into account these regional conditions, in terms of local agrarian structures, regional political forces and their strategies for change.

We have chosen three regions of Brazil with markedly different characteristics: the Northeast, the Southeast, and the South, and three states within these regions: Ceará, Rio de Janeiro and Rio Grande do Sul. The main objective is to

detect similarities and differences stemming from the regional experiences of agrarian reform.

In order to detect these particularities ,we have researched two land settlements within each of those regions.In choosing these settlements among the whole universe of settlements,we have given priority to our main objective ,that is, the analysis of the process of income generation and its economic,social and political determinants.Therefore we had to choose land settlements where the process of development was already underway.It is important to bear in mind that among the five hundred or so land reform settlements there are a great number of very recently established (less than six months since their inception) and others still only partially implemented.We decided to research some of the "older" settlements created by the 1985 agrarian reform legislation ,that is, those initiated at the beginning of this process,in order to discern elements indicative of their future development .In addition ,since the settlements chosen had been created roughly 3 years before our research was undertaken ,they would show their main operating problems and constraints ,rather than the initial problems of installation,which inevitably would have predominated if we had selected new settlements .

The following sections focus on the regional agriculture of the three states named above : Ceará,Rio de Janeiro and Rio Grande do Sul, in conjunction with the local strategies of land reform pursued by the respective state governments .

3.2-AGRARIAN REFORM IN THE STATE OF CEARÁ.

The modernization process ,which has spread so widely in the southern states of Brazil,has not reached ,the northeastern states with the same strength.In the rural sector of Ceará,extensive cattle ranching is still the most common activity among big landowners.Small farmers are usually devoted to subsistence crops,such as beans,maize,manioc or rice, and sometimes they also cultivate cashew nut and coco nut as cash crops(Da Silva,M,1985).

The agrarian structure of the State of Ceará is still highly polarized:a group of big landowners representing 3% of all farmers ,controls 51% of the total land area(IBGE,1985),while ,the remaining 97% live and work on small plots of land,usually under 10has,which is a very limited area given climatic and fertility considerations.

An important part(49%,IBGE,1985) of the total number of farmers are not proprietors of the land they work,and in the case of small farmers this percentage probably is even greater.Small family farming in Ceará (more than in other states),is characterized by insecure relations of land tenure,such as sharecropping ,tenancy and squatting. Historically,these tenants,sharecroppers,and squatters have been in conflict with the landowners due to the fact that they never had legally recognised contracts and the informal relations which predominated are very exploitative.(1)

(1)In some cases of sharecropping 80% of the product goes to the landowner.According to the law,in the case of share tenancies ,the landowners' share was to be limited to 30% of production.

The main goal of the Land Statute of 1964 (Law 4564/64) was to regularize this situation by establishing more "civilized" land tenure relations between landowners and tenants and sharecroppers. The explicit aim was to avoid the development of situations of conflict and social tension which might lead otherwise to a land reform.

However, the implementation of this law, in the twenty years following its approval (1964-1984), was not enough to prevent land conflicts. Exploitative and informal sharecropping and tenancy relations persisted, aggravated at times by violent expulsions of peasants from their lands. For this reason, most tenants and sharecroppers, whose legal rights had not been recognized, embraced the idea of demanding land expropriation as a more effective way of securing access to land. By the end of 1984, land conflicts had become widespread throughout the country and Land Reform was the main goal for rural social movements.

The State of Ceará has been traditionally ruled by the political representatives of the landowners, the so-called "Coroneis". During the military regime (1964-1985), three of these "coroneis" (Adauto Bezerra, Cesar Cals and Virgílio Távora) alternated as governors of the State. In the meantime, the state economy was changing, with new industrial, trade and service activities developing. The complexity of the new economic structure could not readily be represented only by the traditional oligarchy. In 1986, a new fraction of the industrial bourgeoisie managed to take power through electoral procedures, defeating the coroneis at the polls. At the same time, municipal elections in the capital city of Fortaleza brought into power a radical representative of the Workers Party (PT) to power. These elections reflected the political changes in a society where urban and modern industrial interests started to interact in the political arena.

The new governor, Tarso Jerisitati, was not linked to

the traditional landed oligarchy, and instead of seeking an alliance with them, as happened at the federal government level, he decided to press forward with the modernization of the Ceará's economy, including if necessary, the agrarian structure.

This classical political change, which does not occur very often in Brazilian society, explains specifically the strength of the land reform process in Ceará. It is probably the only Brazilian state where the ruling classes support agrarian reform, and not only for political reasons. In Ceará, the industrial sectors, specifically, see in the agrarian reform the possibility of expanding their own business. On this view, the traditional and polarized land structure has worked as a constraint on the expansion of the internal market, and they think that it is necessary to transform it by introducing changes in landownership relations.

The federal institution in charge of executing agrarian reform in Ceará (MIRAD), counts on the support of state institutions, mainly the Agriculture Board which changed its name to the "Agriculture and Agrarian Reform Secretariat". The linking of both activities—Agriculture and Agrarian Reform—in the same agency has never happened before in Brazil, and it represents a major advance in the reformist process.

3.2.1-Mirad's Strategy in Ceará.

With this support and their own political will, Mirad's representatives in Ceará launched a process of expropriation which surpassed the Agrarian Reform Programme of October 1985 (Law N°91.766). In order to understand the perspective of this particular agrarian

reform it is necessary to examine some aspects of the regional strategy.

The Mirad team (Teófilo, F, 1988) developed an strategy of agrarian reform which focused not only on land distribution, but also on the economic organization of each settlement within the regional context. The first step taken to promote economic development in the new settlements was the organization of "Associative Rural Enterprises", instead of traditional land settlements. In the Northeastern states, mainly in Ceará and, Maranhão some old traditions of common landholding and collective land use have survived. This made it possible in discussions with reform beneficiaries to put forward proposals for associative land use, instead of dividing all the land into individual plots.

This old tradition was only the initial point of departure. That is, the new associative enterprises would also have to be economically viable, in order to guarantee the beneficiaries subsistence and their reproduction. According to MIRAD plans, the enterprises were expected to produce an output of more than 3.65 monthly minimum wages monthly per family, in order to pay the labour force (1.5 mw) and reinvest the remainder. This income level represented the lower boundary of viability for those enterprises. According to Mirad's strategy (Teófilo F, 1988), the state would finance the access to the land and the principal initial investments in machinery and implements. But their main effort was intended to be in advising and helping in the organization of those enterprises.

The associative pattern would allow some scale economies within the production process to be internalized. Secondly, it would permit a more precise market orientation in order to find outlets for their products. At the same time, the family labour force working in cooperation with other families would generate surplus

labour time necessary to develop some forms of processing agricultural output into more industrialized products. And, finally, once the capitalist dynamic had been implanted, they will need to improve the quality of their products in order to maintain their market penetration.

The model of Ceará's agrarian reform, in a second later phase, proposes to develop what they call: "Units of Agroindustrial Transformation". The basic idea underlying this proposal is that the agrarian reform process can not be isolated from the regional context. The new settlements risk becoming "islands" of privileged peasants, where financial resources pour in abundance, whilst the people in the surrounding areas remain in the same backward and miserable conditions as always. This occurs mainly in agrarian reforms that are restricted to selected areas and do not encompass the whole agrarian structure.

These "Units" therefore, aim to develop what they call a "sector of production and transformation", covering several land settlements and other small farmers. Within this sector agroindustrial activities would process output from the settlements and the small farmers in the same region.

Actually, this project extends beyond the boundaries of an agrarian reform process, inaugurating in fact a regional development programme rooted in the idea of 'Development Poles', but with the important ingredient of income generation and distribution vectors arising from land re-distribution.

The model pursues a further third step which concerns the trade sector. Thus, trade would become a communal activity as a way to internalize the mercantile or middleman profits. The MIRAD plan includes a project for developing their own marketing strategy, based on the notion of "Ecological products" or organic products. If they succeed in diminishing the use of chemicals during the production process, as anticipated, this will be used

as a major selling point ,arguing that peasant products are of better quality than those which come from big farmers .

In summary ,the model starts with land expropriation,then the second step is to implement associative enterprises ,instead of dividing the land into individual plots and ,finally it proposes a broad programme of regional development on the basis of agroindustrial units with own marketing strategies.

However,the implementation of this model in the real political arena of Ceará's rural sector brought several problems .Despite the lack of political will at the federal government level to execute agrarian reform plan ,Ceará's Mirad has managed to develop a frame of institutional arrangements involving several public agencies .They created the "GERA"(Executive Group of Agrarian Reform),which comprises the Secretary of Agriculture and Agrarian Reform,Mirad,and the State Comission of Agricultural Planning(CEPA).GERA's activities are intend to coordinate efforts and resources from different public institutions in order to enhance their effectiveness.They coordinate several public agencies at the municipal,state and regional levels which are advising and helping the agrarian reform settlements in the countryside.Their aim is to activate and mobilize all the institutions that theoretically should play a role in terms of social development.

This obviously is a difficult task since practically all these institutions had been tied to bureaucratic routines and thus ,are not used to working collectively. Furthermore ,people from these institutions were trained during the authoritarian regime and do not know how to act differently .To develop and implement this model it was essential that these institutions shift sharply towards more participative patterns.

Nevertheless,despite all the cultural and political

constraints, Gera's activities have evolved considerably in comparison to other states. One example of this is the "Settlers Network" that they had organized by October 1988. For this occasion, ten states from the Northeast region sent settlements' representatives carrying agricultural products (for sale), and during one week they met in Fortaleza to discuss their situation and the history of land conflicts. These settlers played their songs and dramatized their stories. It was an important event in Fortaleza, whose population became aware of what Agrarian Reform is directly from the participants (15000 people appeared at the event).

Several organizations supported and participated in the event. The organizers were: FETRACE (Federation of Rural Unions of Ceará), MIRAD, MINAGRI (Ministry of Agriculture), SUDENE (Northeast Board For Development), Culture, Tourism and Sport Secretary, Education Secretary (FUNDELCE), CEPA (Agricultural and Planning Commission), Social Action Secretary (Fundesce) and the Federal University of Ceará.

However, the institutional articulation and the strategy that we have described do not mean the agrarian reform process is secure. On the contrary, as we shall see later on, practical and political constraints obstruct and delay the process, even in the favourable conditions found in Ceará.

3.3-AGRARIAN REFORM IN RIO DE JANEIRO.

The State of Rio de Janeiro is in the Southeast region of Brazil along the Atlantic Coast. Agriculture is less important in this state than its average share in the Brazilian net product (2). Indeed, after the coffee "cycle" in the nineteenth century, Rio de Janeiro experienced a continuous trend of urbanization. Today 94 % of the population lives in the cities, while 6% lives in the rural areas. The percentage of urbanization for Brazil as a whole was 73 % in 1986. (IBGE/PNAD, 1986). Agricultural areas have been abandoned or used for other activities, such as industry, tourism or urbanization. The State is highly populated with 11.248.448 people living within 450.000 km².

Rio de Janeiro was the federal capital of Brazil until the 1960s. This fact and the industrial development, which also took place in this state, generated an important "attraction" force from rural areas towards cities, and mainly to the city of Rio de Janeiro. (3). Migration from rural areas was particularly intense in the period 1970-1980. During this decade, rural areas had a negative migration balance of 52,68%, while population in the cities increased by 8% in absolute terms. (IBGE, PNAD, 1982)

(2) Brazilian agriculture contributed 10% of the Gross Domestic Product (GDP) in 1980, while in Rio de Janeiro this sector contributed only 1.4% of State GDP in the same year. (Source: Fundação Getulio Vargas, Centro de Contas Nacionais).

(3) The State of Rio de Janeiro has the third highest GDP per capita among Brazilian states, only being surpassed by São Paulo and the capital, Brasília. (FGV, 1980).

However, rural-urban migration does not reflect any important process of agricultural change (modernization and expulsion), as happened in many other parts of the country (4). Although agricultural modernization has occurred, the attractive conditions generated by urban development were the main force behind migration. The development of a significant construction sector created a growing demand for labour, which was fulfilled by people coming from Rio de Janeiro's rural areas and from many other parts of the country, especially from the Northeast.

At the beginning of the 1980s, the city of Rio de Janeiro was overpopulated in relation to its own urban infrastructure, and shanty towns had spread throughout its periphery. Approximately one third of the total population was living in shanty towns in 1980. (Guanziroli et al, 1983).

In the meanwhile, first construction activity and then the whole economy went into recession, diminishing sharply the demand for labour. The 1982-1983 economic crisis strongly affected Rio de Janeiro's workers who already had lost their main source of employment in the building business. Unemployment and precarious urban housing conditions led some workers to take a new trajectory, that is, to return to rural areas, looking for land to cultivate and build their houses.

(4) Rio de Janeiro has roughly half the number of tractors per cultivated area found in Rio Grande do Sul, and merely one third of the number of tractors used in São Paulo agriculture. The average number of tractors for each 100 hectares is as follows: Rio de Janeiro: 0.3, São Paulo: 0.8, Rio Grande do Sul: 0.6, Brazil: 0.2. (IBGE, 1985 Census).

On the other hand, the agricultural stagnation provoked by the exodus of rural population and capitals in the 1890s, after the coffee cycle, had left the city of Rio de Janeiro practically without food supply sources. The rural sector supplies barely 10% of total demand for food, the remaining 90% has to be imported from other regions or from abroad (5). In general terms, this was the situation in the state before the process of agrarian reform began.

3.3.1-The process of agrarian reform.

The rural sector of Rio de Janeiro has been the locus of several land conflicts during the past decade. According to FETAG (Federação dos Trabalhadores Agrícolas de Rio de Janeiro), in 1981 there were 61 land conflicts involving 6100 families (Fetag, 1981). The main feature of these disputes was long-standing conflicts involving property rights between landowners and squatters. Nevertheless, in some regions of the state conflicts have raised other problems. Rio de Janeiro has basically four regions: the hills', the plains (sugar cane area), the Atlantic coast and the "fluminense' lowlands".

In the hills, where the coffee cycle took place in the last century, land was abandoned and occupied later, mostly by cattle-ranchers. Small farming is also quite common there, although in conflict over property rights with landowners.

(5) In Rio de Janeiro only 18% of the total rural area was devoted effectively to agriculture (permanent and temporary crops) in 1985, while São Paulo had 32% of its land in crops, and Rio Grande do Sul 28% in the same year. (IBGE, 1985)

In the plains, rural conflicts erupt every year between sugar-cane workers and the refinery owners over wages and working conditions. Although it is a classical class conflict, land issues have also been included by workers' unions in their campaigns. (FETAG, 1981).

However, most land conflicts have occurred in the rural areas along the Atlantic coast. With the construction of an important coastal highway connecting Rio de Janeiro and the port of Santos, in the mid-1970s, huge tourist investments have poured into the region, and mainly on the coast, where hundreds of peasants, fishermen and slave descendants (Guanziroli, 1983), used to live and coexist with restricted tourism. But, when the area was opened up to massive tourism, coexistence was no longer possible and the new tourist developers decided to "clean out" the area; that is, to throw the local population off the land.

Land prices in such centres as Angra dos Reis and Parati rapidly increased, due to tourism. Thus, former peasants and fisherman represented an obstacle to the transformation of coastal areas into a tourist region. In the seventies, 27 land conflicts erupted there involving hundred of families.

Finally, very near the city of Rio de Janeiro, in the "fluminense" lowlands, conflicts occurred between building property developers firms and the semi-urbanized populations. (Araujo, F. 1982). Here also, property rights have not been legally resolved, and the expansion of the shanties and semi-urbanized populations clashed with the interests of the supposed landowners.

Until 1983, land conflicts were merely defensive, that is, each time the business developers intended to "clean out" areas which were inhabited, the people from these areas tried to resist their expulsion, sometimes successfully but, in the majority of the cases, the developers have prevailed.

By 1984 ,a new phase began in terms of land conflicts.The economic recession and particularly the recession in Rio's construction sector,affected large numbers of workers.Those workers ,some of them temporary and unskilled workers,became unemployed or took such casual jobs as hawking (cameló),begging ,informal car washing or car-parking ,and also burglary and prostitution.Some of them ,former rural workers or small farmers ,preferred to make their way back to the land.

The first indication that something had changed,was given by the "Campo Alegre" land occupation in 1984.Near to the city of Rio de Janeiro,in the Nova Iguaçu district,more than 300 families took over a big and unused area called Campølegre. Those families,mainly composed of ex-peasants and urban unemployed ,decided to develop an agricultural settlement within the interstices of rural structures found in the "Fluminense lowlands".There were some farms in the area devoted to cattle-ranching, as well as sites used to deposit rubbish or industrial waste.Ownership rights of these areas was not clear ,with overlapping putative owners claiming to own the same area,a situation known as "grilagem" in Brazil.

The new phase of land occupations coincided with a shift in the political conjuncture.In 1982, an ex-governor of the period before the military regime,Leonel Brizola,won the first direct elections for state government held under the military regime.During his former mandate,in 1962-64,he had advocated agrarian reform ,influencing the federal government to approve a law of land re-distribution.

The governor for Rio de Janeiro before the military coup of 1964 ,Mr Roberto da Silveira,had authorized some land expropriations within the state.Although Mr. Da Silveira was responsible for those actions, the name of Brizola became much more identified in the popular mind with the idea of land reform .

As we could verify through the interviews, the knowledge of the former land reform had remained firmly in the memory of peasants and rural workers of both states, Rio de Janeiro and Rio Grande do Sul. With his return to power, several land occupations occurred, mainly taking over areas expropriated before 1964, but which had remained idle or been given to politicians and friends of the military during the military regime. In fact, those areas were now "public lands", and therefore, the new governor did not need to expropriate them again, as it was just a matter of land settlement.

The example of Campo Alegre spread rapidly to other areas within the state, leading the State Government to create a specific board, SEAF, Secretaria de Assuntos Fundiarios to deal with land issues. This board has had to organize and support the new settlements which occurred spontaneously in the state. Some have been created recently on account of land occupation of public lands, such as Italva, Victoria da União, Valença, and the very case of Campo Alegre. However, others were simply former settlements which have been forgotten over the years, such as Pedra Lisa, Normandia and São Domingos, for example.

The creation of SEAF preceded Mirad's programme of agrarian reform, and due to this fact, it has had more experience in organising land settlements. Nevertheless, after 1986, Mirad's expropriations equalled the total number of Seaf's settlements, as we shall see in the next chapter.

3.3.2-Regional Strategy of agrarian reform.

Although MIRAD is the main institution in charge of agrarian reform, several boards in São Paulo, Paraná and also Rio de Janeiro, have established their own land settlements and followed

different strategies from Mirad.

In our view, state boards had to act before the Federal Government intervened (Agrarian Reform Plan) due to the worsening economic and social situation in their own states, in terms not only of rural conflicts, but also because the urban situation of the main cities had become increasingly insupportable. (Violence, crimes, urban lands invasions, etc). Therefore we will consider both strategies of land reform, that is, the SEAF and MIRAD programmes of land settlement.

The State sponsored board (SEAF) intends to achieve two major goals through their policy of land settlements: (1) to create a "Green Belt" around the city of Rio de Janeiro by making better agricultural use of idle areas in order to supply its population with vegetables and food; (2) to transform peasants and small subsistence farmers into market-oriented units of production. SEAF can count on reasonable regional conditions to develop this kind of agrarian structure, such as several small areas well-adapted to small-scale agriculture, moderate soil fertility, abundant water availability, and what is more important, proximity to RJ, which is an enormous consumer centre.

The SEAF plan aims the development of intensive agriculture with irrigation support, based on the following systems:

a) Irrigated "Olericulture" : These crops, like okra (quiabo), pumpkin, and sweet potato, increase in price during the dry season (winter). Trading intensively in this sort of product would bring these units to the threshold of economic viability.

b) Tropical Fruit-Trees : this activity might create a more permanent source of monetary income in the near future. They include plants like: banana, passion fruit, avocado, papaya, mango, and orange in this section.

c) Subsistence activities: The new units would develop their

own subsistence scheme ,based on traditional crops like beans,corn and manioc, complemented by small animals (swine,goats,sheep) .Some settlers have also developed activities which are complementary to one another ,like the complex swine-corn,fish-swine (feeding fish with the swinedung),or chicken-oranges .

The development of such units would involve the use of modern technology,like fertilizers and correctives ,in order to improve soil productivity.Furthermore,each settlement would have at least one truck so as to sell the output directly in the market without passing through intermediaries.The plan also involves output processing within the settlement before being traded.Finally, the social aspects ,like health,education,handicraft activities ,are included in SEAF plans for each settlement.

Although we have said that this range of activities forms part of a plan,in fact ,it is rather local strategies which in the end shape that plan .SEAF, in practice ,is following "a plan" but without having elaborated one .This pragmatic execution of activities,represents some kind of "Rural Integrated Development " or Urbanization of Rural Areas strategy.

MIRAD similarly has not followed any specific strategy for Rio de Janeiro.Its programmes are rooted within the federal programme of agrarian reform ,which follows the same lines in all states.

The first step in that programme comes immediately after the settlers officially takeover of the area and attempts to guarantee their subsistence.During six months, they will receive "Food Aid" from the federal goverment .In the second stage, the Preliminary Plan(P.P) is elaborated,which includes the initial activities of boundary-survey and the renovation of the farm's infrastructure .The settlers then receive the Food and development Credit or CAF(Crédito de Alimentação e Fomento),which would permit them to plant their first crops

and to buy some implements. The following step is the Immediate Action Plan or PAI (Plano de Ação Imediata), which makes some productive investments and establishes infrastructure that did not exist previously, such as drainage, roads, electricity etc. Finally, they must elaborate a "Definitive Project" (PD) covering all the aspects needed for the permanent consolidation of the settlement. MIRAD's supervision would end at that time, with so-called "Emancipation", when settlers are given full title to their holdings.

The implementation of all these activities is not MIRAD's exclusive responsibility. The idea is that MIRAD would sign agreements with other institutions in order to execute these activities. In Rio de Janeiro the CERA (State Commission for Agrarian Reform Support) comprises several state boards, and even federal representations. This commission is also supported by the federal programme of "De-centralization". In the case of Rio de Janeiro, differently from Ceará, the creation of this commission is merely a bureaucratic measure.

The implementation of all these projects must proceed in sequence; that is, if the settlement has not yet fulfilled the first step (all the phases are controlled) it can not receive the credit which relates to the following phase. Furthermore, even when one of those steps has been already fulfilled, the settlers have to wait until the new project has been elaborated, approved by the specific institution, sent to the respective bank and, finally, if the bank does not delay for one reason or another, they will receive the grant.

Perhaps the existence of this bureaucracy explains why most the settlements have not yet gone beyond the PP (Preliminary plan), and only two are going to be included in the PAI (Project of Immediate Action). This rigidity seriously affects the development of the programme of agrarian reform, and although some flexibility is allowed

at times, in general terms the whole process is excessively tied to rules, papers, agreements and delayed decisions. Nevertheless, as we shall see below, the existence or not of a good strategy within the government does not determine totally the outcome of the process.

3.4-AGRARIAN REFORM IN RIO GRANDE DO SUL.

The State of Rio Grande do Sul is in the Southern region of Brazil bordering Uruguay and Argentina .Along with Parana and São Paulo, it is one of the most important cereal producers in Brazil .It has excellent natural resources for agriculture, both in terms of soils and weather, and also in terms of communications with the main consumer centres.Agricultural modernization took place in this State before later spreading to other places in Brazil,and since then(1950-55) most farms have adopted modern techniques of production.The agrarian structure is less concentrated than the Brazilian average and strikingly different from that found in the Northeast.In Rio Grande do Sul there are some big latifundios ,but they are not representative of the agrarian structure,which is characterized by medium-sized farms and ,in some parts, by small family farms.

Nevertheless ,the modernization process in the 1970s created a mass of landless people .Higher thresholds of technical efficiency and widespread credit indebtedness provoked the failure of thousands of small family farms.Moreover ,farmers' sons found themselves without productive alternatives within their parents farms due to technical constraints on the sub-division of holdings.Thereafter,land conflicts began to disrupt the process of agricultural modernization.

It was within this context that the federal government(MIRAD) and the state government undertook a number of land reform projects.There is no plan to transform the agrarian structure of Rio Grande do Sul and the main purpose of these actions was to reduce land conflicts.So far ,neither the social goal of solving the problem of some landless families nor the political objective of ending land conflicts have been achieved.

In fact, any plan of agrarian reform in the southern states ,however limited its aims ,has to overcome

landowners' opposition, as well as the obstacles represented by the agricultural sector itself. This sector has been shaped by the development of highly commercial commodities, consolidating an agrarian structure that is very difficult to transform.

Before MIRAD entered the scene, the state government had been forced to intervene to tackle some land conflicts, which were spreading very rapidly through the region. Since the beginning of the eighties, the state government had dealt with land conflicts on a case-by-case basis and established settlements as ad-hoc solutions in an effort to patch up the situation.

Rather than agrarian reform, these settlements involve the re-distribution of public lands; that is, they do not aim to transform the agrarian structure through the mechanism of expropriation. However, most settlers have been placed on lands which had been expropriated in the past. Thus we can regard these actions as aspects of the current process of agrarian reform.

3.4.1-Northwest Region of Rio Grande Do Sul.

Although the settlements are found in different parts of the state, most of them are located in the Northwest region. This region is called the "Planalto Meridional" or "Forest Region". The settlements visited for the field research are also located within this region in the districts of Ronda Alta and Sarandí, which belong to the micro-region called "Colonial de Iraí".

This region was been originally colonised by European immigrants, mainly Polish, German and Italian

settlers ,at the end of the nineteenth century (Brum. A, 1988). These immigrants settled in two valleys ,around the Ijuí River and the Upper Uruguay river, which afterwards became known as the "New Colonies". (Idem, Brum).

During the first half of the twentieth century ,the European settlers developed their agricultural activities based on traditional technology and intensive use of small plots of land. They were used to combining different crops and animal breeding ,mainly for subsistence.

According to Brum (1988), this model became obsolete and unable to provide an adequate livelihood due to the following factors: a) soils became exhausted after long periods of intensive cultivation, b) the plots became undersized after division by inheritance and , c) the settlers were badly affected by adverse agricultural policies and low prices for their products. Many families and farmers' sons had to migrate to other regions ,such as Southwestern Paraná and Santa Catarina ,where they inaugurated a new phase of land colonization.

By the 1950s ,this region was swept along in the wake of the process of agricultural modernization. The "Planalto Gaúcho" has been the cradle of the modernization process in post-war Brazilian agriculture. The process of agricultural mechanization and technological innovation started in this region and expanded to other regions in RGS and then to Paraná, Santa Catarina, and São Paulo ,recently reaching the Middle West of the country.

With the modernization process ,rural activities became less diversified .In fact, only two crops dominated the sector during the 1970s:wheat in the winter and soy-beans in the summer season.Although,rice production had experienced technological innovation at the beginning of the century,the most important and widely diffused process of technical change took place with wheat cultivation in the 1950s,thanks to federal state and government modernization incentives .Launched in Passo Fundo and Carazinho(Brum,1988),wheat expanded afterwards to other areas of the "Planalto Gaucho".

In the 1970s, soybean production was stimulated by expanding world markets,reaching its apogee at the end of that decade.The "soybean boom " ended with weakening world market prices ,several failures due to weather variations, and soil exhaustion,leading farmers to diversify their product mix by introducing corn and pig production.

During the "soybean boom" ,land prices increased significantly ,and many indebted farmers who had tried to integrate themselves into the process of modernization but failed, preferred to sell their lands and leave the region.

Most went to the Amazon region where land prices were lower.But ,as is well known ,they had to face very adverse conditions in terms of quality of the soils,health problems, and large distances from the consumer centres.Only those successful farmers who settled on the best soils of Rondonia did not return,but an important percentage came back after being defeated by the bad conditions on the frontier.

These returning migrants,together with small farmers from the planalto region and unemployed rural workers ,combined to create an important new rural social movement (1981),the Movement of Landless Workers (Movimento dos Trabalhadores sem Terra). Its main sources of membership are:

- Settlers who had to sell their lands during the process of modernization.
- Settlers returning from the Amazon ;
- Small farmers who had been expelled from their lands by hydroelectric projects;
- Settlers' sons and daughters who found themselves landless due to limits on the process of sub-dividing the family farm;
- Small farmers expelled from Indian areas (Nonoai);
- Ex-tenants and sharecroppers expelled from land by landowners in order to extend soybean production.

Approximately 200.000 small farmers and former settlers lost their lands during this process in the 1970s .Some as we have seen , went to Amazon,others migrated permanently to the cities, but a portion of them decided to stay in the region looking for land where they could re-settle .One of the settlement we researched has been at the centre of the reform process supported by the landless movement in the 1980s (Macali I).It is the case of small farmers who were expelled from Indian areas(Kaigang Indians,in Nonoai-Planalto).

In 1981 at Encruzilhada Natalino(Ronda Alta)they formed the first "roadside encampment " in Brazil demanding land reform and creating strategies of resistance and struggle that have been widely imitated elsewhere. Thereafter many other land invasions and encampments occurred in other regions of RGS, and then in Paraná, Santa Catarina, reaching even the North and Northeast of Brazil.

3.4.3-Agricultural development in the region.

The settlements that we researched are situated in the microrregion called "Colonial de Iraí" .(Northwest of RGS).They belong to the

districts of Ronda Alta and Sarandí .The agrarian structure is less concentrated than the Brazilian average.As the following table shows ,small and medium -sized farms are the feature of the region,and none exceed 10.000has..

Table 3.1
Land Structure in Ronda Alta and Sarandí

Area Groups	Ronda Alta				Sarandí			
	N°est	%	Area	%	N°est	%	Area	%
Less 10 has	952	39	5016	9	511	25	2583	5
10has to <100	1444	58	30822	53	1494	73	34551	67
100 to <1000	69	3	19413	33	33	2	10135	20
1000to <10000	3	-	3224	5	2	-	4278	8
More 100000has	-		-		-		-	
Total	2468	100	58477	100	2043	100	51550	100

Source: IBGE, Preliminar Sinopsis, 1985.

As noted before, 98 % of the total number of farms are less than 100has ,and although they do not control a similar percentage of land ,they account for between 61% and 72% of the total area.

Average farm size varies from 24 to 25 has,while the Brazilian average is 64.9 has (IBGE,1985).There are significant differences if compared with the Brazilian agrarian structure.In Brazil as a whole, properties of more than 1000 has own 43.8% of the total area (IBGE,1985) ,while in Ronda Alta these scarcely dominate 5%.

The relatively weak position of the landowners in the area ,perhaps can be regarded as an explanation for the strength of the landless movement there.However,the weakness of the latifundio is at the same time a constraint

to the expansion of the agrarian reform programme .The area even on large farms is nearly totally cultivated and there are a few farms with more than 1000 has:3 in Ronda Alta,and 2 in Sarandí.This means that after the expropriations which have already been made land reform probably is finished in these districts.That is given the new criteria approved in the 1989 Constitution that only unproductive lands can be expropriated for land reform purposes. As the following table shows, temporary crops are the main activity in both districts:

Table 3.2.
Land Use in Ronda Alta and Sarandí

	Ronda Alta		Sarandí	
	Area	%	Area	%
Permanent Cultures	250	0,4	642	1,2
Temporary Cultures	45278	77,4	34238	66,4

Source: IBGE, Agricultural Census, Preliminar Sinopsis, 1985.

Family farms are the common feature within the region. On average, these farms use 3.5 persons , that is , the head of the family and some of his children, plus one employee on some occasions. The region is highly mechanized, in comparison with the Brazilian average. There is one tractor for each 70 has , on average ; that is , one in three farms has, at least, one tractor. In Brazil as a whole there is one tractor for each 577 has (IBGE, 1985).

Agriculture typically is complemented by livestock production of some kind . An important percentage of farms have cattle (82%) , swine (80%) or chickens (83%) , as a complementary activity. Farmers on average have 7 cows or

oxen ,12 pigs , and approximately 50 chickens.This kind of livestock production is characteristic of the family farm structure in the South.They are mainly oriented to cereal crops for the market ,but devote part of their time and land to livestock as well.After the period of bankruptcies of the 1970s,the family farm structure of production seems to be quite well consolidated in the area .

3.5-CONCLUSION.

The foregoing exposition shows the spatial and political dimensions of three different experiences of agrarian reform. With regard to the regional (spatial) agricultural context, the three regions are so different in terms of soils,climate,topography,settlement ,and history, that they could be considered as different countries.

Nevertheless ,these regions are equally engaged in the programme of agrarian reform launched by the Federal Government in 1985.In this sense ,agrarian reform is the leit-motiv which has stimulated most of the political changes in rural areas since that time.As we pointed out before ,the process of agrarian reform,after suffering a breakdown at the federal government level ,unfolded in the states as regional strategies of land reform.Despite the slowdown of the programme,the idea had already taken hold even in the remotest areas of Brazil,leading peasants and landless masses to demand its execution and to struggle for access to the land.Hence,the goal of agrarian reform has become the common political reference benchmark for all regions in Brazil following the launching of the plan in 1985.

The political consciousness of the people involved in the reform process in the three regions analysed,appears to have been influenced by the earlier experiences of

agrarian reform in the 1960s. In fact, the transition to democracy has allowed the past, in terms of social struggle to be rediscovered, thus providing continuity in the fight to complete one of the unfinished reforms of that time, namely, agrarian reform. This reform now is seen as the pre-condition for most of the rural population in Brazil to exercise the rights of citizenship. Apart from this unifying factor, however, what remains are striking contrasts and regional specificities.

Firstly the agrarian structures and agricultural activities are completely different. In the poor and arid lands of the Northeast the traditional complex latifundio/minifundio predominates, while in Rio de Janeiro most lands are actually abandoned, and in Rio Grande do Sul's fertile soils, agriculture has been modernized by family farming and capitalist relations of production. The social actors involved in the process are therefore related to these structures. Sharecroppers and peasants in the Northeast, urban unemployed and ex-tenants in Rio de Janeiro, and members of small farm families in the South each have exerted a differentiated influence to the process of agrarian reform.

Secondly, these regional specificities are mirrored in the political scenario of these three regions, leading to different strategies. In Ceará, the process of agrarian reform has counted on an ambitious strategy elaborated by the state, and social movements appear rather dependant on the execution of that strategy. At the other extreme, the process of agrarian reform in Rio Grande do Sul has been fostered from below. The social movements (MST) indeed have imposed their own strategy on the government, which, in turn, did not have overall strategy of agrarian change and tended to tackle the conflicts one by one. In Rio de Janeiro, this process developed more spontaneously, without any preconceived strategy, either from the government or from the social movements.

In sum ,heterogeneous social relations and political strategies have impressed their mark upon very different spatial conditions ,engendering particular processes of agrarian reform within each region of Brazil.For this reason , the following sections of this thesis will maintain the regional approach of analysis.

CHAPTER FOUR.

4-IMPACT ON THE REGIONS OF THE PROCESS OF AGRARIAN REFORM.

4.1-INTRODUCTION

Apart from the political motivation of the federal authorities, the programme of agrarian reform has evolved in accordance with the specific conditions found in each region, as outlined in the last chapter.

In this chapter, we consider the impact on the regions of the process of agrarian reform. In the first section, we examine to what extent the programmed goals have been achieved in the regions; then the gap between the plan and the reality is analysed with regard to the regional constraints. In the following section, we assess the impact of the programme by drawing on evidence about the political, social and economic performance of the settlements in the regions. Finally, the participation of the social movements in the process of seizing the land is presented in the context of the political change that those actions have exerted on regional power structures.

4.2-EFFECTIVE EVOLUTION OF THE AGRARIAN REFORM PROCESS .

Since the Land Reform Proposal was announced in March, 1985 until April, 1989, the Minister of Agrarian Reform (Mirad) has established a total of 427 new land settlements. The following table shows the position for the regions that we have researched :

Table 4.1 Evolution of the Programme of Agrarian Reform
(Between 15/03/1985 and 26/04/1989)

	CEARÁ	R. DO JANEIRO	R. D. SUL	BRAZIL
1-Programmed Goals-Area(has):	960.000	160.000	360.000	27.720.000
2-Expropriated Areas (has) :	116.999	20.992	12.683	4.340.979
3-Percent of execution(2/1) :	12.2	13.1	3.5	15.7
4-Settlement Projects (has) :	84.227	15.402	16.489(*)	4.114.123
5-Percent of execution(4/1) :	8.8	9.6	4.6(*)	14.8
6-Percent of Occupation(4/2):	71.9	73.3	100	94.8
7-Programmed Goals-Families :	32.200	10.400	22.600	900.000
8-Potential Capacity in terms of families :	2.563	1.513	635	106.691
9-Number of families being settled :	2.398	1.044	672(*)	78.147
10-Percent of execution(9/7):	7.4	10.0	3.0	8.7

(*):This item includes some areas expropriated before 15/03/1985.

Source: MIRAD (Minister of Agrarian Reform and Rural Development).
SEASC (Secret. of Settlement and Colonization)
DPO (Department of Control).
This list was prepared especially for our research.

As Table 4.1 shows, the process of agrarian reform is far from achieving its announced goals. During its first three years, the process of expropriation covered merely 15.7% of the target area, while in the regions that we studied this percentage was even lower. Although originally the programme focused on the already-established agricultural areas, in fact most expropriations have occurred in agricultural frontier regions, on account of the availability of underutilised lands there. In Rio Grande do Sul in particular (3.5%), the process of agrarian reform has fallen significantly below the national levels of execution.

In terms of number of families benefited, the process has been even slower. Roughly 10% of the total amount of families which were expecting to receive land in accordance to the original PNRA programme were established in land settlements during this period, this percentage again being less in the case of Rio Grande do Sul.

4.2.1-Regional constraints:

As we already said, the balance of political forces had changed in Brazil practically at the same moment when the plan was announced, in October 1985. Nevertheless, other problems, apart from political constraints, affected the agrarian reform programme. After the first step (expropriation), lots of new practical problems appeared. Agrarian reform means that new forms of organization of production must be implemented, and this second step was not so easy to tackle. The very structure of MIRAD was ill-prepared to foster rapid execution of the agrarian reform plan. One of the most important problems which affected the implementation process was located in the area of financial resources.

In Ceará, the process of agrarian reform (i.e. the actions after land expropriation), started in 1986 without any

source of credit or financial resources. During this year the only activity which could be implemented to support the first settlers was technical assistance.

The following year, 1987, the Northeast region suffered a severe drought. The drought, paradoxically, helped the programme. As usually is the case in these situations, the authorities implement "emergency projects" to help the rural poor people, but actually this money largely finds its way into the hands of landowners and ranchers. (Cavalcanti et al, 1973). However, due to the new articulation of political forces within Ceará's government, part of these funds in 1987 were spent on the settlement projects of agrarian reform. With these resources, the settlements began to be supplied with basic infrastructure, mainly housing, water supply, and roads. In addition by the end of 1987, the federal government started to deliver some financial resources, through the system called "C.A.F", (Assistance and Support Credit), which is orientated towards production.

Nevertheless, only in 1988, after two years with uneven flow of resources, did Mirad begin to deliver seeds in order to launch the production process. Also in 1988, a specific credit line for agrarian reform was implemented by the federal government, called PROCERA (Special Credit Programme for Agrarian Reform). This programme offers financial resources at low rates of interest to develop the productive infrastructure within the settlements. In the case of Ceará, these resources have been allocated to develop permanent crops, cattle & livestock, and to buy agricultural implements and machinery.

Without this kind of credit it would be impossible to start any productive process among people who do not have any capital endowment, and who otherwise very rapidly would consume their working capital, and probably give up being settlers.

It must be noted that in Ceará the survival and

improvement of some projects were the outcome of unforeseen mechanisms, discussed below. The irregular flow of financial resources and the delay and shortcomings in the definition of the special programme of credit obviously affected their development.

In Rio de Janeiro, though credit has been available earlier than in Ceará, the need of credit was more important, due to the different characteristics of the agricultural sector, particularly its higher level of modernization. Despite the higher demand for financial resources, barely 30% of the settlers have received CAF credit (Programa de Assitencia e Fomento), and only 40% entered into the PROCERA credit programme.

Due to the scarcity of credit, merely 40 % of the MIRAD settlements are using modern inputs (fertilizers and correctives), while almost all the SEAF projects used them. Furthermore, only 20 % of the MIRAD settlements have their own modern machinery for ploughing and none of them has any harvesting machinery. With neither trucks nor any storage facility, these settlements depend on the intermediaries in order to sell their production.

In terms of infrastructure, MIRAD settlements are also in worse conditions, if compared with SEAF projects. Until now, very few infrastructure works have been implanted inside the MIRAD areas, just some sheds and community halls, and three drainage works.

It must be noted also that Seaf's settlements have had aid from the LBA (Liga Brasileira de Assitencia), which has lent machinery and money to build infrastructure. This institution does not work with Mirad. Although these MIRAD settlements were created very recently, approximately 1½ years ago, they are indeed very delayed in all aspects concerning production and, moreover, in terms of social infrastructure. One of the signs that their needs are not being met satisfactorily, is the fact that EMATER (Empresa de Assitencia Técnica e Extensão Rural) has yet to do any

serious research on the soils within the settlements. Therefore, it is clear that the settlers are producing precariously and following their own criteria.

The need for technical advice is very great in RJ because, as we pointed out above, most of the new settlers have come from urban areas with few notions about agriculture, just what they remembered from their past experience. In fact, Mirad and Emater recently have signed an agreement which assigns two persons to each settlement, one to give agronomic advice and the other as a social visitor, but this agreement has hardly been implemented.

4.2.3-Other obstacles in the process of settlement

There are some structural problems within the projects that constrain their development. The following appeared to be main structural constraints faced by the settlers : 1-Inadequate size of some areas, 2-Quality of the soils, 3-Inherited internal conflicts within the project.

In the case of Ceará practically all the projects respected the minimum size per family established by the government. (1). However land fertility, irrigation facilities and distance from the local centre played a negative role in their development.

(1) According to INCRA Special Instruction of 1/2/78, the minimum hold of land per family should not be less than 30 hectares. The size of holdings on different settlements are shown in annex 4.1.

The rural module, according to MIRAD's definition, is the minimum area of land necessary to generate income for one family. Its size varies depending on soil fertility and regional conditions for production and trade. In RJ it has an average of 15 has.

However, some settlements suffered from the effects of inherited conflicts within the area expropriated, between the different categories of household producers living there, such as :tenants,sharecroppers,ranchers ,foremen ,rural workers and squatters ,who afterwards become settlers on the same project.The existence of these categories has given rise to the appearance of political forces which fight to maintain or increase their power.These social actors each have their own history,formed by different kind of events (marriages,religious groups,political differences,violence, crimes,etc).Their history is part of the initial endowment within the settlement.

The very idea of developing a communal pattern of organization ,like that in Ceará,accentuates the internal power struggle.When family relations cross the social structure vertically ,it might be easier to integrate ex-foremen with ordinary settlers within a common project,since they belong to the same family.The average age also influences this process of internal integration.Younger settlers are more comfortable with new things or new ideas.Another problem which appears usually each time a communal activity has been implanted is the education level of the leaders .A communal pattern of organization involves a lot of management activities which sometimes exceed the settlers' capacity .

The Rio de Janeiro settlements,sponsored by SEAF, mostly failed to provide families with holdings equal to the rural module for the region.The area per family in the settlements varied widely from some cases of 12 hectares,close to the minimum or module size, to other very small holdings of about 3 hectares(See Annex 4.2).

Settlements created by MIRAD ,however, roughly achieved the minimum threshold per family as the annex 4.3 illustrates.In fact ,the problem of size of holding has been offset by the advantage of being located very near to

the commercial centres, on average, only 18 km away. In addition, soils in the area of level ground are reasonable in terms of fertility, in contrast to the position found in Ceará(2).

Most settlements, however, are still very precarious in terms of housing, sanitary conditions (water supply and waste channels), electricity and drainage of swamp areas. Practically none of the settlements have electricity, nor proper waste channels or purified water.

Actually, there are no important differences between the settlements established by SEAF and MIRAD in terms of social conditions. The production side is better in the former due to the fact that they have received free inputs and machinery. The main difference between them arises from the complex bureaucratic relationships which have hindered the execution of Mirad's agrarian reform. Legal problems, demarcation discussions, rules to be observed and steps to be followed all delay the settlements' development, unless the settlers organize themselves to claim their rights and freedom from the bureaucratic framework of relations, as happened in one of the settlements we describe below. In this respect, Seaf's actions go directly to the production side, shortcutting "legal" and bureaucratic obstacles.

In Rio Grande do Sul the State sponsored projects also were below the minimum or rural module size of holding necessary for one family, while the others (MIRAD) roughly achieved this benchmark. (Annex 4.3). Nevertheless in RGS, the size of holdings and the relation to the minimum module have been at the centre of discussion among the rural social movements.

(2) Most soils are latossolos podzólicos or hydromorfic, belonging to the category 2 a(b)c. The letters means that the soils demand the use of moderately advanced technology, fertilizers and correctives, due to their low natural fertility. The scale goes from 1 to 8.

4.3 AGRARIAN REFORM'S ECONOMIC IMPACT ON THE REGIONS.

Despite the economic and social constraints described above, the process of agrarian reform brought changes in regional political structures and in the very process of regional development.

In order to assess the influence exerted by the process of agrarian reform on the regions, it is important first to show the settlements' own economic performance. The following table illustrates this issue using one of the Rio Grande do Sul regions as an example.

Table 4.2
Agricultural performance in Ronda Alta Settlements
(1988)

Settlement	Area (has)	Fams (N°)	Soy-beans (t)	Corn (t)	Wheat (t)	Beans (t)	Rice (t)	Pork (t)
Macali I	923	68	655	297	435	42	75	42
Macali II	558	36	475	194	262	132	25	32
Brilhante	1640	102	918	453	588	37	51	86
U. Vitoria	172	16	81	87	59	12	12	17
N. Ronda. A.	108	10	90	141	53	9	9	10
N. S. Terra.	187	15	162	120	117	6	11	14
Passo Real	1095	57	854	187	-	6	23	35
TOTAL	: 4683	304	3235	1479	1514	244	206	236

Source: Cetap (Centro de Tecnologias Alternativas Populares), 1988. Evaluation Reports on economic performance in the settlements, and Emater (1988).

Note: Most of this output goes to the market. Soy-beans and wheat are the usual cash crops (100% for the market), but they also trade 50% of their corn, and 30% of the rice and beans.

The economic result of this production in terms of income/per family can be seen in the following table:

Table 4.3
Agricultural income in the Settlements.
(1988)

Product	Total Output OutPut (t)	Output Sold Sold (t)	Gross Product Product (Otn's)	Production Costs Costs (Otn's)	Net Income Income (Otn's)	Net Income (min wages)
Soy-Bean	3235	3235	100824	53436	47387	5809
Wheat	1514	1514	40878	27797	13081	1603
Corn	1479	739	12316	12400	-84	-10
Beans	244	73	3111	1866	1245	152
Rice	206	62	1031	670	361	44
Pork	236	189	37800	8316	29484	3614
Total:			195960	104485	91475	11212

Source: Data from Cetap (idem op cit).

Transformation in Otn's and in minimum wages is ours.

Soy-beans clearly is the cash crop which generates most of their income, followed by swine production, and then wheat. The other products are just complementary in terms of income and are basically devoted to the settlers own consumption or to feed animals. According to data from CETAP (Centro de Tecnologias Alternativas Populares) (1988), each family approximately earned in 1988 an average net monetary income of 37 minimum wages annually (11212 min wages/304 families), or 3 minimum wages monthly. This amount does not include non-monetary sources of income. It must be noted that we have already discounted costs of production,

which reduces income significantly, though most of the inputs used were paid for by using subsidized credit.

In sum, the settlers' income at least pays for their own labour (1 minimum wage= poverty level), and allows them to make a small profit (2 minimum wages). The determinants of income and all the other aspects related to production will be analyzed through the data collected during the field research in two specific settlements.

The following table attempts to compare the output obtained in the settlements with total output in the district of Ronda Alta.

Table 4.4
Impact of Agrarian Reform In Ronda Alta
(1986/87)

	Output (t)	Area (has)	Productivity Tons/has
Settlement's Total			
Output (Cereals)	6.914	4683	1,47
Ronda Alta's Total			
Output (Cereals) (87)	89.015	62916	1,41
Percentages			
Settlements/R. Alta:	7.8%	7.4%	

Source: IBGE, Produção Agrícola Municipal, 1986.

CETAP: for the settlements output.

Cereals: sum of soy-beans, wheat, corn, beans and rice.

Table 4.4 shows that the settlements' productivity has been slightly above the average for the district as a whole. This can be regarded as an important achievement of the land reform process for many reasons. First, the

settlements have had a very short life ,if compared with their neighbours' experience.Secondly ,agriculture in this region is very capitalised with huge resources of credit incentives and financial support pouring into large farmers. It also poses the question of scale economies,since small farmers within the settlements have achieved similar levels of efficiency to mid-size and large farmers.

Moreover this process of income generation allowed a substantial process of capitalization .According to Cetap's data(idem ibid) ,the settlements located at Ronda Alta have used in the last two years(1987/88) 10.936 t of lime to improve soils ,and have bought 116 cows,4 tractors,32 implements and 31 processing machines.They also built 129 houses and warehouses .

This initial capitalization allowed the settlers to cultivate again the following year;that is , to guarantee a new cycle of economic reproduction.Soil conservation might be crucial in this cycle,since these soils have become excessively tired during long years of monoculture.

Individual CETAP reports(idem ibid) demonstrate that 50% of the settlers use machinery in the production process.The other 50% still use animal traction to plough the soil.However ,with new equipment the settlers will be prepared to mechanize some of their activities such as sowing cereals ,harvesting,output processing ,etc.

The general effect of all these activities (production commercialization and inputs purchases),yielded between 1987 and 1988 to the State approximately 31.500 Otn's in taxes(ICM=Tax on the commodities circulation)(CETAP report,1988).This sum was not generated before the settlements started and represents approximately 25% of the total subsidized credit they have received until now.(average of 500 Otn's per family). This subsidy might be refunded in less than three years with the taxes that

will be paid by the settlers. (The credit subsidy represents almost 65% of the original value). The remaining 35% , that is, the part which is not subsidized, will be refunded in periodic instalments according to the terms of the contract. (3)

(3) The agronomist in charge of the regional Emater described the region after the land reform as follows:

"A real socio-economic change has occurred within the the expropriated areas ; before they were unproductive and now are 70% cultivated and have ordinary houses everywhere, surrounded by fruit-trees, vegetables and all sorts of livestock production. There is an intense movement of agricultural machines , community centres being established with schools attended by hundreds of children. All the families are totally integrated within the productive process which is oriented to self subsistence and to trade as well." (Emater, 1988, pg 1)

4.4 SOCIAL AND POLITICAL IMPACT OF THE PROCESS OF AGRARIAN REFORM.

The struggle for land in Brazil in recent times has followed a long trajectory ,full of different events and regional disparities.Beside the pressures exerted on the government by national organizations ,such as CONTAG(Confederacao Nacional dos Trabalhadores na Agricultura),CNBB(Conferencia Nacional dos Bispos do Brasil),and the MST(Movimento dos Agricultores sem Terra), the grassroot organizations acted at the local level in order to seize the land and to secure the process of expropriation.Actually ,most of the settlements numbered in the last section of this chapter have been wrested from the government by the social movements.

In this section ,we illustrate the participation of the social movements in the process of agrarian reform by examining five cases of land seizure located in different regions of the country. (Ceará,Rio de Janeiro and Rio Grande do Sul).As can be observed in the map, these settlements are :

- Guriou Village: in Ceará,Northeast Brazil.
- Bõa Esperança : in Rio de Janeiro,Southeast Brazil.
- Fazenda Conquista:in Rio de Janeiro,Southeast.
- Macali II :in Rio Grande do Sul,Southern of Brazil.
- Fazenda do Holandés: in Rio Grande do Sul,South..

Map of Brazil: Settlements Location in the Regions



- 1-Guriou Village
- 2-Fazenda da Conquista
- 3-Bõa Esperança.
- 4-Fazenda do Holandês.
- 5-Macali I.

4.4.1-History of Guriou's villages(4)

The area which now belongs to the settlement, had been inhabited for a long time by squatters and some landowners who devoted themselves to agriculture and fishery. Until the mid-seventies, one of these landowners controlled part of the area known as Guriou. His name was Francisco Marques Neto, but he was called "Caboquinho". This person managed the farm as a "Coronel". This means that strong personal relations between the landowner and the rural workers were mixed with the relations of production. (5)

(4)The Guriou settlement is placed in the north of the state of Ceará, some 400 km from the state capital, Fortaleza, and lies on the Atlantic coast. The project comprises three rural villages each of which has its own organization, despite belonging to the same settlement.

Two of those communities-Guriou and Corrego do Braço- are located in the administrative district of Camocim, and the other, Mangue Seco, is placed in the district of Cruz. The project is located almost on the frontier with Piauí, and is near the towns of : Jijoca (27 km), Camocim(85km), Cruz(63 km), and Granja(65km)

The project area is 5.193,5 has and contains 231 families. For more details see: MIRAD-Ceará, (1987) and CEARÁ(1988).

(5)Some authors (Guimarães, 1963) characterize this phenomenon as feudalism or semi-feudalism. Actually, the social relations within these villages were much more complex and diffuse than the historical phase which most European countries experienced.

A huge variety of social relations had developed in this area, though a mix of tenancy and sharecropping predominated. Squatters, many of whom had lived in the area for longer than the alleged current "owners", were required from about 1940 onwards to pay rent in exchange for the right to plant crops-corn, beans and manioc-, and had to share the output in the case of the permanent plantations-coconuts and cashew nuts-. The peasants used to complement their income by other activities, such as commercial fishing, extracting logs from the forest or hunting small animals. Some tenants also used to give free days of labour in exchange for housing.

The landowner counted with the money-rent plus the rent payed in kind-coconuts and cashew nuts - and occasionally, according to our interviews, he used to undertake smuggling operations from the coast. There are legends and stories about this person, but the very existence of so many stories reflects how strong were the personal ties between these people and the coronel. His role was to regulate internal tensions and to manage the production using his personal power over the people.

In the 1977-81 period, different properties in the area were sold to Antonio Sales Magalhães, who intended to transform the relations inside the area toward more homogeneous relationships between the residents and himself. In 1983 after some failed attempts, he sold the area to Victoria Régia Empreendimentos Imobiliários Ltd, a real estate firm linked to the financial conglomerate, Fininvest.

The transaction, according to INCRA, was illegal. Apparently it involved not only private lands, but also public lands and areas which, after a judicial process, have been recognised as belonging to the residents and squatters. Despite all these irregularities, the enterprise established itself in the area, through its administrators, implanting new labour relations with the

residents .

A fixed amount in money was charged for the use of the crop land ,plus a percentage on tradable out-put -coco and cashew nuts- which ranged from 50% to 80% in some cases.However,it was not an easy task for the enterprise to standardise labour relations within an area that contained so many different situations.Some of the residents had their own cashew plantations and even property rights over their areas,and these rights were not recognized by the firm.

Fininvest ,in turn, started to enclose areas to which the peasants used to have free access,and to clear these areas in order to establish new coconut and cashew nut plantations.

Due to the peasants' resistance in accepting the new contracts, the firm decided to go further in the homogenization process by establishing wage contracts with some workers from inside, and also from outside, the area.These workers had to work in the cashew nut and coconut plantations without any right to the output since now they were no longer sharecroppers but only wage-earners.

The development of these new relations of production meant the loss of the peasant's right to collect cashew nuts and coconuts which had been the most important sources of income in the area for many years.

Hunting activities and the collecting of logs from the bush were also forbidden,and they had to pay rent in order to fish .The balance was a very negative one from the peasants' point of view.They had lost the access to the crop lands,that before was almost free,they had practically lost the right to exploit the commercial plantations and ,finally ,the activities which usually complemented their income, such as fishing and hunting ,were suppressed or subject to the payment of rent.

Since these changes threatened their social reproduction they were faced with the alternatives of ,either becoming proletarians or resisting the introduction of the new relationships. (6)

Furthermore ,the new enterprise was unable to keep control over the social relations within the area in the same way as the traditional "coronels".They ,as we have already said , were used to dealing with the peasants through their personal influence and power.Nonetheless ,the new forms of production were not been peacefully accepted and assimilated by the peasants. (7)

(6)The transition towards capitalist relations was following similar patterns experienced much earlier in Europe.First, rent in kind is transformed into monetary rent ;secondly:all the complementary activities that usually keep those societies in balance are suppressed and, finally, wage relations are implanted.

(7)The transition from peasant forms of production toward capitalist forms of production in the Northeast has been described by some authors(Martins.J.1981),as a situation of "political emptiness".This author points out that with the end of "Coronelism" ,the old scheme of domination was dismantled without being replaced by a new and socially legitimized frame of relations.Rural workers that became "free" from the old scheme of personal relations,and had more access to the "outside world" and consequently to job opportunities,began to challenge the new set of relations .The military authorities have been called upon to fill the political vacuum,using the repressive force of the state whenever the conflicts were very intense.Although,repression would never be able to set up a definite or "legitimate" frame of relations ,it was succesful in maintaining "order" ,at least until the beginning of the eighties,when land conflicts could no longer be controlled only by repression.

By 1985, the political situation had changed in Brazil, and the military was replaced by more democratic forms of domination. Guriou's rural residents decided to resist the new model of relations which the enterprise had tried to impose. In their view, this model could not improve their living conditions since it threatened their old traditions and their own endowment. The Pastoral Land Commission (CPT), and the Union of Rural Workers advised the people in the discussion of the problem and in their organization.

Then, peasant leaders travelled to the capital, Fortaleza, in order to meet the INCRA (National Institute for Colonization and Agrarian Reform) authorities. These events occurred at the beginning of 1985, when, in turn, INCRA was being instructed by the federal government to undertake the agrarian reform plan. The local authorities and the Federation of Rural Union Workers of Ceará (FETRAECE) also asked Incra to take into account the problem raised by Guriou's residents. INCRA made a proposal to Fininvest which basically was intended to halt the enclosure activities, but the enterprise did not respect the compromise.

After analysing the situation, the Mirad authorities, who by this time were in charge of Incra responsibilities, decided to expropriate the Fininvest holdings. The act containing the expropriation was approved in Brasilia on the 17/12/85.

The expropriation was not peacefully accepted by Fininvest. They brought hired gunmen into the area from other places with the purpose of threatening the residents. Some violent events occurred, but since the case had been legally resolved, Mirad authorities with the support of the police took definitive control of the area on 9th April, 1986.

The whole area comprises approximately 10.685,6 has, but Mirad's expropriation was scarcely one half of this, namely :5.193,5 has. (8)

The very existence of an agrarian reform settlement in the region has had a political impact. Firstly, the settlement itself is creating the "new landless": the young people who will not find room inside the area in the future. Secondly, other squatters and small tenants who live in the neighbourhood have begun to organize their communities to discuss the possibility of having access to the land reform programme. Groups from Lagõa dos Patos, Itapipoca and Granja have visited the Guriou Settlement to collect more information about agrarian reform.

(8) Although the expropriation tackled the main problem, it raised another set of legal problems. The land structure and the inherited property rights were very complex within the area. The expropriated area was created by joining together several properties and communities where different land use and tenure relations prevailed. Some peasants had their permanent crops in lands that have not been expropriated, and other peasants who belonged to the villages have not been included among the beneficiaries because their households were not in the area expropriated.

Some of these problems have been resolved, but others have only been postponed. Nevertheless, by the end of 1986 the provisional selection of beneficiaries (for the first three years) was completed, and the settlers started to organize their activities.

The Guriou Settlement is becoming a pole for further expansion of the agrarian reform. Actually, the political relations within the region are also changing. The region concentrates a great number of small peasants who were used to following traditional forces. These people have become more conscious of their subordination and have started to change the focus of their support from those traditional parties towards more advanced ideas. As a result, even traditional organizations have had to refer to land reform in their speeches and programmes.

However, some forces within the region are attacking land reform, through the so-called "intermediaries" and other social agents, like ranchers and money lenders. This fact reveals that abolishing the intermediaries' power within the settlements will not be enough, because the pressure might continue through other channels. It means that agrarian reform, in order to succeed needs to change radically the political relations not only inside but also outside the settlements.

Despite these attacks the settlement has projected to the neighbouring villages the image of being the first group within the area to have broken their ties with landowners and traditional politicians. As a consequence of this "demonstration effect" some peasants (small squatters, tenants and sharecroppers) have begun to struggle for lands and hence to strengthen the process of agrarian reform itself.

Several factors combined to make the expropriation possible:

-The "homogenization" process which Fininvest intended to implant in the area was oriented towards labour relations only, without changing either the technical relations of production or the kind of economic activity. That is, their project followed the same old lines in terms of output: cashew nuts and coco nuts, which do not require technical innovations to be developed. Therefore, the

original residents just perceived the expropriation side of the new situation without feeling that this change would bring them better working conditions.

-The area was not empty; on the contrary it contained a spectrum of old and heterogeneous relationships, which are not easy to eradicate .

-The "modernization" process, or, in other words , the introduction of capitalist relations of production , had developed without the corresponding political structure of domination . The "coronelism" had been eased out , but at the moment of the implementation, the authoritarian mechanisms of domination (military) were no longer controlling the political scene.

-The political conjuncture , on the contrary, was favourable to the discussion of agrarian reform. Mirad's authorities, local politicians, members of the church and rural unions were useful channels and institutions connecting remote areas, like Guriou, with the decisions taken in Brasilia.

In sum, this case illustrates how , in the Northeast , the participation of social movements has halted the development of capitalist relations of production in agriculture , establishing a different pattern of rural development, based on the process of agrarian reform.

4.4.2-~~B8a~~ Esperança's recent history: (9)

Before expropriation this property had belonged to the Campanella family. This family had not practised any productive activity on the land for many years, and their presence was restricted to one foreman and nothing more. His function (the foreman) was to protect the "farm" from squatters that often attempted to take over the place, but actually the farm became a shelter for neighbourhood bandits and criminals.

(9) This settlement is situated within the municipality of Nova Iguaçu, in the 6° district of Eng° Pedreira. The nearest commercial centres are Eng. Pedreira at 5 km, N. Iguaçu at 22 km, the city of RJ at 60 km and CEASA (State Company for Food Supply) at 40 km. The settlement has an area of 278 has and 49 families have been placed since December 1986, when it started to be organized under Mirad's supervision.

The region around the settlement is mostly urban, with some small patches of rural areas. There are several low-income urban communities in the neighbourhood living in very poor conditions and having to withstand constant violence from all sorts of criminals, and also from police and "death squads". The area belongs to the "Fluminense lowlands", which are very well known due to the high levels of violence and widespread poverty and misery.

For more details see: MIRAD/EMATER (1988) .

In 1984 ,groups of unemployed,landless,squatters of small plots of land,and people with vague professions spontaneously started to gather together in order to take over idle lands within the region.Their first victory happened at Campo Alegre, as noted above ,but after that event the movement began to spread to other areas.This movement of masses of poor people to rural areas was a consequence of the lack of employment opportunities in the urban sector .

Some of the people who did not find room at Campo Alegre decided to take over the Campanella property.The first attempt happened on the 6th April,1985,but the police, following court instructions,expelled them in one week.

By that time ,the federal government had announced its first proposal of land reform, calling on the general public ,and particularly ,the rural workers movements to discuss it and present their suggestions.This announcement obviously was interpreted by social movements as a green light to intensify in their struggle for land.Hence, they made a new attempt at occupation on 8, August 1985 ,but the state courts and the police,which had a different interpretation of the political reality , expelled them again eight days afterwards.Realising that to succeed they would have to exert greater pressure ,the 87 families who had organized the previous occupations decided to instal a settlement directly opposite Mirad's head-office in Rio de Janeiro.

Mirad's local authorities ,under such a pressure,forwarded the expropriation documents for Campanella's farm to Brasilia .At first ,MIRAD technicians in Brasilia did not agree with the recommendation for expropriation ,arguing that those people were not real farmers and that the lands were not suitable for expropriation due to their poor quality.

The workers decided to prove that both assertions were wrong, and therefore they established a trial plantation of corn, beans and manioc on 3 hectares of the farm. The output was so good, that they sent a picture to Brasilia to be included in the documentation. After almost one year of hard struggle (7/3/86) the government finally signed the expropriation decree and authorized the boundary-survey of the area. When the technicians went to mark the boundaries they found that the people had already sub-divided the land and had started to clear the area. Other legal steps, such as the decree of authorization to take over the property (Imissão na posse) (29/7/86) and the decree for the creation of the settlement (21/10/86) were signed at least five months after the moment when the people began to work on the farm; that is, after de facto settlement of the area.

After more than one year of conflict -three attempts to settle and two violent expulsions- they gained the land, and the Boa Esperança decree was the first to be signed by the federal government within its programme of land reform. It is interesting to note that despite the government rhetoric, the real process of agrarian reform has had to be taken to such an extreme of violence and conflict, confirming the idea that it would be very difficult to execute a peaceful agrarian reform in Brazil.

4.4.3-Brief History of the F. da Conquista Settlement. (10)

The F. Conquista settlement was established within a public area which has belonged to the state of Rio de Janeiro since 1984. At that time, a pottery enterprise which operated in the area went bankrupt with unpaid debts to the state. Therefore the land was appropriated by the state, and had since remained idle.

As we stated before, in 1986 the process of agrarian reform reached its apogee throughout the country and also in Rio de Janeiro. In fact, the movement towards land occupation had begun earlier in RJ as a consequence of the new political conjuncture created by the election of the populist L. Brizola as state governor.

(10) The settlement is located in the southwest of Rio de Janeiro state, within the Valença district, approximately 200 km from the city of RJ. The nearest towns are Valença at 8 km and Jiparaná at 4 km. The settlement's total area is 619,52 hectares and 39 families have been settled there since February, 1986 when activities began under the supervision of the Secretary for Land Issues of the state of RJ (SEAF).

The neighbouring region is characterised by the hills and mountains which belong to the system "Serra de Bocaia". This region was occupied by coffee plantations during the last century and the first three decades of the twentieth century. So many years of monoculture have left the soils exhausted provoking the migration of coffee plantations and their owners to other states in Brazil. Since the thirties, the region has slowly been occupied by ex-slaves, peasants, squatters and tenants. Big cattle-ranchers and forestry enterprises also took over some parts of the ex-coffee plantations.

Nevertheless the main feature of the region is given by the small farming.

For more information see: SEAF (1988).

The successful land occupation at Campo Alegre had an important influence on this case as well. Some squatters without a place there, decided to join the landless in Valença. Nevertheless, the people who have taken over the F. Conquista's lands were not unemployed urban and casual workers, as in the case of Bôa Esperança. In fact, they were real rural workers. Valença is a rural district and therefore has its own agrarian problems and landless population. Within the region, job opportunities have diminished in recent years not only as a consequence of the general economic crisis, but also due to its own regional problems.

The old coffee plantations have become cattle-ranching areas and more recently tourist "dude ranches" and hotels. Activities like cattle-ranching do not demand much labour, while tourism and hotels demand skilled professionals, who are not to be found among rural workers. Great numbers of share-croppers, tenants, rural workers, temporary workers became unemployed within the region, coincidentally with the economic crisis which still affects the country. Without job opportunities elsewhere, some of these people mobilised in order to take over the F. Conquista lands. According to the interviews, the people who entered into this conflict were to a great extent middle-aged rural workers with experience in agriculture and also with some political memories of the former process of agrarian reform in the mid-sixties.

With the advice of the local priest and the CPT, they noted the existence of this idle public land, and so, at the end of 1985 they decided to occupy it.

The conflict lasted six months and was full of violent events, such as threats, shots at night, entry to the farm blocked by hired gunman or "jagunços", destruction of crops, etc. The state police surrounded the area for some time but were unable to expel the squatters. Finally, even the commander of the Second Battalion and the state government

of Rio de Janeiro decided to accept the occupation and to ask SEAF to give assistance to them.

The local church celebrated a mass with 17 priests and more than 1000 people to commemorate the success of the occupation, and also to try to gather more people to support this settlement. Although this event has had an important influence in the region, the example did not spread to other areas. In our view, this is due to the fact that the government (and the army because they have an important battalion near there) were aware of that risk, and have managed to bring the conflict to an end as soon as possible. After the settlement was established, some support began to pour in from urban areas, but the neighbouring small farmers and squatters have not been too interested in what was happening. The local politicians spread the notion that this was a case of communists and radical priests in an attempt to isolate the settlement from the regional context. Nevertheless, since the settlement started to produce and to interact with the local people and traders, the initial bad image has begun to disappear.

4.4.4-Macali's settlers brief history . (11)

Most of Macali's settlers underwent a very particular experience in the districts of Nonoai and Planalto at the end of the 1970s. Since 1930 they had been tenants of lands which belonged to a tribe of Indians, the Kaingang, who were under FUNAI's administration (National Indian Foundation) .

The relationship between Indians and colonists , despite some periods of tension , was in general terms , peaceful. Later however , the colonists began to hire workers among the Indians (basically at harvest time) and hence their relations started to deteriorate. It created the paradoxical situation of the landowners being employees of their tenants.

In 1978 , the Indians decided to finish the tenancy, perhaps under the influence of other people who were interested in these lands, and started to act violently against the colonists : destroying houses, schools , churches, and even killing one colonist and wounding another three. The colonists thought the police would help them , but instead they defended the Indians and therefore they had to leave the area. After those events, according to those interviewed , the Indians spent 7 years without renting the lands, and finally they rented the area to large farmers.

(11) This settlement is in the district of Ronda Alta , which belongs to the region of the "Planalto Meridional" in the Northwest part of the state of Rio Grande do Sul , approximately 400 kms from the capital Porto Alegre. The nearest commercial centres are Ronda Alta at 22 kms and the city of Passo Fundo at 60 km. Both centres are linked by dirt roads in good conditions of conservation.

The total area of the Settlement is 923 has and it is under the supervision of the Agricultural Secretary of the Government of Rio Grande do Sul.

The people expelled from Nonoai formed the first encampment of the "landless" in Brazil, near the lands they hoped to have expropriated by the state government. They stayed in this "camp" on the roadside for a year and a half, without any health care, feeding themselves on their remaining livestock and voluntary contributions. Some of them were relocated by the state to colonization projects in the Amazon region, mainly to the Terranova Project and Parque do Esteio project, both situated in Mato Grosso. This solution was not satisfactory due to the bad conditions they encountered there - poor lands, malaria, lack of roads and medical support - and most came back to RGS.

This event highlights one important aspect of their struggle for land, namely the fact that these colonists have had two experiences of expulsion: one by the Indians and the other from the Amazon. As they already have tried the Amazon alternative and realized that it was not the so-called "paradise", and with few possibilities of urban employment, due to the economic crisis, they decided to persist in their struggle for land within the region. The fact that other groups of landless are aware of this experience has strengthened the belief that land should be conquered within the region in which they were born.

The "encampment" was set up at the "Encruzilhada Natalino" (Christmas Crossing), beside the road which goes from Passo Fundo to Ronda Alta. In September 1979, one group split away from the encampment and organized one of the first massive land invasions in Brazil when they took over the farm property known as Sarandí. The success of this land occupation attracted more people to the encampment which by the end of 1982 had grown to more than 600 families. They started a movement that is still going on and which has resulted in consecutive land occupations and conflicts.

The idea of invading the Sarandí farm originated from their memory of its history. As also happened in Rio de Janeiro, the peasants remembered very well the earlier experience of land reform of 1963. At that time, the governor of Rio Grande do Sul, Leonel Brizola, had expropriated several latifundios in different parts of the state, and Sarandí was one of those. Subsequently, during the military regime (1964-1985), this farm had stayed unused, being taken over illegally by large landowners with close links to the military. The Guazelli family took over this farm for part of this period.

It is interesting to note that the earlier Land Reform experience has thus been linked in practical terms with the recent project of Agrarian Reform. That is, the old experience had not died and when the political situation permitted, it has flowered again.

The putative landowners intended to expel the peasants, but the local judge defended them, and the state government, accepting the new situation, authorized the settlement. The Indians' ex-tenants had been making "too much noise" from the point of view of the government and their example was spreading dangerously to other landless people. The government preferred to sacrifice some public lands rather than try to eradicate the movement simply by using repressive force.

By the end of September, 1980, the total area was divided in plots of 12 hectares each for the 68 families selected. They received a "permission letter" to stay there until 1988, when the government should have provided them with definitive property titles.

4.4.5-A Brief History of the Novo Holandes' settlement. (12)

The origin of this settlement is very closely linked with the story of the MST (The Landless Movement). In fact, this settlement became reality due to the strategy of land occupations elaborated by the MST.

As we said before, the encampment at Encruzilhada Natalino was the embryo of the Landless Movement. (Movimento dos Sem Terra-MST). In this encampment, 600 families stayed until 1982, after resisting several police attacks. By that time, some families had already left for Mato Grosso, others participated in the Macali settlement and the remainder were settled by the church on a piece of land it owned in Ronda Alta.

Several families which failed to receive land, plus the people who returned from colonization projects in Amazonia, started to organize the first embryonic group of the Landless Movement. From the beginning, they enjoyed the support of the church and a few unions of rural workers. Later, other groups of small farmers' sons and daughters from Rondinha and Ronda Alta, and ex-tenants and ex-sharecroppers without work in the nearby farms, joined the movement.

The initial group began to enlarge and to expand to other districts, numbering in 1985 approximately 1500 families from 32 districts.

(12) This settlement whose proper name is "Encruzilhada Natalino Fase II", is located in the district of Sarandí, near to Ronda Alta. As in the previous settlement, it is 22km from the nearest commercial centre (Ronda Alta). The area where the settlement is placed belonged to Fazenda Anoni and was expropriated by the former Land Reform Insititute (INCRA) in 1973. Insofar as the settlement was established only in May 1987, this case can be considered part of the new agrarian reform set up by the federal government.

The movement decided in October, 1985 to occupy the Anoni Farm. This farm had been expropriated by the federal government in 1973 but, as happened in the Sarandi case, instead of being devoted to some project of land reform, it had been used by different landowners and farmers from the Ronda Alta region.

In both cases, the movement began by taking over public lands. The landowners and farmers' interests were not so far threatened, as long as MST sights were focused on illegally owned land. However, in contrast to the Sarandi case, the state did not accept the invasion of the Anoni farm easily.

In October, 1985 the final version of the agrarian reform plan was approved and converted into a presidential decree. This final version came out after five months of discussion of the first proposal presented in May 1985 by MIRAD. During this period, the extreme-right and the landowners in different parts of the country had united against the proposal, convincing the federal government to soften its terms and to elaborate a plan which would not represent a real threat against the latifundio and which could be controlled by the government. (Guanziroli, 1985).

The government committed itself to preventing land invasions and consequently to clipping MST's wings. In the meantime, the MST and the Agrarian Reform Campaign had been quite isolated politically. They had received little support from the urban sectors of Brazilian society, neither from the political parties nor from the business and industrial associations. The MST realized by then that the government was not strongly committed to the implementation of its own agrarian reform plan and, therefore, they took the decision to "make the agrarian reform by their own means". The Anoni occupation ended the

truce between government and the MST ,and inaugurated a new phase of social tension in the countryside.

The Anoni occupation was fully covered by the press during these months since it represented the greatest and most striking challenge the government had faced up to that moment. The MST was demanding not only the legalization of their occupancy of this farm, but also the expropriation of 32.000 hectares in order to accommodate all the 1500 families in plots of 20 has, in accordance with the size of the region's minimum module. (13).

Nevertheless, the permission for the MST squatters to stay on the Anoni farm was given only at the end of 1986 ; that is, after more than one year of hard struggle between the government and the landless movement.

The initial occupation lasted a few months before the settlers were evicted by the police at the end of 1985. The settlers marched to Porto Alegre and encamped at MIRAD's offices for 27 days and then , without receiving an answer to their demand for land expropriation (32.000has) they invaded the local state assembly in October 1986.

By that time , land occupations were common in several parts of the country as there were approximately 20 encampments in front of different properties or within the major cities.

(13) The issue of which lands should be given to the Anoni settlers still raises heated discussion and also provokes violent conflicts. (Jornal do Brasil, April 1989). The government insists that this farm (Anoni=8200 has) is large enough to accommodate all the 1500 families (approximately 6has per family). The MST, in turn insists on the minimum module of 20 has , due to the fact that less than this size would not permit any farm to be economically viable .

In the meantime MIRAD was trying to demonstrate that the agrarian reform plan was being executed ,and so it started to expropriate unproductive lands in most of the states,even in Rio Grande do Sul.These expropriations gave the impression that the Anoni case would be resolved satisfactorily.

By the end of 1986 ,the Landless Movement decided to take over Anoni again .However, this time they were better prepared for the action .They faced the military forces using their tractors and trucks and, despite some violent struggles which left more than 20 people wounded,they managed to seize the farm and to plant some crops.

In 1987 ,they were authorised to continue cultivating plots inside the farm.Nevertheless,for the landless this triumph was only partial and represented only the possibility of having a base for future action in order to gain more land for all the families. The movement undertook further land occupations in areas which in turn became expropriated by MIRAD ,such as F.São Pedro,Tupariarité,Santiago de Santa Rita and so on.The agrarian reform plan therefore began to be executed in this climate of social tension,,suffering and conflicts.

Finally ,on 6 January ,1987,the MST organized the occupation of another farm ,the Novo Holandés,which in fact was an area within the Anoni property that was being illegally used by a Dutchman called Johane Peter(O Holandes).

This area was not very big ,but it was located very near to the Anoni encampment ,and therefore a large number of landless could participate in the occupation,although they were aware that not everybody would gain land there. The settlers had to overcome the resistance and threats from the supposed owners ,but in the end the landowners

gave up this farm to the settlers.

At the time of this occupation (January 1987), the settlers found that there were large areas planted with soy-beans and also some infrastructure. (Warehouses, and houses). This is probably one of the few cases where productively-used lands have been expropriated due to the pressure of the Landless Movement.

In our view, the occupation was possible because the farmers had been caught off-guard and face-to-face with an important movement which exceeded their forces in political and practical terms. The police, in turn, even when called up to repress the invasion, was not allowed to use violence against the social movement. The government still wanted to give the impression that it was trying to reconcile the interests of the landowners and the landless.

Thereafter, the landowners decided to organize themselves in order to oppose land occupations and the agrarian reform itself. They created the UDR (Ruralist Democratic Union) in all regions of the country and were successful in stopping the execution of the agrarian reform plan.

4.4.5.1-The Landless Movement's (MST) Strategy.

Before entering into the analytical part of the settlements' performance, there are some aspects of the MST strategy which must be noted, due to the great interaction between this movement and the development of the Novo Holandes Settlement.

The N. Holandes was one episode within the movement's strategy of carrying out their own land reform so as to guarantee enough lands for all the Anoni's settlers. Differently from Rio de Janeiro and Ceará, these occupations are not isolated or spontaneous. (14).

When the process of settlement started in several farms, the MST had to change its strategy. It had to assume other roles beside land occupations. In fact it decided to expand its activities by also taking on responsibility for advising and helping in the management of some aspects of the settlements. Its strategy now included at least three major roles:

- To reinforce and guarantee the economic development of the settlements MST had helped to create.
- To support Anoni's settlers by leasing land and providing food, seeds and machinery, so as to avoid the disintegration of the group.
- To plan new land occupations in other places.

(14) The problem still persists because the remaining families who are working inside the Anoni farm have less than 3000 has to crop because most of the area is still under the control of other farmers. Some families were accommodated in other farms nearby, such as Passo Real and the Holandés, but at the time of our research there were still approximately 800 families inside Anoni. Those families have survived in very difficult conditions after three years of pressures and conflicts.

The solidarity with the landless ,which usually came from the church and other institutions ,also is demonstrated by the settlers .Each new settler commits himself to give 1% of his income to the people that still have not gained land.Approximately 50% of the settlers agreed to collaborate actively with the encampments.According to our interviews ,they feel it is not fair that only some of the people who struggled for land have gained it while the others are still waiting,and this appears to stimulate their participation.

On the other hand ,MST still continues to organise land occupations.Nevertheless, this aspect of its struggle is becoming more difficult.It lacks of support from the urban centres and the far-right movement (UDR)has strengthened its position.Although land occupation has not progressed too much,the Landless Movement has also reinforced its penetration among the landless and peasants within the region.It estimates that approximately 50% of the young rural workers or small farmers within the region have been enrolled in the MST.Furthermore ,MST has managed to improve relations with the rural workers' unions ,through the discussion of other problems that affect small farmers and peasants in the region,particularly aspects related with agricultural policy.

Once access to the land is won , new problems arise and the discussion of these problems has obliged MST to leave aside its initial radicalism ,in our view,and to integrate the discussion about land reform with other issues,such as cooperativism,credit,and prices.

4.5-CONCLUDING REMARKS.

In this chapter, we have outlined some aspects related to the political and economic impacts of the process of agrarian reform in three different regions of the country.

From the quantitative viewpoint, the process of agrarian reform attained merely 10% of the programmed goals for the period (1985-1988) which, in turn, even if completed, would not represent a radical reform of the agricultural sector.

Nevertheless the experience left by the process of organization of the settlements, their economic performance and the political impact of the land occupations on the regional structures of power have far-reaching significance.

Apart from the willingness of the federal government to fulfill its programme, the establishment of the initial settlements gave rise to unanticipated and critical problems, such as lack of financial resources, inherited structural problems within the areas expropriated, ill-prepared institutions, bureaucratic delays, and lack of enough land to give all the settlers the minimum regional module.

The case-studies have illustrated the economic success obtained by some settlements, despite the constraints cited above. The Rio Grande do Sul settlements, on average, generated 3 minimum wages per family of net income, after taxes, by making intensive use of the land available to them. Furthermore, these settlements have accumulated some capital to ensure their reproduction every year.

The struggle for land described in the second part of this chapter shows how the process of agrarian reform was shaped by the social movements. The case-studies reveal that the announcement of the reform programme by the government created confidence among the social movements all over the country and encouraged land occupations.

Land conflicts ,however ,were not homogeneous. Specific regional structures of power determined their heterogeneity between the regions and within the settlements themselves. In the Northeast ,the conflict was characterised by the traditional peasant's resistance against the advance of modern relations of production. This in turn, has been favoured by the boost given to the process of agrarian reform by the regional authorities . In fact, these regional institutions provided the mechanism linking remote zones of the state with the decision taken by the Federal authorities (MIRAD).

In Rio de Janeiro ,land occupations were not defensive, as in Ceará. On the contrary, groups of poor urban unemployed and rural workers took the initiative quite spontaneously ,and organized several invasions of land. These cases have demonstrated that the return from the city to rural areas is not impossible or undesirable when the conditions of urban employment are not favourable .

The Southern struggle for land reflected more precisely than in the other regions the crisis of modern agriculture. The conflict with the Indians in fact triggered a wider movement for land reform ,which gathered masses of rural workers, ex-tenants and others that have lost their access to land in recent times as a consequence of agricultural modernization. Land occupations in this region were well-organized ,actually shaping a real "movement" of people who attempt to resolve their problem according to a pre-elaborated strategy. In our view, the disproportionate force of this movement in comparison to the relative disorganization of most farmers was the main cause of the resurgence of right-wing landowners' organizations which ,in turn ,managed to halt the whole process of agrarian reform.

It is interesting to note that the struggle for land , ,irrespective of being offensive or defensive, has affected mainly public lands or with disputed title lands. The only

private properties expropriated (Gurióu and Bõa Esperança) were totally underutilised by their previous owner.

For this reason, the economic impact of the process of land reform on the regions has been complementary to the pre-existing land structure. However, these actions have had far-reaching political consequences, as the case-studies have shown. Submission to traditional organizations has been replaced in the Northeast by more active and participative forms of organization. New initiatives of social organization were established in Rio de Janeiro, and an active movement of rural workers was developed in Rio Grande do Sul.

In sum, the case-studies reveal the tremendous effort that some peasant, unemployed and rural workers' families have had to make in order to obtain a piece of land. In that sense, Agrarian Reform in a context of modern agricultural relations of production either is restricted to the margins, hence is complementary, or alternatively, it transcends the limits imposed by capital and thus it becomes a violent political process.

CHAPTER FIVE

5-RE-ORGANIZATION OF THE RURAL SPACE AND CREATION OF THE NEW CONDITIONS FOR PRODUCTION

5.1-INTRODUCTION

Although our research is mostly focused on the conditions and economic welfare of the settlers ,there are several issues related to the establishment and economic and social infrastructure in the settlements which deserve attention .

The expropriated areas had several problems which needed to be resolved before they could be brought into production .In fact the settlers had to tackle both problems,infrastructure and production, simultaneously,but for the sake of simplicity we will explore these activities in different sections of this thesis.

In this chapter ,we first examine the process of re-constitution of the rural space,followed by the description of the forms of organization adopted by the settlers, and the problems arising from the different models of organization .In the final section , we analyze the relationship between the solution of some of these problems and the utilization of the mechanisms of agricultural policy related to agrarian reform.

5.2- INFRASTRUCTURE AND NATURAL RESOURCE ENDOWMENTS.

The pre-existing endowments of the various settlements were inadequate for the needs of the settlers .It has to bear in mind that the properties expropriated by the Federal authorities had been previously used ,in some cases,for extensive farming or were held only for speculative motives,and ,therefore ,lacked important productive infrastructure.The following table shows the starting point for the settlers within the settlements:

Table 5.1 Pre-Existent Infrastructure and Natural resources

<u>SOILS.</u>	<u>GURIOU</u>	<u>BOA ESP.</u>	<u>F.CONQ.</u>	<u>MACALI</u>	<u>HOLANDES.</u>
-Without possible use. (*)	6%				
-Low Fertility; sandy deep, acidic.	77%				
-Podzolic red/yellow.	11%	60%	60%		
-Latosolo red/yellow dependant on lime.		40%	40%		
-Red argillaceous with natural fertility.				50%	50%
-Red Good soils.				50%	50%
<u>TOPOGRAPHY.</u>					
-Dunes/marshes.	40%				
-Swampy areas.	30%	30%	20%		
-Hills/mountains.		30%	50%		
-Up-Land plateaux	30%				
-Undulating.		40%			
-Gently rolling.				100%	100%
-Plain/level.			30%		
<u>WEATHER.</u>					
-Arid/hot.	X				
-Tropical-semi humid		X			
-Tropical-Humid. (enough rainfall)			X		
-Sub-Tropical Mild				X	X
<u>WATER RESOURCES</u>					
-Rivers/streams		X			
-Small lakes		X	X		
-Dams	X		X	X	X
-Wells	X	X	X	X	X
<u>INFRASTRUCTURE</u>					
-Nothing/abandoned		X		X	
-Houses.	2		1		1
-Cattle Barns			3		
-Grain deposits			2		
-Hens					4
-Artesian wells.					1
-Electricity					X
-Schools	Inside	Next	Next	Far	Far

Source: MIRAD (1988), EMATER (1988), SEAF (1988). Evaluation reports.

(*) Different qualities of soils are not equally distributed between the three communities. The village of Guriou has 73% of their total land composed by class 8 soils and only 11% of the best class of soils (3). Mangue Seco holds 42% of the best soils, 71% of class 5, and only 18% of the worst type. This pattern of soils distribution left Guriou's residents with few alternatives for agriculture, leading them to rely upon fishing, as we shall see in the following pages.

As the table shows, there are big differences between the settlements. Those located in the Northeast appear to be disadvantaged in comparison with the southern ones, while the Rio de Janeiro settlements enjoy regular natural conditions. Soils and topography are indeed more favourable in the case of Macali and Holandes than in the others. The natural endowment factor and the pre-existent infrastructure, although important, have not played an absolute determinant role in the economic development of the settlements, as we shall demonstrate in the next chapter. One of the settlements, Boa Esperança, thanks to its internal organization and its openness to the market, has indeed offset the disadvantage of the relative poor natural conditions.

5.2.1-Re-constitution of the rural space :

We have seen that the settlements inherited lands with poor natural conditions and, on average, lacking the basic productive and social infrastructure. These areas, in fact, had been used by the former landowners for extensive farming. Although in some cases-Guriou, Holandés-the new settlers at first tried to adapt themselves to the inherited former structure by adopting collective organization, most of them realized that the area ought to be re-shaped in order to embody the new relations of production. The following table shows the infrastructure established by the settlers between 1986 and 1988.

Table 5.2 Settlement's new infrastructure.

<u>1-SOCIAL INFRASTRUCTURE</u>	<u>GURIOU</u>	<u>B.ESP.</u>	<u>F.CONQ.</u>	<u>MACALI</u>	<u>HOLANDES .</u>
-Schools.	3	-	1	-	1
-Health Centre.	3	-	-	-	-
-Community Halls.	1	1	1	2	1
-Internal Roads.	46km	4km	8km	150km	6km
-Houses. Masonry	-	24	12	30	24 (b)
Precarious.	-	20	27	38	
-Electricity.	-	-	-	10000mts	5500mts
-Forestation.					5000trees.
<u>1.1-Financial Resources.</u>					
-MIRAD	x	x	x		x
-State Education Board	x		x		
-State Health Board			x		
-State Board of Roads			x		
<u>2-PRODUCTIVE INFRASTRUCT.</u>					
-Deposits/silos	4	-	(a)	-	(a)
-Manioc Mill.	1	-	-	-	-
-Wells.	3	-	-	-	-
-Drainage.	-	2500mts	500mts	5000mts	-
-Soils Improvement.	-	-	50has	590has	350has
-Discompacted areas.	-	-	-	50has	50has
-Contour farrow.	-	-	-	20has	20has
<u>-Machinery</u>					
-Tractors .	1	-	-	20	4
-Harvesters.	-	-	-	1	2
-Ploughs.	1	-	-	68	10
-Treshing machines	-	-	-	13	12
-Truck.	-	-	-	1	1
-Vehicles.	-	-	-	1	1
<u>2.1-Financial resources.</u>					
-MIRAD (CAF)	x	x			x
-State Boards			x		
-FADA/PAPP. (c)	x				
-PROCERA.				x	x
-Bank of Brazil.					x
-Savings.					x

Settlements Area (Hectares):	5194	278	620	923	723
Number of settlers :	231	49	39	68	35
=====					

(a)The pre-existing facilities were used.

(b)The houses will have an area of 135 m² ,with 3 rooms ,living room,kitchen,bathroom and larder,and will be built using cement for the walls,wood for the internal divisions and roof tiles.All the houses will have their own cesspit ,water supply,electricity and 1/2 ha of land for vegetables .

(c):Fundo de Assitencia ao Desenv.Associativo.It is a complement of the PAPP (Programa de Apoio ao Pequeno Produtor),which is coordinated by the World Bank in Brazil. (BIRD).

The creation of the new conditions of production demanded the construction of internal roads to connect the households with the community halls and deposits, the sub-division of the land, the construction of schools and health centres to attend the increased population within the area, etc. In the case of Guriou, the construction of schools and health centres became more urgent due to the distance that separates these villages from the nearest urban centres (roughly 60km). The social infrastructure, and also the community halls have been important in encouraging these people to settle down in such an isolated region.

Apart from being devoted to different tasks, most lands in the new settlements had previously been devoted for long periods to mono-cultivation, which left the soils eroded and over-compacted (in the South). Lands in the Southeast, on the other hand, had been abandoned for long periods of time and therefore posed other kinds of problems, such as lack of clean water, swampy soils, etc. The new settlers thus, were obliged to recuperate these lands for production. For instance, in the South this meant restoring soil fertility using lime in large quantities and applying techniques of contour ploughing to undulating areas..

In Rio de Janeiro, the settlers needed to drain flooded areas which suffered from flooding in the summer and drought in the winter. Drainage, therefore, was necessary to tackle the summer flood problem and, at the same time, would facilitate the opening of irrigation outlets (channels) to prevent the winter drought. MIRAD authorities, in agreement with other public institutions, had started to drain some areas but then stopped for lack of resources leaving the work unfinished.

The search for financial resources to tackle these problems has driven the settlers closer to the market and increased their awareness of agricultural policies. Since agricultural investment credit was being sharply reduced by

that time (1987), as we saw in Chapter One, the new settlers had to rely upon regional sources of credit and the special credit lines established for agrarian reform (PROCERA, see Annex 5.3). As the table shows, the State-sponsored settlements (F. Conquista) only had link with State authorities, while the others established closer relations with Federal authorities or banks (MIRAD and Bank of Brazil, FADA/PAPP). The settlers' search for credit and materials increased their knowledge of banks, loan contracts, different institutions, gradually transforming their previous status of peasants or rural workers, who used to depend on the landowner and bosses, into more integrated small farmers or "modern peasants". Nevertheless, the changing situation in some cases engendered a new dependency, this time with the state, as we shall demonstrate below.

5.2.2-Costs and benefits of the new infrastructure.

As in the case of every rural development project, the establishment of the new conditions of production and the recuperation of the natural environment have incurred some costs, in terms of public resources which, in turn, generate some benefits. In the tables below we estimate the costs and benefits of the projects :

Table 5.3 COSTS AND BENEFITS PER FAMILY
(period: 1986-1988)

A-COSTS	DIRECT COSTS (a)	SUBSIDIES (b)	TOTAL
1-Initial Forecast. (PNRA/MIRAD.1985)	U\$ 5.900.-		
2-MIRAD Operational Budget (Decree N°1024,28/7/88) Plus:Estimation 1986/1987:	U\$ 5.968.-		
3-Estimated costs of the infrastruct. effectively built,plus the cost of land. (MIRAD report,1988) (c):	U\$ 8.716.-		
4-Bõa Esperança estimated costs :	U\$ 4.241.-	4.560.-	8.700.-
5-Guriou estimated costs(d):	U\$ 8.170.-	700.-	8.870.-
6-F.Conquista estimate.(e):	U\$ 8.132.-	-	8.132.-
7-F.Holandés estimate (e) :	U\$ 8.512.-	7.000.-	15.512.-
8-Macali I estimate(e) :	U\$ 8.904.-	3.040.-	12.940.-

Notes:

- a) Nominal values have been transformed in US.\$ using the official exchange rate. Had the black market been applied the amounts in dollars would have been 30% inferior.
- b) Procera credit has been regarded as 90% subsidized on account of the special conditions of interest rates.
- c) The estimation has taken into account the schools, health centres and roads registered as being built by MIRAD data. (21/11/88), plus the estimated value of the land expropriated. It must be noted that land has been paid off by giving landowners 20 year public bonds, redeemable yearly. Despite these long term conditions of re-payment, the total value (see d) of land has been included within our estimate of costs.
- d) Expropriated land has been valued at 60% of its market price (FGV), following the PNRA initial calculation. (PNRA.1985, pg 66)
- e) These settlements were not established on expropriated lands. Lands already belong to the State .

Table 5.4 -BENEFITS AND RATE OF RETURN OVER COSTS. (a)

(values in US\$)

Settlement	Monthly average Income(b)	N*months	Total Income	BENEFIT	COSTS	Benefit/Costs RATE OF RETURN
1-Bõa Esp.:	4.3 min wages	X 24	= 6.264	8.700	72%	
2-Guriou :	2.5 " "	X 24	= 3.496	8.870	39%	
3-M. Seco :	1.4 " "	X 24	= 2.039	8.870	23%	
4-F. Conq :	3.0 " "	X 24	= 4.385	8.132	54%	
5-Macali :	5.9 " "	X 24	= 8.505	12.940	66%	
6-Holandés:	5.1 " "	X 24	= 7.429	15.512	48%	

Note:

(a)For the sake of simplicity the total income generated by the settlers has been considered as the Benefit generated from the settlements. Although this calculation lacks some items normally used in the cost benefit analysis, in our view, it represents the contribution to society by the settlers. Apart from the taxes that the settlers are paying they are, moreover, legally committed to re-pay the settlement's costs within a given period of years.

On the other hand, there are shadow benefits, or in other words, costs that have been prevented because of the settlement's existence which should enter into the calculation. These avoided costs are mostly the urbanization costs (electricity, water, roads, etc) which would have existed if the settlers did not have land and decided to migrate to the cities.

(b)The amount of minimum wages above has been calculated from the field research data. More details about the method of calculation of this item will be presented in the next chapter.

Table 5.3 indicates that the flow of resources in the first two years has exceeded the foreseeable costs when the programme of agrarian reform was approved. Nonetheless, a closer examination of this issue, with the inclusion of the benefits engendered by the settlers, diminishes the impact of the costs on the projects. As can be seen in Table 5.3, the settlers managed in two years to take good advantage of the initial opportunity given by the process of agrarian reform. Among the settlements researched, Bõa Esperança shows the highest rate of return. Indeed, the settlers there managed to generate quite high levels of income without having disproportionate access to investment resources if compared with the others. As we see below, high levels of motivation and flexible internal organization have been important factors contributing to their success.

5.3- FORMS OF ORGANIZATION OF ECONOMIC ACTIVITIES:

The organization of economic activities within the settlements has , in some cases ,followed the collective pattern (Guriou and Holandés) ,and in others the individualized form of production .In fact, the latter form of organization encompasses a mixture of communal and individual activities ,which is not exactly the same as the traditional individualized peasant form of production.

In the following sections we describe the motives which have led the different settlements to choose their form of social organization ,the evolution and characteristics of these forms, and ,finally ,the problems which have emerged during the last three years of activity.

5.3.1-Collective Farming 1:The case of Guriou.

Some specific factors ,related to the settlement's natural and social endowment,influenced the decision to adopt the collective model, ,apart from the ideological motivation of the authorities.(1).The Guriou project has a particular feature :1-It is constituted by three communities with quite different problematics and characteristics;2-A fishery sector has been developed within the area due to its special location.(2)

(1) See chapter 3 about regional strategies and Annex 5.2.

(2)The spatial distribution of areas between the three villages was not equitable:

Guriou:	545,4 hectares	and	100 families
Mangue Seco:	3270,5	" "	102 "
Corrego do Braço:	1037.6	" "	32 "

The existence of small lakes ,marshes and swamp areas between the communities made a better allocation of the land difficult .

For more details see:Ceará(1988)Evaluation Reports.

The specificities of the area and the fact that in the past fishery had been practised on an individual basis influenced the decision about the pattern of organization to be adopted by the settlement. (3)

On the other hand, the former landowner had set up a very centralised pattern of production within the area. Despite the different internal situations, economic activities were administered by the landowners in such a manner that even the houses were grouped together to form something like urban villages. Agriculture, that is, plantations of cashew nuts and coconut, were also placed in specific areas under the centralised control of the landowners.

Taking all these factors into account, MIRAD authorities proposed the adoption of a collective pattern of organization. Clearly, they were following their own model of agrarian reform which, as we noted previously, is oriented towards the implantation of community farms. At the same time, it was almost impossible, according to MIRAD, to divide lands of very poor and uneven quality among the settlers.

(3) Fishery, agriculture and livestock are the principal activities among settlers, although fishing is rather more important at Guriou, where 50% are permanent fishermen and 20% approximately are occasional fishermen. At Mangue Seco, agriculture stands out as the main activity, with 50% of the settlers devoted only to this activity and the others practising fishery occasionally. Corrego do Braço's settlers are devoted to agriculture and also to livestock production. The uneven distribution of these activities is related to their particular environment. Guriou has a small area for cropping, but has the advantage of being located on the coast, while Mangue Seco is more in the interior and holds more land.

The settlers took these reasons into account and accepted , the advice to avoid sub-dividing the land .Had the land been divided into individual units,they would had to move to other areas ,build new houses and adapt themselves to another environment.According to the leaders ,the collective pattern of organization,moreover,would strengthen their internal organization ,easing the risk of land sales and abandonment by project beneficiaries .

However ,they complemented Mirad's proposal with other rules on account of their particular environment .The organization of economic activities would be as follows:

a)Cashew-nuts ,coco-nuts and livestock would be exploited following the communal model .That is,each family would work one day a week on these activities(in Mangue Seco they decided to devote two days a week),and the profit would be shared among the families according to the number of days effectively worked.Before sharing the profit,they would reserve 30% of it to create an" Accumulation Fund".

b)The cropping areas-manioc,beans and corn-would be exploited in groups of 10 workers .Each group would have the right to work approximately 10 has of land.They labelled this activity as "Collective farming".

Each family devotes two days a week to this activity<in Mangue Seco they work 4 days there>,and the number of days are registered in a book by one delegate.At the end of the month ,profits are shared according to the number of days which have been registered .

c)Individual crops were allowed on the plots of land (1 ha approximately) that they maintain around their households.

d)Fishery and handicrafts would be private activities.

e)Marketing and input purchases would be part of the communal activities.

In fact ,the pattern followed has not been purely collective.They maintained the centralized cashew and coconut plantations ,but they also have developed

semi-collective crops , individual small agriculture and livestock production.Trade and output processing are on the way to being collectively managed.As can be seen ,the system embraces diverse forms of organization.

In order to manage this complex set of activities, the settlers have created an Association and six committees with specific functions: Fishery, Agriculture, Livestock, Fiscal, Marketing and Infrastructure.Each of these committees is responsible for the purchase of implements, for financial investment ,or for trade,and they are controlled by the general assembly.

5.3.1.1.Problems of organization

The settlement's economic development is only just beginning ,hence it is full of shortcomings and problems to be solved .Some of these have been inherited from the old system of production ,yet they affect the new forms of organization adopted within the project area.

As we said before ,fishing is one of the most important activities within the settlement,and particularly at Guriou village.Although they fish the whole year in order to trade and consume ,in the winter season (May to August) they also have the opportunity to fish shrimp,which it is far more valuable than ordinary fish.

This activity in the past has enriched certain families,which thereafter have had the economic endowment to expand their business to other areas,like cattle ranching,and also commerce.Those families have enriched themselves more rapidly than the others,generating an internal differentiation among the peasants .Some of those families have been accepted to stay within the settlement despite the fact that they were also foremen or managers in the former system.

At Mangué Seco ,these families have been integrated very well with the other beneficiaries-because they were

relatives-, with whom they share the same goals .However ,at Guriou village two of these families still practice the role of intermediaries, buying the output from the settlers and selling it outside. On their way back they bring different goods to sell within the settlement. This activity, so normal under other circumstances, is generating some trouble inside the village.

The boats used for shrimp fishing belong to them and in this way they control the activity .They supply fishing equipment to the settlers in exchange for one quarter of the output, but the remaining three-quarters must also be sold to them because they have vans with refrigeration equipment. Indeed it is a case of perfect monopsony .Through this pattern of commercialization, the settlers lose a big share of their surplus.

The intermediaries have also developed a network of handicraft industry, supplying material to some settlers' wives and daughters to make the nylon nets. Afterwards ,the workers are obliged to sell the product to the intermediaries. The control they practice over these economic activities allows these people to perform a political role within the community. They are in contact with traditional political parties and with landowners from outside ,which collect votes within the community.

With the creation of the new community ,they lost some power among the people, and this factor has led them to try to demoralize the settlers' leaders ,and therefore undermine the agrarian reform itself. The settlers intend to reject this influence, which they think will be negative for the community. However, it is not an easy task, since their political power derives from a real economic base .That is, the settlers ,despite losing part of the surplus earned from fishing ,still depend on them.

In order to face this problem they have planned the following steps:

-Implantation of a mini-fishery office:Using part of the PROCERA credit they have opened an office where they can knit their own nets and where also they have started to build their own boats.Subsequently they intend to acquire their own refrigeration equipment.

-Opening of a community shop:With a grant obtained from FADA/PAPP they have opened a warehouse and shop.They aim through this facility,to avoid intermediaries ,both in the marketing of output and in the purchase of goods from outside.

-Goods ,inputs,and implements are purchased in large quantities,and then are sold at cost price within the settlement.Their commodities-cashew and coconuts,corn and others-are sold through the warehouse ,which has a deposit for storage.

The warehouse system also has a consumption sector,which in turn engenders some problems.There the settlers can buy food and other things on credit,with the condition that their debts will be repaid within fifteen days.If the debtors do not have money and present a reasonable motive, their debt may be extended for a further fifteen days.After this moment,if they do not present a very serious justification , their credit is cut off.The debt must be paid at the market price on the day of its cancellation ,due to inflation.However ,it is possible to perceive that almost everybody was in debt to the shop,because the monetary income obtained from agriculture or fishery it is not enough to cover their family budget.

The warehouse manager ,who is nominated by the general assembly,is obliged to discuss each price increase.Such discussions are very tiring in times of high inflation.Furthermore, the settlers, who are very isolated from the outside ,do not understand why prices go up so often,and blame the managers for these increases.The intermediaries have spread abroad gossip of corruption over the issue of price increases.Pressures against the

leadership are strong, leading them sometimes to make some concessions, like the decision not to increase prices of basic goods, which may easily lead to the failure of the warehouse in the future.

The intermediaries seek to exhaust the leaders' energies so as to regain their role as traders. The leadership meanwhile is trying to implement its strategy; that is, to eliminate the intermediaries' role by establishing communal activities(4). If the rich families do not give up, the community can still decide to exclude them from the settlement at the time when the definitive beneficiaries are selected. In this case they must repay their fixed endowment.

(4) The economic performance of communal activities is explained in Annex 5.2.

Other community activities include cattle-raising and financial activities. (saving, accountancy, etc).

The community complex is shaped by the following activities:

- Production: cashew nuts, coco nuts, banana in the communal areas.
- Storage and commercialization.
- Communal Warehouse and shop .
- Mini-agricultural office.
- Mini-fishery office.
- Communal livestock.

These activities are, in practical terms, forming a real co-operative, which would incorporate all activities, from production to final marketing. It must be noted that they also plan to develop systems of transportation and output processing. In order to manage these sectors, five commissions have been created.

At the same time ,the actual leadership comes from the educated people ,who also were the better off within the farm and, despite their current good intentions ,they are not representative of the whole communal group ,in terms of social class .Therefore ,adult education becomes a precondition for the democratic development of their association.

Nevertheless, this is not the only constraint on the development of a new leadership.Mirad's rules do not allow single mothers or single men to be included as beneficiaries.Everybody must be married and have a family so as to be regarded as a "Head of family",and hence potential representatives.Young people and women,who are mostly regarded as dependents,thus are excluded from the leadership.Although exceptions have been made,legally, those young men and women, despite their participation in the land struggle and their politicisation,can not be chosen as representatives.Mirad's rules ,on this point are very backward and have been criticized on many occasions,but so far have not been changed.

In sum ,the current situation and future prospects are not yet clearly defined .From the organizational point of view, the settlers are neither typically peasants nor a consolidated communal organization .This pattern of organization in Ceará has shown all its different facets ;that is, advantages and disadvantages ,mainly those related to management problems.The settlers themselves are inserted into an organizational structure which tends to undermine their domestic economy.The settlers tend to share the product and to purchase goods without using money, buying and selling on credit accounts with the warehouse .

However, for several reasons ,the communal organization has become a useful tool for the peasants.First, under Northeastern conditions ,it is less painful to face drought periods when people are united

than to face it alone. Second, Northeastern markets tend to be very monopolized by informal structures and therefore the best way to interact with them is through collective trade. Third, the communal organization has become a form of collective representation in order to address the settlers' claims against Mirad authorities and other public institutions. This issue can also be interpreted as a form of dependency towards Mirad, whose officials might finally fall into the temptation of practising new forms of paternalism with the settlers.

In our view, the settlers are actually waiting to see what results the communal organization achieves and, in the meantime they continue with their domestic monetary economies (fishing basically), and with the self-consumption crops needed to guarantee their reproduction. This process can indeed be called a "Settlement Process". That is, in political terms, the settlers have initiated the process of constituting their citizenship and of producing a new economic and social space.

5.3.2-Collective Farming 2: the case of " The Holandés".

After the settlers were selected(5), they met in an assembly to discuss different models of organization .The final decision was in favour of the collective form of organization . It meant that practically all the economic activities would be developed in this way, from the communal use of land and communal ownership of the means of production to collective trade and storage. Even the vegetable area would be managed collectively.

Originally the settlement distributed only one plot of 20 hectares to one settler. The remaining area (703 hectares) would be managed collectively. Nevertheless, after 1 year of communal activities ,10 settlers decided to leave the collective and to exploit the lands either individually or in small groups, which they called semi-collective. Thereafter the spatial structure of the settlement was as follows:

Total area	= 723 has
Individual Area=	20 has
Group of four =	81,6 "
Group of six =	122,1 "
Collective area =	<u>490,</u> " 713 has
Infrastructure area	10 has.

(5)The first step after the legalization of the area, was to select the beneficiaries from among the 200 who participated in the occupation. According to MIRAD rules, the settlers had to complete an application form ,which contains questions about their agricultural experience. The Landless Movement (MST) has preferred to choose beneficiaries by drawing lots to give all people an equal opportunity but, in this case, they decided to accept Mirad's rules. Hence 35 families were chosen and they opted to develop a collective form of organization. Perhaps the decision to accept Mirad's criteria of choosing those best adapted to agricultural work was not a bad idea ,and could be regarded as an explanatory factor for their economic success, as we shall demonstrate later on.

According to the interviews, the decision to leave the collective did not reflect an internal crisis in its organization. Apparently, the settlers who created the new groups respect and regard the collective form as more efficient than the individual. However, for them, it is more important to live on their own plot of land in the best peasant style.

The community decided not to sub-divide the lands and also to build the houses all together, forming a village around the settlement's central offices. For the people who split away from the community, the individual way of work has some advantages and some disadvantages. The main advantage is the possibility it offers for better control over the work and for more intensive use of the land. The two main disadvantages are the impossibility of making big group purchases to obtain bigger discounts and to trade in bigger quantities and, second, to make collective use of the harvesting machinery and other implements.

After the decision was taken on the form of organization, the group adopted some rules and functions to manage the settlement. One rule concerns the employment of outside workers. The employment of permanent workers is forbidden and the labour force is restricted to members of the settlement. The decision was taken on moral grounds and for economic reasons as well. The moral argument is that the settlers should not exploit other workers who have not benefitted from the land reform process. Furthermore, if they employ workers, MIRAD authorities could argue that they have more land than they are able to crop, which would set a precedent against their claim that the rural module of 20 hectares should be given to each settler.

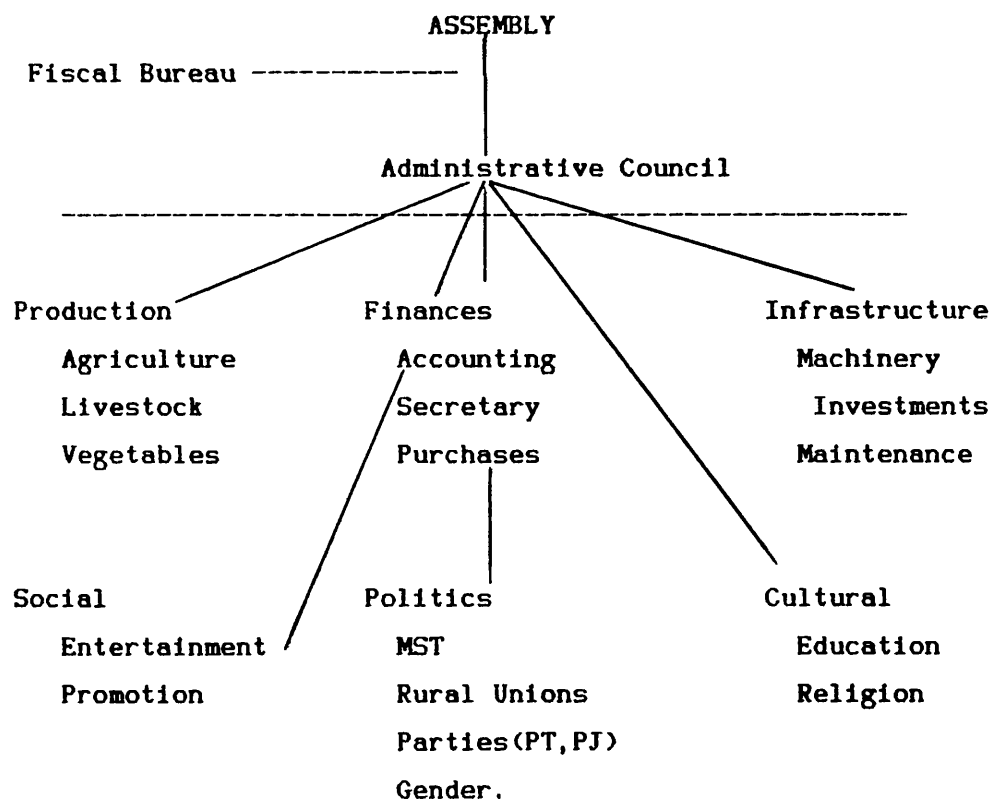
The economic argument refers to the high level of mechanization achieved, which does not demand further workers; on the contrary, there is a problem of idle labour within the settlement. Their aim is to increase

the level of mechanization even more so as to free more people for other activities, such as political organization in the MST, to improve their own knowledge of technical and agronomic issues, and to develop new forms of cooperation with other settlements in the region.

This point about the labour force highlights another decision taken by the group. They plan to create a "Board of Settlements" which would encompass several settlements within the area in order to replace the functions of marketing and output processing presently undertaken by co-operatives .

They aim to create the settlement's own co-operative with these functions and also with financial functions ,for saving and lending .

Internally, the Holadés settlement has created the following functional structure:



The assembly meets every week to discuss the reports of each one of the councils' representatives and to take decisions.

Besides these functions, the settlers have specific tasks, such as tractor driver, harvester operator, and some manual tasks, such as weeding. Women devote 1 day a week to the weeding and another to the vegetable area. The very idea of having an internal division of labour marks an important difference between this settlement and the others. In fact, they do not act as classical peasants or small farmers, but nor are they simply rural workers. They are reproducing a real business organization with shareholders who work and participate in the communal organization.

Some issues remain to be decided. They do not have a system to calculate profit sharing, nor to control the labour time of each person. Until now, they have improvised a system of profit sharing. The assembly periodically takes decisions on profit sharing according to the level of their bank accounts.

The other problem, of controlling work time, poses the question of different qualities of work, which is highly controversial. The problem of labour homogenisation between work of different qualities and quantities has taken years of discussion among the classical economists and still remains unsolved.

They also lack an efficient accounting system. The Holandes settlement is a very complex entity, and without a system of accounting they can very easily lose track of their financial situation. Although the lack of these controls imposes a severe limitation on the decision-making process, the leadership so far has managed very well in developing the settlement's economic activities, as described in Annex 5.1.

This communal pattern of organization can not be generalized to other places, however, since it is the

outcome of very special conditions. In their case, this pattern has worked efficiently until now basically because a small group of people (4 persons) has managed to control all aspects of this complex organization. In the meantime, the leadership has taken on all the administrative tasks which, under family farming, would be shared by its members. The settlers are now free of this problem and can relax to take care of the productive tasks.

This situation in fact reproduces business characteristics, with the difference that decisions are taken collectively. In our view they face two challenges: first, to maintain the democratic process of decision-making and, second, to produce new leaders capable of taking over the responsibilities of such a complex organization.

Apparently most of Holandés' settlers have accepted the idea of living within a village separated from the cropping areas, which also is an exception among rural workers. The farm stereotype is defined by the image of having the house "over" their own plot of land, as desired by the settlers who split away from the collective organization.

Collective organization represents one aspect of their development. In fact, this form of organization has made it possible for the settlers to counteract temporarily the tendency to internal differentiation since, by their rules everybody will earn the same. But, the process of homogenisation has not yet been clearly defined and, if the rules are changed in order to pay more to different quantities or qualities of work, some differences probably will emerge.

5.3.3-Individualized farming 1:the case of Macali I.

In order to understand the decision of Macali's settlers to develop individual holdings ,it is necessary to describe the way the settlement was managed after the settlers took over the land in 1980.The settlers passed through three different phases:

1-The government(Agricultural Secretariat)in 1980 had established a collective system which ,according to the interviews, had been managed by government technicians in such an authoritarian way that it gave rise to protests .Thus the first time the settlers were asked about "forms of organization "they voted for individual farming.

2-After this experience ,they organized a family farm system,with each family having the right to exploit their own plot of land, but still under strict state control.

By 1982 ,when this occurred,agricultural modernization was at its climax in the south of Brazil.In order to obtain credit from public banks, it was obligatory to use modern inputs ,which often were sold by the government's own extension agents .Everything associated with chemical fertilizers ,pesticides,fungicides and so on, was identified as a sign of modernization and progress ,and so it was welcomed without discussion .

After some period of exaggerated use of these inputs, the *"nature was poisoned"* (interviews).They began to suffer the effects of air pollution and water pollution caused by the chemicals,which weakened people's resistance ,making most of them sick.Furthermore, costs of production increased in such a way that they had to devote almost all their earnings from production to repaying the loans to the banks.They felt by that time ,that they were *"employees of the bank"*.

By 1985 ,the settlers were highly indebted,the soils had been eroded by permanent mono-cultivation ,many peasants were sick ,and insects had become resistant to

pesticides as a result of their intensive use. Approximately half of the original settlers had to sell their lands in order to repay debts to the banks.

3- In 1986, the settlement started to receive technical advice from CETAP (Centre of Popular Alternative Technologies) which is a non government organization (NGO) created with the main purpose of supporting the agrarian reform process and social movements in the rural areas of Rio Grande do Sul

Indeed, the settlement practically started from the beginning again. With a new social composition, due to the entry of new settlers who bought land from the people who were indebted, and following a different approach to technical advice, they joined in the process of agrarian reform that was taking place in the region. The relationship with Cetap allowed the settlers to adopt alternative techniques of production, such as biological control of pests, conservation of soils, and green fertilization techniques.

In sum, their former negative experience of being tied to the state authorities through the communal pattern of organization has driven the settlers towards the individualized model. In a second moment, when the process of agrarian reform had spread in the region, they decided to free themselves from the state, and to follow more ecological techniques of production.

5.3.4-Individualized holdings 2:the case of Bõa Esperança.

After the selection of the beneficiaries (6), the settlers had to decide which pattern of social organization to adopt. A small percentage (20%) wanted the community form of organization, which meant cultivating the land collectively and, moreover, building the houses together to form a village within the settlement. After some debate, the other proposal (individual areas for each family) won and they decided to follow the family farm pattern of organization instead of the collective model.

However, this decision does not mean that there is no internal organization. They decided to create an association -Mutirão of Guandú- with the purpose of maintaining some level of community organization, such as common use of machinery, collective trading, communal purchases and credit allowances, etc. This distinction is important in order to avoid the polarization to which much of the literature on agrarian reform refers between individual versus collective forms of organization. Actually, the new agrarian reform settlements are organized as flexible entities constituted by a number of settlers which take on some level of communal organization, but do not undertake collective cultivation.

(6) Mirad's rules are very rigid in terms of agricultural experience which they use as a criterion to differentiate among the applicants. The main criterion in choosing the final beneficiaries was their participation in the events which led to the expropriation. Therefore, the selection was practically decided by the movement. The process of selection left outside half of the original number due to the small area of the farm.

The collective pattern was rejected by the new settlers for several reasons. Firstly, in their minds they were fighting for their own piece of land, and thus the community pattern was seen as a possibility of losing control over the land, mainly when this approach is advocated by the authorities. Secondly, they are aware that in order to manage a collective farm a high degree of internal organization and discipline is necessary, otherwise a lot of new problems would appear as, for example, the way to control the work of the different families and so on. They often think that this kind of process carries the threat of losing control of the many complex activities involved, and therefore risks falling into the hands of the state or any sort of bureaucracy. Thirdly, farmers usually prefer to live on their own plot of land and do not easily understand the idea of living together in "rural villages", as sometimes has been proposed to them.

5.3.5. Individualized holdings 3: the case of Fazenda da Conquista.

At the beginning, the settlers debated the possibility of organizing the settlement collectively following the advice of the church. During the first five months, the settlers had worked collectively on some tasks (clearing and opening up the land for cultivation) and had also planted some areas collectively. However, according to the interviews, they were never very enthusiastic about this kind of organization. They wanted to guarantee their rights within the area and they know that accepting a collective pattern of organization might imply subordinating this right to the collective decision or, even more, submitting themselves to the state and its bureaucracy. The settlers have received a very precarious document (carta de

anuencia) authorising them to stay there and to use the land and so ,in their view, the first issue to be resolved is related to recognition of their rights as legitimate owners of the farm .

Obviously other factors influenced their rejection of the collective pattern of organization, such as the tradition of private property ownership ,the lack of history of communal work in Rio de Janeiro ,and the difficulty they have in accepting something new ,and therefore without the proof given by experience. Due to all these factors, they finally decided to divide the area of level land between the 39 families, leaving each family with plots of 4 hectares, approximately. The remaining areas (forests and mountains) stayed under the control of the state.

Similarly to the other cases ,the decision not to hold the land collectively did not imply that the pure form of individual farming would be followed. One of the first actions taken was to organise an "Association of Settlers" with the following purposes:

- Collective use of machinery: Tractor ,truck, corn and rice mills, processing machines, working animals.
- Collective use of land: they have a trial area for collective use where they planted beans in the last harvest.

Collective means of production are administered by the Association and everybody has the right to use them. With the collective use of the tractor, they plough all the land at the same time, making it easy for the families to maintain the crops. The truck has not yet been used for transporting the output ,but their intention is to take over this aspect of trading in the near future. The existence of the association led to some internal division of labour between the settlers, and they chose specific persons to manage each activity as, for example, : tractor driver ,supervisor for the processing machines and the

mills ,and the leadership of the settlement.

Practically all the improvements have been introduced by the state ,and in terms of property nothing belongs to the settlers,not even the land, which has been given to them on lease for thirty years.(7)

The State Board For Land Issues(SEAF) and the local church have influenced the association to impose certain rules which ,in our view, constrain their development.As happened in the case of one collective settlement(Holandés) , the F.Conquista settlers are not allowed to hire workers or work themselves for other farmers. Moreover ,they can not contract loans with commercial banks.Furthermore ,they are not using the whole area of the settlement ,and therefore do not have enough land to breed cattle ,which usually represents a reasonable way for peasants to invest their capital and to draw extra cash when it is necessary.

Despite this lack of autonomy and ,in some cases ,of real subordination to Seaf's plans and projects,some settlers have managed to develop considerably increasing their control over decision-making.There are two different groups within the settlement which ,according to their own declarations ,might be labelled as : "committed farmers" and "casual farmers " ,or subsistence peasants in other words.Although the first group is not very large in this settlement ,it responds directly to market signals,while the others are more clearly peasants,that is devoted to subsistence activities and selling any surplus on the local market .

(7) The machinery (tractor ,truck) was mainly lent by LBA(Brazilian League of Assistance), along with some implements and the processing machines.

This separation into two groups is not the consequence of any process of internal differentiation. It is clearly the outcome of different initial social and economic endowments, and is linked to their previous origins.

Some had previously been small farmers, though landless (squatters), while others were rural workers or sharecroppers. Small farmers, despite their lack of resources, are used to treating agriculture as a sequence of activities, from ploughing to harvesting and to marketing. Therefore they know the time to plant, to weed, to harvest and, moreover, how to adapt this sequence to weather variations and market signals.

Sharecroppers or rural workers, on the other hand, have been submitted to a labour process dictated by landowners. They were thus used only to obeying orders, which were related to specific tasks within the agricultural cycle. Therefore they have a more fragmented knowledge of agriculture, and it will take some time until these settlers understand the whole agricultural process. Indeed these people, in the meanwhile, are being "settled" by the state board, which intends to supervise the transition from the landless condition to peasant status.

In our view, despite their good intentions, it would be better to free them from excessive ties and rules, which can prevent further steps in terms of progress and development.

So far nobody has left the settlement and there is even a "waiting list" of people who would like to join this settlement. Nevertheless, as we have shall see later, the role of the state does not determine totally the economic performance within the settlement. In the next section, we compare all the settlements we have studied from the angle of the state intervention.

5.4-SETTLEMENTS' ECONOMIC AND SOCIAL EVOLUTION.

So far we have described the initial problems of the settlements ,in terms of endowment , and the infrastructure which was established to allow the settlers to begin economic activities. Also we analyzed the different forms of productive organization chosen by the settlers and the different dynamics stemming from these organizations.

In the first two years of activity, most of our case studies have shown positive results in terms of economic evolution (8),with the exception of Guriou ,which is still growing slowly ,and Mangue Seco ,which has not yet overcome the initial stagnant conditions ,in terms of production. (9)

(8)For more details about business evolution, see Annex 5.2-the case of Guriou -and Annex 5.1 -the case of Holandés.

(9)In the case of Guriou, , the settlers produced their first collective harvest in 1987/88 with very poor results. The cashew nuts, coco, corn, manioc and beans harvests have not produced a monetary income sufficiently high to improve their economic situation and the settlers have had to rely on their individual and semi-collective activities in order to meet their basic needs.

The field data we collected show some economic progress at Guriou and stagnant conditions at M. Seco, both of them having high levels of income concentration within the settlement. In fact, land reform has enhanced their purchasing power ,but their basic needs are still being met by self-consumption.

The situation is bad but not desperate. There are important prospects for progress thanks to the facilities given by the special credit system for agrarian reform ,and also due to the fact that they have their own natural resources to develop, mainly shrimp fishery and cashew nut plantations. Concerning the population itself ,not all the labour resources have been fully exploited. We could perceive that barely 70% of the available work force (measured in man-equivalents) was employed in the differerent tasks.

The evaluation of any Northeastern settlement must take into account the natural constraints ,such as the arid weather ,the poor quality of the soils and the pests which attack the crops.The two settlements we studied indeed have suffered all of these problems during these two first years of activities, plus their own structural constraints.The problem referred to most by the settlers during the interviews was the scarce and poor land available for cultivation.The second problem cited was lack of electricity to establish irrigated areas.Other structural problems mentioned were related to the lack of roads and health services ,thus reflecting the isolation they suffer by being so far from the cities.The social conditions are also very precarious,mainly in terms of housing and sanitation .

The lack of the most basic infrastructure and the existence of structural problems show the difference between these settlements and the southeastern settlements, where the problems emerge mainly during the production process.In the Northeast ,irrigation and credit to implant basic infrastructure are the most relevant solutions,whilst in the south ,price incentives and credit for production are more important.

However in the southeast,the Bõa Esperança settlers have the additional problem of security since the settlement is located within one of the more dangerous areas in Rio de Janeiro and the settlers share with urban workers the miserable conditions of the shanty towns around the big cities,including the problem of criminal violence.(10)

(10)Their social conditions are also very precarious. Although the houses are usually constructed with cement and roofs of thin metal plates,they lack the most basic sanitary conditons, such as clean water,waste disposal,bathrooms and so on.

In the Southeast specifically , the interviews show that the settlers' basic demands are not linked to infrastructure, but to better conditions of production. The main problem for the settlers is lack of working capital to improve their holdings , hence credit supply appears as the solution for this problem.

In the South , although they still have problems related to infrastructure, such as lack of a high school, drinking water, and insufficient resources to restore the fertility of all the soils, their main problems are now linked to agricultural policy , and specifically to price policy. In fact, price variations , and principally the recent decision of the government to withdraw wheat price subsidies have affected them strongly (11)

So far , the process of "positive integration" has posed new questions to the settlers. They attempt to face these with different strategies, such as output diversification (sorghum instead of wheat, for example), communal storage to avoid problems with the co-operative, communal transport and trade in order to cut out intermediaries, and even direct trade with the cities and export markets .

(11) With the end of the subsidy, wheat is no longer as profitable as before. Therefore they do not have a compensatory cash crop in the winter season, relying only upon soy-beans output in the summer.

The struggle for better prices is mediated by the inflationary process, which obliges them to be aware of a complex set of management problems , such as the timing of credit , cash-flow planning, etc. For instance , a loan coming with just one month's delay could force them to make payments for inputs using their own working capital , disrupting as a consequence their cash -flow. This situation might have very negative effects on the process of income generation.

The following statement given by one settler reflects their new understanding of the process of agrarian reform : "*Agrarian reform is not only land ,it means in addition :land for their sons,fair prices,fair cost of living,enough credit for production,one machine for at least six farms,agricultural insurance covering the own working capital,health services and freedom to protest*" (Interviews).

In fact the resources for the solution of both kind of problems,those related to infrastructure and to production , have come from the special system of credit for agrarian reform(Procera ,CAF,)(12)).With this financial support , the settlements have been equipped with some social services ,such as schools, health centres, roads, and new communal activities (warehouse,collective barns ,corn-mills etc).They also have been able to extend the permanent plantations(cashew-nuts in the Northeast,fruit trees in Rio de Janeiro, for example) and to introduce modern techniques of production in some cases.(13)

It is clear for most settlers that credit under the PROCERA system represents the only possibility of accelerating their modernization process,which becomes necessary if they are to off-set the lack of access to further land resources .

(12):See Annex 5.3 for more details about the PROCERA system.

(13):In the case of Guriou,,there are some basic activities, which can allow them to cross the threshold away from poverty. Using the resources that are available to them,they can expand cashew nut production , and through irrigation they should be able to increase the production of temporary crops,such as corn,beans and manioc.Indeed they need further mechanization,basically tractors,,so as to open new areas for cultivation.

Macali's settlers, however, have learnt by experience that land ownership without adequate means of production and technical advice leads to desperate situations. As described above, they went through the process of agricultural modernization (from 1979 to 1985) with all the ingredients that affect small farms: highly intensive use of chemical inputs, inadequate technical advice, and consequently huge debts.

The agrarian reform process, basically Procera and CETAP, corrected their trajectory and permitted those who were able to survive these past events to begin a new cycle of reproduction. Despite their bad past experience with credit they have continued to contract loans in order to run their production and to make some investments. Insofar as they are under the "umbrella" of the agrarian reform programme, it has become easier to face the process of commoditisation, as compared with the conditions "outside" the programme.

However, in the other southern settlement (The Holandés) the settlers have begun to buy modern equipment, combining self-financing with Procera resources. Insofar they are now already equipped, the possible cutting off Procera resources would not halt their process of modernization and trade. This case shows that Procera has contributed to set the initial conditions of production among a landless population without any initial endowment. This population took real advantage of it, and at present they are capable of continuing alone as commodity producers. Therefore they are no longer dependent on the "umbrella" of Procera, as might be the case in other places.

In general terms, the settlers are satisfied with the progress they have achieved in a very short period of time. Despite the fact that they are still quite poor, as we see below, they feel better off now than before. Proof of this is the fact that until now, almost nobody has given up and abandoned the

settlements. They think the outlook for the future is good enough to support the first stages of the organization process. (14)

(14) The impact of the process of agrarian reform on their particular standard of life was positively evaluated by most of the settlers. According to the interviews, 65% of the settlers believe their standard has improved and the remaining 35% think it has not changed. Nevertheless, those who think it has not changed often have said that the problem is inflation or other general factors, which affect the whole Brazilian population.

In Bõa Esperança only one settler (in 49) so far has have left the area for personal reasons. It must be noted that they are not allowed to sell the land, and when someone leaves the settlement another person must be introduced in his place.

Nevertheless, the settlement itself is not going to represent the only source of employment and income for all the settlers and their families. Being located near to the city of RJ, the settlers can look for work more easily than the typical rural worker, and in fact they are doing this. Barely 55% of the total work force available (measured in man-equivalents) has been employed within the settlement until now. Although they might expand employment in the future through new activities, the settlement, due to its small area, will never fully employ all the people involved.

5.5-CONCLUSION

In this chapter we aimed to understand the relationship between the process of re-constitution of the rural space and the establishment of different forms of organization of economic activities.

The foregoing analysis suggests that the need to re-constitute the settlement's infrastructure induced the settlers to strengthen the process of social organization, which they had created before during the land conflicts. The continuation of the process of social organization permitted the settlers to resolve some of their basic problems in terms of infrastructure and to launch agricultural production. As we have seen, the search for credit and the implantation of infrastructure also played an educational role, in terms of acquiring more knowledge about credit policies, price fluctuations, marketing mechanism, and even about business management skills. (15)

Apart from the improvement in productivity, the benefits generated by the settlements were sufficient to give quite reasonable income rates of return over costs in the short span of time since their creation. In the case of one settlement (Bõa Esperança), the costs/benefits relation has been remarkably positive. In our view, the fact that Bõa Esperança's current settlers did not have a previous "rural experience" has paradoxically contributed to their success. They were mainly unemployed or casual workers unable to reproduce themselves economically under urban or industrial conditions due to the economic crisis which Brazil has suffered since the beginning of the eighties.

(15) It can also be argued that the location of the settlements on abandoned or waste lands has improved the utilisation of productive factors (in this case land and labour), and therefore improved productivity of the economy as a whole.

Their return to agriculture, which features a curious transitional movement : from urban surplus labour towards peasantry (the opposite phenomena of proletarianization), has been done full of motivation and, what is probably more important, it took advantage of their previous urban experience, in terms of management skills and speed in making decisions.

The process of social organization, however, has been influenced by the widespread ideology "collective is better". In fact, many institutions (Castro et al 1988, MIRAD-Teófilo 1988) and civil servants in charge of some settlements exerted their influence on the settlers to adopt this kind of organization, in the best Mexican "ejido" style.

The main arguments in favour of the collective pattern of organization can be summarized as follows:

- In some cases, such as the Gurio villages, the former economic organization was centralized, both in terms of the organization of rural activities (plantations) and in the urban design of the villages.
- It has been suggested that in the Northeast, because of the climatic conditions, peasants are more likely to accept collective forms of organization which, in turn, hark back to their old communal traditions. (mutirão, kilombos, etc).
- Collective activities create better conditions for the peasants to face the intermediaries and, furthermore, to replace them by their own marketing organization.
- Equitable profit distribution would counteract the tendency towards social differentiation within the settlements.
- Cropping activities over large areas using groups of workers and machinery would generate scale economies.
- The existence of collective organization eliminates the possibility of land re-sales because land belongs to the community and not to individuals.

The collective model of organization was complemented

in some cases by rigid rules ,such as the prohibition on hiring outside workers,to contracting commercial loans,having off-farm jobs and on becoming cattle-ranchers instead of agricultural producers.

Under these conditions , the settlements are fulfilling completely the old slogan of the agrarian reform;that is, "to fix the man on the land ".

In our view ,the implementation of this slogan will give rise to authoritarian and bureaucratic tendencies.Collective use of the land implies the establishment of further rules to control the working time of the settlers and to divide the labour process in different tasks .Furthermore ,it relies on complicated management units,such as warehouses,teams of tractor drivers,finance committees,and so on.The settlers ,therefore ,tend to lose their autonomy and ,in practical terms,tend to become proletarians.

Ultimately,this approach seeks to transform the agricultural production process in something similar to the industrial process,despite the fact that it has largely failed in the socialist countries. Irrespective of the good intentions of the current leadership, the full implementation of something along these lines would probably generate bureaucratic tendencies among them.

The opposite tendency,that is ,to share the land and to work individually, stems from other motives,such as:

-Peasants do not understand the idea of forming "rural villages" and living together.Although there are relations of solidarity among peasants,the common feature of any rural area is to have independent households .

-Most settlers fear that the collective organization might decide to nullify their property rights .

-Their insertion in a collective organization would oblige them to accept disciplinary rules and patterns of work.This style is not in harmony with the ways peasants are used to in managing their working time .

-The collective organization risks becoming dependent on State decisions ,as happened at Macali in the past.In fact ,settlers can use their collective organization to exert more pressure on the government but, at the same time ,when such lobbying is taken on exclusively by the leadership , the ordinary settler might lose his autonomy ,becoming subordinated to both State and to their own leaders.

In our view ,a more **flexible form of organization** is more appropriate and more adapted to Brazilian conditions.As the experience of some settlements has demonstrated ,neither the pure collective form of organization,nor the totally individualistic form are the best.A more flexible organization would combine some aspects of the collective model ,such as communal marketing,common use of machinery and credit , with individual production; that is ,individual use of land and family control of the cropping activities .In this way ,the settlers can take advantage of the activities that certainly generate scale economies,mainly marketing and common purchases (Britton and Hill,1975,Cline 1970), leaving the use of land to the family householders ,which historically have proved to be more efficient in the control of the farming activity.

In addition ,the maintenance of some sort of collective organization appears to be crucial ,in order to face State authorities and to struggle for better conditions of integration in the markets.

Finally ,the case-studies have revealed some aspects of the settlements' economic evolution and their relationship with agricultural policies. The settlements researched have reached different stages in terms of economic development,and this evolution ,in turn, has determined a different relation with the state and its policies.In the Northeast ,**structural problems** (social and productive infrastructure) are present.These settlements therefore are still closely linked with State boards and

with the institutions in charge of the agrarian reform. The lack of **adequate credit supply** in the Southeast appears as the main constraint to their take-off in terms of production. Their main linkage thus is established with credit institutions (PROCERA, BNDS). The southern settlements have already formed their working capital and currently are paying more attention to State **marketing policy** and to **price fluctuations**.

As we emphasized above, the special system of credit for agrarian reform (PROCERA) has facilitated the establishment of basic infrastructure in some settlements, as well as providing working capital. Nevertheless, if this source of cheap credit dries up, as is likely to happen on account of the government's plans to reduce the public deficit, the settlers will have to cope with the commercial sector and with the normal sources of credit. As we showed in chapter one, current agricultural policies in Brazil are not favourable for the development of small farming. High interest rates, restrictions on credit supply and inadequate marketing policies (for small farmers) have constrained their development.

In sum, agricultural policies in Brazil have been unable to "improve the working of markets" (Ellis, 1988), which small farmers need in order to develop economically. This point represents a major challenge for the future of these settlements.

CHAPTER SIX

INCOME GENERATION IN BRAZILIAN LAND SETTLEMENTS .

6.1 INTRODUCTION.

So far we have presented the historical evolution of agrarian reform settlements and made some general points about their economic performance. In this section we shall analyse the settlers' individual economic performance so as to complete the description of the process of income generation brought about by agrarian reform. Our main hypothesis is that agrarian reform has been able to launch a process of income re-distribution, in spite of the adverse conditions in which it has been implemented. We have already pointed out that the first phase, (income re-distribution), would give rise to a steady process of income generation provided that the new settlers became positively integrated into the agricultural sector as small farmers. In order to illustrate this hypothesis and also to discover the determinants of this process we shall use data collected with the settlers in our field research. (1)(2)

(1) The current process of agrarian reform has been examined mainly from the political and/or sociological point of view in earlier studies. Furthermore, most studies have been restricted to individual cases (one settlement). For more information, see Perosa, E. (1988), Pereira (1986), Leite, S. (1987), Simon et al (1988) or official reports, such as BIRD/INCRA (1987), SEAF (1988), and MIRAD (1986).

(2) Although the BNDS research (Castro et al, 1988) has used economic methods of analysis, in our view it fails to present a comprehensive evaluation of the land settlements.

In order to prepare our methodology we have used some ideas of F.A.O (Kunert, H. 1976) and classical microeconomic methods of analysis.

6.2 METHODOLOGY.

The field research has covered six land settlements located in three different regions of Brazil, as the following table shows:

Table 6.1 List of Settlements researched .

<u>Settlement's name</u>	<u>Region</u>	<u>Total N°</u>	<u>Surveyed</u>	<u>Percentage</u>
Guriou - Ceará	NthEast	100	18	18%
Mangue Seco- Ceará	"	102	10	10%
F.Conquista- R.J	SthEast	39	17	44%
B.Esperança- R.J	"	49	19	39%
Macali - R.G.S	South	68	10	10%
N.Holandés - R.G.S	"	35	6	17%
Total	=	393	80	20%

The questionnaire was applied to a random sample within each settlement of about 20 % of the universe, which is bigger than the normal sample size. (around 5%). Nevertheless, the field research does not purport to be representative of the agrarian reform as a whole, as there are almost 500 settlements and we have visited barely 6 (around 1%). The main goal of this research is to provide some indications about the process of the agrarian reform and its determinants.

To determine settlers' monetary income we have used the prices obtained by the settlers, but to quantify the item of self-consumption we have applied the average consumer prices for each product. These reflect better the amount of money that the settlers would have to spend to buy these products. The quantitative results obtained from the survey have been converted in stable currency (ORTN'S) and then transformed into minimum wages so as to facilitate comparisons with the average Brazilian standard of life.

The results of the research will be shown as settlement averages, despite the internal variations within them. In

our econometric calculations ,the difference between settlements has been found to be more significant than the difference between settlers .However in the section related to income concentration we shall present some of the cross-section results. (3)

The main objectives of this study are :firstly,to quantify the process of income generation occurring within the settlements ;secondly, to detect the main determinants of this process;thirdly ,to show some indications of surplus accumulation and ,finally, to discuss the problem of income variations between settlement in relation to their different forms of social and economic organization. (4)

(3)Before we present the results ,it is important to note that in Brazil the BNDS(National Bank for Social and Economic Development) ,after extensive research in rural settlements (Castro Monteiro et al,1988) concluded that the agrarian reform process would reproduce the same pattern of income concentration that exists within Brazilian society.According to the BNDS study ,the main factors which might improve income generation are firstly ,the adoption of modern techniques of production and ,secondly, the adoption of a collective model of organization instead of traditional family farming. Since the results of this research can be interpreted as a critique of the very process of land reform ,we will try to compare it with our own results ,and despite similarities on some issues,we will show that the conclusions differ.

(4)There are obviously many "determinants" which will not appear in the quantitative analysis.We have tried to capture the qualitative aspects by special interviews with settlers' leaders and with advisors and civil servants who work for Mirad(Ministerio de Reforma e Desenv.Agrario) and secondly through our participation in their assemblies and discussions .

6.3 ECONOMIC PERFORMANCE AT THE MICRO-LEVEL

In the short period of time, 1986-1988, since the beginning of the settlements' economic activities an important process of income generation has taken place. The following table shows the results achieved by the average settler in terms of production in the 1987/1988 harvest:

Table 6.2: Household production for the market
(kgs and minimum wages)

	<u>Guriou</u>	<u>M. Seco</u>	<u>Bõa Esp.</u>	<u>F. Conq.</u>	<u>Macali</u>	<u>Holandés.</u>
<u>Cash Crops</u>						
Manioc	400	200	3800	500		
Corn			100	140	600	3400
Soy-Beans					8400	17800
Wheat					1600	
Okra			2200	200		
Pumpkin			400	900		
Cashew nut	15	75				
Coconut	200	300				
Fish	297	30				
Shrimp	50	60				
Others			100	1200		
<u>Min. Wages</u>						
per month	1.03	0.20	2.83	1.36	2.95	2.44

Beyond this production, the settlers have produced the following quantities of output for their own consumption:

Table 6.3: Household production for own consumption
(Kgs and totals in minimum wages)

	Guriou	M. Seco	Bōa Esp.	F. Cong.	Macali	Holandés.
<u>Consumption</u>						
Manioc	300	300	590	210	1400	200
Corn	100	160		290		
Beans	100	130	30	150	100	500
Rice	17		77	160	300	200
Potatoes				240	60	500
Pumpkin			200	90		
Okra			110	35		
Vegetables	70	40	90	320	110	100
Fruits	50	90	170	140	60	
Fish	330	80				
Pork Meat	120	90	110	60	260	150
Red Meat					40	60
Chicken	30	80	60	35	80	80
Eggs (dozen)	24	40	60	50	95	90
Dairy (lts)	60	70	100	70	200	200
Others					300	250
Min. Wages						
per month	1.5	1.2	1.51	1.65	2.93	2.67
Total: (*)	2.53	1.4	4.34	3.01	5.88	5.11

(*) From tables 6.2 and 6.3

The table above shows clearly that the settlers have been able to generate enough income to sustain their families; that is, a process of income generation has indeed occurred. Although the monetary income of the Northeastern settlers (Guriou and M. Seco) was very low, when it is added to the income represented by family consumption, it reaches the minimum threshold of one minimum wage per month. According to Hoffman (1981, 1983) this parameter

represents the minimum income necessary to sustain a family. However, this amount of income would be insufficient to sustain a family composed of many children and other persons, as is often the case at M. Seco. In fact, the settlers there have not yet overcome their deep poverty, and are still having great difficulty in feeding their families.

The other settlements, except M. Seco, have managed to produce for the market and for self-consumption, generating larger incomes, notably the Southern settlers, which earned 5 monthly minimum wages per family (average) or even Bõa Esperança, with almost 4,5 minimum wages of total income. With regard to these settlements in the south and southeast, there is sound empirical evidence to say that, on average, they have fulfilled the first condition of viability. That is, they have generated a decent income, and therefore overcome the standards of poverty in Brazil.

Although there are no exact data about their previous income to compare with the current situation, it is possible to affirm that in most cases a process of income re-distribution also has taken place. Approximately 90% of the settlers declared that their situation has improved since the settlement began. But more important than this, is the comparison between their former employment situation and what they actually do now. Before agrarian reform, most were tenants (in the Northeast), or unemployed (in the Southeast) or ex-migrants and rural unemployed in the South, whose families barely managed to feed themselves. After two years of settlement, they are feeding themselves reasonably well and beginning to develop their economic activities. We have to bear in mind that most settlers have also built their own houses within the settlements, which means that they do not pay rent for housing as urban workers do. If that "unpaid rent" was calculated and included in the total income, it would

effectively exceed the living standards of the average urban worker.

The table above also shows different patterns of output and self-consumption between the settlements. The principal cash crop in the Northeastern settlements are cashew-nuts and shrimp, manioc and okra in Rio de Janeiro, wheat and soybeans in the South. In terms of consumption, although the quality of the food is quite good, this also differs sharply between the regions. The Northeastern diet is composed mainly of manioc, beans, ordinary fish, and small quantities of vegetables and dairy products. In Rio de Janeiro, the settlers eat vegetables, fruits and some varieties of olericolas, while in the South, the diet is more complete and balanced, with all sort of vegetables, cereals (beans, rice,) dairy products and also red meat. They only fail to produce fruits if compared to Rio de Janeiro's settlers. Although the differences between the settlements in terms of family consumption converted to money terms are significant, when the different patterns and qualities of food are taken into account, the gap between them is accentuated further, mainly due to the poorer quality of the Northeastern products (fish and pork).

Before looking into the determinants of income, it is important to describe the sources of that income (Table 6.4).

Table 6.4
Distribution of Monetary Income according to the
different sources of income (%).

	Guriou	M.Seco	Boã Esp	F.Conq.	Macali	Holandés
Sources						
Agricult.	6.4	5.7	72.1	87.3	70.2	100.0
Livestock	3.9	15.3	4.6	2.8	24.4	
Fishery	71.3	9.0				
Off-Farm	14.2	23.8	23.3	9.8	5.4	
Others	4.2	46.2*				
Total	100.0	100.0	100.0	100.0	100.0	100.0

(*):mainly income from collective activities.

Note:Agricult=Monetary income after deduction of inputs.

Inputs deductions were:Boã Esp:3%,F.Conq:3.3%,Macali:29.8% and
 Holandés:68.7%.Guriou and M.seco did not use inputs.

As can be seen ,individual agriculture does not play an important role in the Northeastern settlements due to opportunities for fishing, and also because of the contribution of collective income in the case of M.Seco and handcraft activities in both cases.The other settlements are less diversified in terms of sources of income .Income stems mainly from agriculture ,although livestock accounts for almost 25 % of the income at Macali I and off-farm employment for 23.3% at Boã Esperança.

Table 6.4 also shows the different proportions of income absorbed by purchases of agricultural inputs.The Holandés settlement is the only one devoted wholly to commercial agriculture by using a high level of modern inputs.In fact ,this settlement produces like any other modern farm in the region and, by doing so ,they have incurred high costs of production .

Off-farm activities actually are not as important in determining income as studies of peasant agriculture

suggest. Only at Bõa Esperança do such activities account for a significant part of the total income (23.3%). In the other two cases (Guriou and M. Seco) this employment is not strictly off-farm , since it is engendered by handcraft activities executed within the settlement. At Bõa Esperança , it stems effectively from off-farm jobs , which can be taken by the settlers due to the proximity to the city of Rio de Janeiro and their former experience as urban workers in some cases. Even so , this income is usually generated by one or two members of the household, who have retained jobs outside the settlement, while the father or the mother stays full-time within it .

6.3.1 Determinants of income.

There are different techniques to analyse economic determinants of income at the micro-level, such as production functions , cost-benefit analysis, household behavior, etc. In practical terms , these approaches attempt to explain how the main factors of production (land , labour and capital) affect the generation of income. The analysis of household behavior will emphasise such factors as initial endowments, past experience , education and so on to explain individual family behavior.

In our research, the following factors have been found to be significantly correlated with income : use of modern technology and its impacts on land productivity, the quality and quantity of land available, use of family labour or waged labour, the degree of opening to the market and access to market, credit availability , and forms of productive organization. Other factors such as education, experience , and initial endowments are not included in this analysis (these factors barely explain differences between individual settlers in some aspects) because our principal concern is to explain variations at the aggregate level of

the settlement. ("average settler").

Contrary to the conclusions of other researches (4), our analysis shows that the **degree of opening to markets and access to the market** are the main determinants of economic success. The following table demonstrates this point:

Table 6.5
Percentage of monetary and self consumption
income (in monthly m.w and %)

<u>Settlement</u>	<u>Market</u>	<u>Self Cons.</u>	<u>Total</u>	<u>Off-farm</u>	<u>Total</u>
Bõa Esp.	2.83(65.2)	1.51(34.8)	4.34(100)		
			4.34(84)	0.85(16)	5.2(100)
Macali I	2.95(50.2)	2.93(49.8)	5.88(100)		
			5.88(97)	0.16(3)	6.0(100)
Holandés	2.44(47.7)	2.67(52.3)	5.11(100)		
			5.11(100)	--	5.1(100)
F. Conq.	1.36(45.2)	1.65(54.8)	3.01(100)		
			3.01(95)	0.15(5)	3.2(100)
Guriou	1.03(40.7)	1.50(59.3)	2.53(100)		
			2.53(95)	0.14(5)	2.7(100)
M. Seco	0.20(14.0)	1.20(86.0)	1.40(90)		
			1.40(100)	0.15(10)	1.6(100)

(4): Castro Monteiro et al (1988) arrived to the conclusion that technology was the main determinant of income. Carter (1984) highlighted the forms of social organization in his study of the Peruvian agrarian reform. See also Biswanger et al (1988) and Arroyo (1979).

In Table 6.4, we saw that the percentage of income generated through off-farm activities oscillated around 20% depending on the settlement. However, when this source of income is related to total income instead of exclusively to monetary income, it appears to be less significant, oscillating now between 16% to 0% .

The other part of Table 6.5 above relates market income to self-consumption. It reveals that Bõa Esperança' settlers have devoted most of their efforts to production for the market, while at the other extreme M. Seco families have consumed practically all their output. In turn, other settlements, with less openness to markets, have produced higher amounts of income, like Macali and Holandés. However, we have to bear in mind that the land available to the different settlements is not the same.

In the following calculations we have controlled the variable for "area" by imputing the same amount of land to all the settlements (20.4 hectares) and also for the variable "inputs" by deducting 30% from the income of Bõa Esperança and F. Conquista, which use very low quantities of inputs according to our data.

Table 6.6
Net Monetary Income in Monthly minimum wages
after adjustment

Settlement	A	B	C	D	E	F
Bōa Esp.	2.83	4.9 has	30%	2.06	8.6	85%
Macali I	2.95	14.6 has	-	2.95	4.1	58%
Holandés	2.44	20.4 has	-	2.44	2.4	47%
F. Conq.	1.36	4.0 has	30%	1.00	5.1	75%
Guriou	1.03	(*)				
M. Seco	0.20	(*)				

Note: A=net monetary income according to Table 6.2 .

B=Average area of land effectively available.

C=percentage deduction from income (inputs) to facilitate the comparison with the southern settlements.

D=Net monetary income after deduction, $B \times C / 100$.

E=Net monetary income if all the settlements had the same area as Holandés (20.4has); $(D/B) \times 20.4$.

F=Degree of opening to market using the income =E

F= E/self consumption income+E.

Obs: Self Consumption income is the same as in Table 6.3 since it is considered as a constant.

*: It was impossible to extrapolate these incomes because their main source was not related to land. (fishing).

What we have done in Table 6.6 is to equalize incomes with respect to land and technology and then to recalculate the degree of market participation. Obviously there are some assumptions in this method which could be controversial. Firstly, we are assuming the land is of the same quality, which is not true; secondly, we assume that more land will mean more production, that is, marginal productivity is constant, thirdly, we consider self-consumption income as a constant. If we drop the first of these assumptions, we would have to impute a value to the land quality factor. However this procedure would strengthen our hypothesis even more on account of the higher values that we would have to give to the case of Bãa Esperança (less fertile land). The second point (more land, more income) stems from the fact that marginal productivity at that level of area (less than 20 hectares) is really constant, due to idle labour capacity within the families. Finally, self consumption is constant because more land would mean slightly more use of this land for consumption, which surely would be devoted to cash crops.

Taking all these considerations into account, we conclude that the highest incomes are related to the degree of openness to the markets achieved by the settlers, as the Table 6.6 shows for the cases of Bãa Esperança and F. Conquista.

6.3.2. Methods of Trading and Storage.

The conclusion above, that is, that settlers' total income is related to the degree of opening to markets, although apparently obvious, conflicts with most of the assumptions underlying traditional peasant behaviour. The risk aversion theory suggests that peasants' activity would need to balance cash crops with respect to own-consumption crops in order to guarantee their main goal, which is the survival of the family as a peasant family. However, under Brazilian circumstances of high inflation and low monetary incomes, people in the countryside have drawn progressively on the market, despite the allegedly superior security given by self-consumption activities.

The results from our research reveal a different process of commoditisation in the three regions visited.

In the Northeastern settlements, cashew-nuts and shrimp are the products which people trade most, because of their market value. Although there are some difficulties in trading these products directly in the market, their production is time-consuming, and tends to replace the production of other commodities. The Guriou's settlers are aware that their future will depend on the commoditisation of these activities.

In Rio De Janeiro, by contrast, the tradeable goods have found an easy way into the market, which is located very near the settlement. (60km from RJ and 40km from CEASA). Trading is still been done through the intervention of intermediaries (called "camelós"), who transport the output from the settlement to the market (Ceasa). Most of the settlers use this system (75%) and, according to the interviews, the difference in price they receive is offset by the costs of transportation, classification and other activities.

However, some do sell directly to the market (15%) using their own small trucks, or even horses and bicycles, but these cases do not represent an important share of the total output. Only a small percentage (10%) send their produce to closer local markets, basically vegetables. Recently, settlers began to organize an association with the purpose of replacing the intermediaries by buying their own means of transportation. Collective trading might be successful as the average output per family is quite significant given the small area of their holdings (5 has): 1 ton of pumpkin, 4 tons of quiabo, 5 tons of manioc, plus several hundred kgs of other cereals and vegetables.

F. Conquista' settlers however are less oriented to the market than Bõa Esperança' settlers, at least in the two more tradable commodities: okra and manioc. In this case, they consume 21% of the okra and 30% of manioc, while at Bõa Esperança the settlers sell almost all the okra produced and 90% of the manioc. This makes an important difference to the total monetary income generated by the settlers.

In fact, these two settlements, and mainly Bõa Esperança, have benefited enormously from their proximity to the city of Rio de Janeiro. Bõa Esperança settlers have managed to sell their output practically at the same price calculated by the Consumer Price Index (FGV), instead of the "farmgate" price received by most farmers. (Index of Prices Received), which always is lower than the consumer price.

The main factor in determining net monetary incomes, therefore, has been the location advantage (location rent) enjoyed by the Rio de Janeiro settlers in comparison with the other settlers, who depend on a very rigid structure of commerce.

Nevertheless Bõa Esperança has strengthened its position in the market by producing a valuable commodity(okra) and ,secondly, by using workers from outside the settlement to complement family labor, as the following numbers show:

Table 6.7
Settlements Work Force

	Family labour	Workers(days/year)
Bõa Esperança	2 persons	50.7 days
Macali I	1.8 "	2.2 "
Holandés	1.2 "	(not allowed)
F.Conquista	2.3 "	(not allowed)

As can be seen the Bõa Esperança settlement has assumed a more capitalist pattern of production ,by making good use of the market and of hired labour ,which permitted the settlers in the short term to achieve the highest levels of income .At F.Conquista ,on the other hand , employment of outside workers was ruled out by the Association,with the specific purpose of avoiding capitalist methods of production.

In the South ,Macali's settlers are heavily engaged in commercial production (63% for sale),which allows them to generate a considerable amount of monetary income each harvest. Trading ,however,is restricted to soybeans and wheat due to the specific market structure found in this

region. These two products, wheat in the winter and soybeans at the summer, have taken over most of the land in the region, shaping the whole trading system. In fact, any attempt to broaden the range of tradeable output to include other products, such as beans, rice or even vegetables, would be impeded by the lack of marketing structures (silos, trucks, storehouses, and clients).

Some settlers, interested in developing more diversified agriculture, have thought of starting trading with the city of Porto Alegre. Nevertheless, until now, trading has been done through the Co-operative Society-COTRISAL (Cia Triticola Sarandí Ltda), which sends its own harvesters and trucks every year to the settlement to collect the production. They use the co-operative barns and silos so as to avoid low prices immediately after harvesting

These facilities are not given free of charge, and settlers in fact pay a percentage of the total output (approximately 20%) for harvesting and transport. Although storage is free, the settlers usually have had to sell immediately after harvesting in order to repay their debts. With the introduction of the Propera credit programme the settlers will not be pressed to sell so quickly. Also they plan to build their own storehouses

6.3.3 Technology and Land Productivity.

The use of modern technology has varied widely from settlement to settlement. In the Northeast, the settlers still use very traditional techniques of production, basically manual ploughing and harvesting, with practically no fertilizers and only limited application of pesticides. Only 16% use organic fertilizer (no one uses chemicals) and 25% spray with pesticides.

In the Southeastern settlements (Bõa Esperança and F. Conquista), the settlers have managed to achieve quite reasonable yields without very significant reliance on modern technology. The first two harvests at Bõa Esperança occurred before the arrival of Procera, and thus they were unable to purchase enough fertilizers and other modern inputs. Although they have not applied chemical fertilizers or any kind of soil correctives to the land before planting, most settlers have used organic fertilization (70%) and 90% spray pesticides. To plough the soils, almost every settler (90%) rented tractors and they have employed day-labourers (60%) to help with the harvesting. The lack of modern inputs did not prevent good results in terms of output and yields, as shown below, although this does not mean that they are tied to traditional methods of production. In order to modernize production, the settlers have assimilated some technical advice given by Emater engineers, who visit the settlement and also individual settler households, which is important because the settlers' plots differ one from another in terms of soils, relief and so on.

In the other settlement of this region (F. Conquista), the settlers were in better financial condition on account of the aid given by L. B. A, which allowed them to adopt some elements of modern techniques, such as mechanized ploughing, use of chemical fertilizers (NPK), soil correctives (lime), application of pesticides and improved seed. Although some other activities are still done

manually, such as weeding and harvesting, the size of the area and the kind of products they plant would not require further steps in terms of modernization. Nevertheless, as we show below, the use of larger quantities of modern inputs in this settlement has not induced higher yields than Bõa Esperança. According to our field observations, settlers in Bõa Esperança, despite less access to credit and inputs (only organic fertilizers), have better assimilated the technical advice available to them and have been more careful in allocating their scarce resources. Settlers in F. Conquista, meanwhile, received the inputs and tractors in kind, that is as a donation, and tended to follow general instructions given by the EMATER extension agents to all settlers, without specific household advice. At the end of the year, these settlers produced a lower output at lower levels of productivity despite the advantage of having large quantities of modern inputs available.

The Southern settlements are undergoing a more radical process of agricultural modernisation than the others. Macali's yields in the last two harvests have been quite reasonable if compared with regional and national average yields:

Table 6.8
Land Productivity in the South.

Product	Macali	National Aver.	Regional (Ronda Alta)
Soy-Beans	1.1 (1.4)	1.8	1.3
Wheat	0.7 (1.6)		1.9
Corn	2.2 (1.5)	2.2	1.4
Beans	0.3	0.7	0.2
Rice	0.7	1.4	0.8
Manioc	4.2	12.0	1.0

Source: IBGE, Preliminar Census, 1985, Municipal Production.

Wheat was the only crop with yields below the regional average, while soybeans, corn, and the others have yielded approximately the same as their neighbours. It must be noted that the region is characterised by the presence of highly capitalized farms which use all sorts of modern technology, while these settlers are, at best, small farmers still undergoing integration within the market and the process of modernisation.

The adoption of modern agricultural techniques, however, is also very important among these settlers. Practically all the cultivation tasks (ploughing, threshing, weeding, and harvesting) are being executed with the use of modern machinery, and the soils are treated using some of the more advanced techniques such as green fertilization, soil correctives, contour ploughing (terraces) to prevent erosion, and so on. With the advice of CETAP, they have substituted biological pest control for pesticides, which has resulted in increased productivity and, at the same time, eliminated intoxication of soils and people (consumers and workers).

The use of modern machinery became possible by forming small groups (3 to 6 families) to buy tractors, ploughs and all the necessary implements, or sometimes by renting those machines from others.

The following table shows the quantities of inputs used on their holdings

Chemical Fertilizers: (t)	1.19
Organic Fertilizers: (t)	1.42
Lime (t)	24.00
Seeds: (t)	1.10
Tractor: (Hours)	33.89
Pesticides: (lts)	9.85

At the other southern settlement (Holandés) the situation

in terms of methods of cultivation is similar. Although the Holandes' settlers have partially adopted the modern technological "package", they are progressively combining this with elements of "appropriate technology". They use modern machinery for practically all activities, from ploughing to harvesting. They have their own tractors and harvesters working day and night on these tasks, with the sole exception of weeding, which is done manually or with the use of animal traction. Weeding is being done manually so as to avoid the excessive utilization of herbicides. They also intend to mechanize weeding in order to free the work force for other activities.

Despite the heterogeneity of techniques available and different possibilities and ways of using them, the BNDS's research concludes in a more general way. It finds that the settlers who use the most advanced agricultural techniques have achieved the highest levels of income per family. Thus, according to their research, technology plays a general and central determining role in the generation of total gross income, while the other factors of production (land and labour) do not seem to be so strongly correlated.

However, our quantitative survey has not achieved the same results as the following table shows:

Table 6.10:
Productivity(t/has) in the settlements
and use of modern inputs(tons)

	Soy-B	Wheat	Corn	Beans	Rice	Manioc	Inputs.
Settlement:							
Guriou			0.5	0.4			
M.Seco			1.0	0.4			
Bõa Esperança			2.2	1.4	2.2	8.9	
(Region)			(1.5)	(1.2)	(1.7)	(12)	
F.Conquista			2.2	0.7	1.1	2.9	0.4
(Region)			(1.1)	(0.7)	(1.0)	(10)	
Macali I	1.4	1.6	1.5	0.3	0.7	4.2	1.2
(Region)	(1.3)	(1.9)	(1.4)	(0.2)	(0.8)	(1)	
Holandés	1.7	1.7	3.0	1.2	1.1	2.5	4.2
(Region)	(1.3)		(1.5)	(0.3)	(1.1)	(1)	
=====							
National							
Average	1.8		2.2	0.7	1.4	12.0	

Source: IBGE, Agricultural census (preliminar) 1985.

As the table reveals , there are no great productivity differences between the settlements , except in the Northeastern case which follows a different dynamic. Furthermore, differences do not appear to be correlated with the use of modern inputs. For instance, the Holandés settlement which has achieved a higher yield (40% more) in the case of corn, has used ten times more inputs than the others. Despite some variations , most settlements have accompanied the average regional yield . For this reason, we believe that this factor has not yet played a crucial role in determining the level of income , as

happened in the case of market integration.

The BNDS's research found technology to be the determining factor because they worked with gross product instead of net product. What happens is that technology has a dual impact, one on income, pushing it up, and the other on the costs of production, hence reducing net income. As the BNDS's research has not subtracted the costs of production from the gross income, they only have captured one side of the coin, the one which presents the positive impact of the technology. If we did the same, the southern settlements (Macali and N. Holandés) which use all kinds of modern technology would show the highest levels of income but, once we have subtracted the costs of purchasing technology, their net income does not surpass that of Boa Esperança's settlers, who have not used so many elements of modern technology. (5)

Productivity, furthermore, is unlikely to be a determining variable, unless great differences appear, because of the low Brazilian average levels compared to international standards. Within this context, of low general productivity, the agrarian reform settlements have found room for development and economic viability, as also might be the case of small farm production as a whole. Furthermore, the use of modern inputs depends on the credit resources available for the settlers. This variable might be independent, and hence a real determinant of income.

6.3.4 Credit availability.

As we already said, the agrarian reform settlements were supposed to receive financial support from the government.

(5) These settlers have not yet used modern technology due to the lack of financial resources, but with the new system of credit (PROCERA) they are starting to buy tractors and to use more fertilizers

The programme of credit encompasses three different stages. It begins with the credit to provide food for the new settlers for a period of six months, followed by credit for assistance and development (CAF) for the acquisition of basic materials and machinery and, finally, the settlers enter into the PROCERA system, which, in turn, also has three stages. With this credit the settlers develop permanent crops, livestock and can increase their stock of machinery. Most of these financial resources are de facto grants, with the exception of PROCERA, which must be returned to the government, but under very favourable conditions of interest rates and re-payment terms. According to the programme, the settlers would have been financially supported during the first three years. In real life, the system of credit did not work so perfectly, as the following table shows:

Table 6.11: Use of Credit in the Settlements:
Average Value of Loans per family (OTN'S)

	C. A. F.	B. Brazil	PROCERA I	PROCERA II	III
<u>Settlement.</u>					
Guriou (Dec 86)	110.0 (87)		87.5 (Nov 88)		
Bõa Esp. (Dec 86)	52.5 (87)		250.0 (Dec 87)	750.0 (Dec 88)	
F. Conq. (*) (Feb 86)	100.0 (87)		250.0 (Nov 88)		
Macali I (Oct 86)		230.0	187.0 (Feb 87)	531.0 (May 88)	
Holandés (May 87)	250.0 (87)	715.0 (87)	250.0 (Jan 88)	700.0 (Aug 88)	250.0 (Dc. 88)

Obs : 1 OTN \approx US\$ 7.6-

(*) : Instead of CAF, this settlement received aid from LIA.

Credit and financial grants played, at the beginning, a strategic role within the settlements. The credit for assistance and development has been reasonable and equitably distributed amongst the different settlements, with the exception of Holandés, which received double the others. Apparently the CAF aid arrived promptly, facilitating the implementation of the initial activities.

Nevertheless, the PROCERA resources did not flow at the right time and also its performance varied widely between the different settlements. In a previous chapter, we pointed out that its bureaucratic character provoked severe delays in the flow of credit to the settlers, thus imposing delays on production. The worst cases of delay in the table above are Guriou and F. Conquista, which had to wait almost two years to receive the first phase of Procera money. Bõa Esperança had to wait around a year and Holandés almost six months. The rhythm and flow of financial resources was crucial for the settlements' economic performance, since it has allowed some to crop the 1987/1988 season with credit, such as Bõa Esperança, Macali and Holandés, or without this support, as in the case of the others. Although Procera credit is not devoted entirely to cropping activities, because part of it goes to the implementation of infrastructure and permanent plantations, it allows the settlers to have enough working capital for harvesting and trading tasks, which can not be faced using only the resources remaining from the CAF grant.

The second issue which arises from the table above is related to the quantity of resources available. There is a great gap (ten times) between the settlements, with Holandés at one extreme and Guriou at the other. The three settlements which have received the largest amounts of credit (Macali, Holandés and Bõa Esperança) were also, as we stated before, better off in terms of income

generation. These settlements are currently undergoing the second or third stage of the Procera system, which will allow them to implement new economic activities, and therefore to have a steady process of development in the near future.

The gap between the settlements cannot be interpreted exclusively as a privilege. Although the Mirad authorities have shown some preference for these settlements, these settlers themselves have triggered a more rapid flow and greater quantity of resources than the others, basically on account of their political organization, the Landless Movement (MST).

On the other hand, these settlements had previously shown higher prospects of profitability than the others, and thus a higher cost-benefit ratio, which obviously has led the MIRAD authorities to favour them instead of the Northeastern ones. However, the difference between them appears to be excessively large with regard to the standard of life in the Northeast, which ought to be improved.

In sum, access to credit and, in particular, to the Procera system, has proved to be strategic in determining the process of income generation, allied to the other factor of market participation already discussed above.

6.4 THE ACCUMULATION PROCESS

So far we have described the variables which affect income generation and the characteristics of this process. The second step within our model is related to the settler's evolution in terms of the following variables: saving capacity, indebtedness, and investment. The main goal of this section is to detect the financial sources of investment and its impact on the process of modernisation and commoditisation.

The following family budget gives some supportive evidence about the first of these variables, namely, saving capacity.

Table 6.12: Household's Average Monthly Budget.
(OTN's)

	Net Balance	Percentage	Debts with others
		Surplus/Income	than Procera.
Guriou	6.5	50.0%	
M. Seco	-3.4	- 8.5%	
B. Esperança	18.0	60.0%	
F. Conquista	4.5	36.0%	
Macali I	10.4	40.0%	106.0
Holandés	21.3	25.0%	216.0

Note: Net balance= is the difference between family income and expenses.

Income= Yearly net income (OTN's)divided by the number of months in 1988 until the date of the research.

Expenses= include all the expenditures related to the family as such: food, clothing, remedies, school materials, transportation, energy and amusement.

Although on average, balances are not in deficit ,when they are disaggregated ,several cases of negative balances appear.In the Northeastern settlements ,these are met by informal loans and purchases on credit ,which allow the settlers to offset temporary losses of income(deficits).Nevertheless ,M.Seco's settlers as a whole have sustained deficit, as Table 6.12 above demonstrates.This fact is closely correlated with the low level of income generated by this settlement in the past two years,and the failure to supply financial resources promptly .They have administered their deficits by using the warehouse' "purchase on credit" system.

Within the southern settlements there are also cases of budget deficit ,which have had to be financed by bank loans,mainly from the Bank of Brazil ,as the table shows.It must be noted that in these states buying on credit and informal loans are not available, as is the case in the Northeast and Southeast regions..

In general terms ,the settlers have managed to save reasonable portions of their budgets,despite the individual deficits which have occurred.Furthermore , saving capacity is correlated with the average income of the settlement,as happened in the cases of Bõa Esperança,Holandés and Macali ,which have produced the largest output also.

Nevertheless ,this saving capacity has not been enough to guarantee a steady process of investment,which has been mainly financed by the special programme of credit for agrarian reform.The following table shows some data about investment within the settlements:

Table 6.13: Average Investment in the Settlements.

	Stock of Animals	Livestock Increase	B/A Household % Improvement	Technical Improv.	
	(A)	(B)	(C)	(D)	(F)
M. Seco	142.8	6.6	5	200	65
Guriou	143.3	17.6	13	100	80
Bõa Esp.	131.7	39.4	30	400	115
F. Conq.	45.1	30.2	67	400	50
Macali I	411.6	52.4	13	1000	790
Holandés	200.8	180.2	89	1000	470

Notes:

(A): Final Stock of animals: includes all the animals brought to the settlement by the settlers, plus the new animals purchased and born, minus consumption and deaths in the last two years. In order to standardise all the different animals into a single category we have given the following values to each one according to their relative prices:

chicken= Otn's 0.25; Mature swine =5.23 ;
 small swine =1.32; Goats=5.35 ;
 Cattle= 60.0 ; Horses= 85.3 Otn's.

(B): Net Increase in Livestock: includes all the new animals purchased and born minus the animals consumed or sold by the settlers since the settlement began until the date of our ressearch.

(C): Rate of livestock increase.: net increase in livestock over the final stock.

(D): Household Improvements: This item shows the number of improvements the settler has made in his household, such as kitchen, beds, furniture, etc. Each item has the same value=100.

(F): Technical Improvements: includes all the new machinery, equipment and tools bought since the settlement began. We imputed the following values to the different items:

Harvester	: 2000
Tractor	: 1500
Truck	: 1500
Vehicle	: 300
Implements, Anexes (stores)	: 200
Tools	: 50

The investments above will have different implications for future income generation in the settlement as a whole, and for internal differentiation amongst the settlers.

Analyzing the average investment per family it is possible to detect three different options or strategies of investment:

-Household investment as predominant: This is clearly the case of all the settlements, since there were no houses within the settlements before the settlers arrived. However the situation varies widely amongst them; in Northeast the settlers had their houses already built but they decided to improve their quality, instead of making other productive investments. Rio de Janeiro's settlements were without housing, and so the bulk of financial resources was allocated to house building. In the South, where this kind of investment was also important, the situation is quite different. Macali's settlers, having built their houses before, spent more money in recent periods on buying domestic equipment, like kitchens, freezers, TV and so on. The people at Holandés are currently building good quality houses but simultaneously they are adding to their productive infrastructure.

-Livestock investment as second option: Although no settlement has devoted more resources to livestock than to technical improvements, the Northeastern settlements appear to be more engaged in this strategy than the rest. They have bigger stocks of animals than machinery, which can be a good solution regarding the necessity of developing complementary sources of income. Macali's settlers had already acquired their livestock beforehand and do not show a trend to continue in this direction.

-Technical improvements as first long term option: The Southern settlements are clearly concerned with technical improvement, having invested five to ten times more than the rest in machinery, equipment and so on. Also, the

composition of the investment is different. Elsewhere it involves mainly simple rural tools, but in the southern settlements it comprises tractors bought by small groups, harvesters for collective use, ploughs and other equipment.

The Southern settlements, despite lower short term income, (in proportion to area if compared to Bõa Esperança), are indeed better equipped to launch a steady process of income generation in the future than this settlement.

However, the data above do not include other investments, such as soil improvement (lime), and the planting of permanent crops. In fact, the Northeastern settlements have planted cashew trees and those in Rio de Janeiro have planted different fruit trees, which might induce long term development as well.

In sum, there are two different strategies, one undergoing modernisation and mechanisation and the other more concerned with finding "niches" in the market for specific products and permanent crops, such as cashew-nuts, passion fruit, okra and so on. The options depend mainly on the regional environment, which lends itself sometimes to modern agriculture and mechanisation while in others it induces settlers to stick to local and profitable markets.

To finance these investments the settlers have used part of their budget surpluses and the credit system. The household budgets depicted above represented only the average position in the last month of our research. Although saving capacity exists in some cases, it is not significant enough to be able to project a yearly tendency which could explain investment. Furthermore, as stated before, some other individual cases were highly indebted by the time of our research.

In fact the arrival of the PROCERA system has modified this situation, at least in the case of Macali's settlers, preventing the failure of some of them, and the likelihood

of land sales amongst the settlers. In the other cases, Procera loans have been allocated largely to productive investment, such as technical improvements, livestock production, lime for soil correction, permanent crops, with the remainder being allocated to finance short term production.

Household improvements (construction of houses and domestic equipment) were paid for from the first system of grants already mentioned, that is, CAF (advice and development) and specific loans given by MIRAD for housing and preparatory tasks.

In sum, our empirical material has shown that there is a process of income generation going on in the settlements somewhat dependent on its internal forces (land and labour) but more so on access to credit and to the specific trading conditions. The investment which so far has occurred has been fostered, to a great extent, by the system of subsidised credit and other official grants.

6.4.1 Land Use in the settlements.

The settlers have responded efficiently to the boost given by the government, buying machinery, extending crop production, and undertaking new activities. The following table gives some indication of land use within the settlements:

Table 6.14
Land Use in the Settlements (Average)

	Total Area (A)	Cultivated (B) 1987/1988	B/A %	Increase 88/89 %	Total Use
Guriou (1)	582.4 has	131.8	23%	17%	40%
M. Seco (1)	3308.5 "	201.5	6%	5%	11%
B. Esperança	278.0 "	136.0	49%	40%	99%
F. Conquista	619.5 "	433.0	70%	25%	95%
Macali I	923.0 "	752.2	81%	7%	88%
Holandés (2)	723.0 "	458.0	63%	-	63%

Note: (1) There are large areas with forest, moors, and arid zones (74% Guriou and 94% in M. Seco), which need great investment to be opened up for agriculture. At the same time, the enlargement of cashew plantations will not occupy large areas in the future, despite their high profitability.

(2): Some areas are not being cropped because they are undergoing soil correction using lime.

These data show that most areas are fully cropped, except the Northeastern settlements where, though rural, their main activity is non-agricultural (fishery). Some settlements already have reached full capacity, as in the case of Boa Esperança, Macali and F. Conquista. The settlers there, are already embarking on new economic activities, such as permanent crops, handicrafts, small livestock, and beginning to use more intensive methods of cultivation in order to overcome the limitation imposed by the scarcity of land.

6.5-INCOME CONCENTRATION WITHIN THE SETTLEMENTS AND FORMS OF ORGANISATION

So far we have analysed several aspects of the settlements' performance so as to detect the main income determinants and their dynamic evolution in terms of saving and investment. In this section, we are concerned with internal differences of income, that is, income concentration, and the different patterns of organisation adopted by the settlers.

The following table shows the settlement's income distribution profile and the average net monthly monetary income generated by the settlers.

Table 6.15
Net Monthly Monetary Income(Percent).

Min. wages	M. Seco	Guriou	F. Conquista	B. Esperança	Macali
0 -0.5	80	30	23	-	10
0.5-1	10	23	23	16	20
1 -2	10	35	19	36	10
2 -3		6	29	5	20
3 -4		6	-	11	30
4 -5				5	
5 -6			6	11	
6 -10				16	10
Total	100	100	100	100	100
Average:	0,2	1,0	1,4	2.8	2.9

Note (a): We have translated all the monetary values into constant currency (OTN'S=Obrigações do Tesouro Nacional) first and then into minimum wages in order to take into account the effect of inflation.

(b): F. Holandés income distribution was not included in the table because all the settlers have had the same monetary income (approximately 3 minimum wages per month).

The "total income" item includes agricultural income plus earnings from livestock and off-farm activities. Off-farm activities, however, are not very significant but they have been included in order to have a complete picture of living standards.

Average income varies from settlement to settlement. Although Bõa Esperança has achieved the highest income per capita (in proportion to area), the other settlements, except M. Seco, have managed to generate average output equivalent to one minimum wage or more. Despite the fact that this level (one minimum wage) is indeed very low to meet the total necessities of a family, this is regarded as the minimum threshold of subsistence for one family in Brazil (Hoffman, 1988). Furthermore, it is important to note that this is monetary income, that is, the share of the total output which is sold in the market. This share is approximately 50% of total output, with the remaining 50% being devoted to own-consumption.

Adding monetary income to own-consumption output, the average net product is more than two minimum wages, as we already demonstrated, which is reasonable in comparison to the average worker's salary, even in the urban areas. Indeed, urban workers still have to devote part of their total income to housing (rent), while the land reform settlers have received grants to build their own houses, and therefore do not pay rent.

Table 6.15 also shows the degree of internal income differentiation between the settlers. Although this is clear in all of the settlements, it must be noted that, with the exception of M. Seco, at least 50% of the total number earns more than one minimum wage. In the case of Bõa Esperança, 84% of the settlers have surpassed this level, and there are some settlers who have reached notably higher levels of income (more than 7 minimum wages).

Muller (1986-b) has undertaken extensive research into

levels of income in rural areas using data from the census and primary evidence. His broad conclusion is that " farmers who earn from 4 to 10 minimum wages in the south and from 3 to 8 m.w in the other regions show traces of modernization. These farmers use temporary workers, and have been able to produce monetary surplus for investment" (pg 54).

This conclusion coincides with our observations in the settlements with respect to the same group of farmers, that is those earning more than three minimum wages ,in money, leaving aside own-consumption. Table 6.15 above reveals that 6% of the settlers at Guriou, 6% at F. Conquista, 43% at Boa Esperança , 40% at Macali and all of them at Holandés (see note-b-) have passed this level of income. According to our observation of individual cases, we can conclude , furthermore, that those settlers earning more than three m.w monthly are undergoing a process of steady commoditisation of their activities, and thus can be labelled as being "positively integrated" within the market.

The remaining settlers who are not yet "integrated" , but those with between 2 to 3 minimum wages are beginning this process , and at least have been able to give themselves and their families a better quality of life than if they were living in the shanty towns around the big cities. Moreover , with the introduction of the special line of credit for agrarian reform (Procera) more settlers will be able to progress towards the status of small farmers.

On the other hand , there is a significant number of deprived and poor settlers , namely , those earning less than one m.w, who , present a serious challenge for the agrarian reform in the future.

Table 6.16 shows more clearly the degree of income concentration within the settlements:

Table 6.16: Income Concentration. (% of income)

Settlement	\bar{Y}	1 st Tenth	2 nd Tenth	Poorest50%	9 th Tenth	10 th Tenth
M. Seco	26.3	-	1.9	20.9	18.4	32.7
Gurióu	88.3	0.8	2.5	19.1	15.0	27.3
F. Conquista	122.8	0.4	1.9	15.6	17.6	27.1
B. Esperança	294.1	2.4	3.3	17.9	16.6	32.2
Macali I	248.5	0.4	1.8	19.0	12.5	36.3
F. Holandés	185.4	8.3	8.3	50.0	8.3	8.3

Note: \bar{Y} : Average net monetary income from 1/1/88 until 31/10/88. Values are in OTN's, and the deciles (tenth) represent the percentage of income generated by each income group.

The results shown in this table are very similar to the BNDS's research and certainly, at a first sight, reproduce the Brazilian pattern of income distribution. In practically all the settlements, with the exception of F. Holandés, the 10th decile (that is the richest) generates approximately 30% of the total income, while the poorest 10% scarcely achieves 1% of this income. Also, the poorest 50% produces around 20% of the total income, which means that the other 50% is taking 80% of the "cake".

Nevertheless, instead of concluding from this data that the settlements have failed, we take the opposite view; that is, that they have succeeded in improving the situation of at least 50% of the total number of settlers significantly. Regarding the high level of income concentration within the settlements, there are some issues that must be taken into account:

- 1) All these settlements, and also those researched by the BNDS, are made up of different categories of people who started their activities with different initial endowments.
- 2) With regard to the BNDS's settlements, it must be noted that they were established before the current Agrarian Reform Plan, and most of them were old settlements

orientated by different approaches. During that time, before 1985, it was very commonly observed that the rural credit system was biased, allocating loans to some settlers who behaved according to their rules or to the bankers' political ideas. In fact, the internal differentiation found within the old settlements is not a "natural phenomenon", nor something that necessarily will always happen as has been predicted by the "theory". In our view, internal differentiation has been provoked mainly by political linkages and as a consequence of the different initial endowments.

3) In the new settlements, there is a sound empirical basis for saying that "endowments", including not only material endowments but also education, experience, relations etc, have indeed played a role in generating concentration. Nevertheless, with the advent of PROCERA (Programa de Crédito e Assistência à Reforma Agrária), this situation will tend to improve as financial resources are more equally distributed. Since this programme has not yet been fully operational in the settlements, the uneven situation has continued to appear in our data.

4) The agrarian reform aims principally to give landless and rural workers the opportunity to have their own means of production in order to improve their standard of living. It is obvious that different settlers will achieve different levels of income, and this will occur independently of the objectives of the programme. In turn, this is not intended to equalize the standards of living among the beneficiaries.

5) The idea that the settlements are reproducing the same problem of income concentration as found in Brazilian society is mathematically false. The settlements' income concentration occurs within a universe composed of poor people; that is, among those who earn from 1 to 5 minimum wages. Therefore, every increase in the average level of

income achieved within this group will work against the macro-level income concentration. When our tables show that the 10th decile generates 30 % of the total income ,it does not mean that the richest people in Brazilian society are getting richer. On the contrary, it means that one sector within the poor is improving its standard of living ,hence the poor are becoming better off and the macro pattern of income distribution is becoming less concentrated. It must be noted that the 10th decile in Brazilian society earns ,on average, more than 10 minimum wages monthly (IBGE, PNAD 1986), while in the settlements researched it is less than 5 minimum wages.

The second idea suggested by the BNDS's research relates to the model of organisation adopted by the agrarian reform programme. In their view, family farms are unable to adopt modern techniques of production and therefore can not compete in the market. They therefore suggest that the collective model of organisation be adopted instead of individual farming. Although our research must not be regarded as conclusive proof ,due to the small sample ,it can illustrate something about this issue. Table 6.17 shows the different models of organization that have been adopted by the settlements:

Table 6.17: Patterns of Settlements Organization.

Settlement	\bar{Y}	\bar{A}	Pattern of Organization
M.Seco	0.2	30.0	Collective plus 1,4 has per family.
Guriou	1.0	4.5	Collective plus 0,9 has per family.
F.Conquista	1.4	4.0	Family farming plus association .
B.Esperança	2.8	4.9	Family farming plus association.
Macali I	2.9	14.6	Family farming plus association.
N.Holandés	2.4	20.6	Collective .

Note: \bar{Y} = Average net monetary income in minimum wages.

Obs: does not include consumption.

Income has been re-calculated in order to control the variables area and inputs(see Table 6.6);however we decided to make the current comparison using the original data and to compare it with the other two variables.(area and pattern of organisation).

\bar{A} = Average area in hectares per family.

Although a much more detailed analysis would be needed in order to understand the linkages between patterns of organisation and differences in performance ,at first sight, neither the form of organisation nor the size of the area seems to be correlated with different levels of income.

The Novo Holandés settlement has followed a pure collective model ,which includes all of the agricultural processes from ploughing to harvesting and marketing ,but it has not surpassed the average income of the others(Macali or Bõa Esperança) which adopted the family farming approach.Nevertheless ,it has achieved other major goals,such as higher levels of investment and an absolute homogeneous pattern of income per family ,as can be verified in tables 6.6 and 6.13 .

Indeed, income is equal for everybody at N.Holandés since profits are being shared in equal parts between the settlers.On the other hand, if we note that they have four times as much land as Bõa Esperança , whose members have

achieved more income ,the Holandés level of income can not be considered so high.

At Boa Esperança ,the settlers have reached important levels of income per capita with less land and without following the collective pattern of organisation. In fact, they succeeded in the first two harvests by planting okra "quiabo", which is a valuable product (Olericulture) ,and which is in strong demand in the city of Rio de Janeiro,located scarcely 60 km from the settlement. Although they have shared the land in individual plots, the settlement should not be labelled as a pure form of "family farming" .They were very well organised by the time of the "take over", and they have retained this organisation in order to execute some collective tasks ,such as common use of machinery and communal purchases ,and they now intend to undertake communal irrigation works.

The Northeastern settlements-Gurióu and M.Seco- ,which are collectivist ,have achieved lower levels of income per capita due to the extremely poor soil in that area and the arid weather. The difference between them is due to the fact that Gurióu's settlers practice fishing (shrimp) during part of the year ,which gives them extra cash in comparison to M.Seco's settlers ,who depend solely on agriculture and livestock production.

In fact ,the so- called "family farm pattern of organization" does not exist in a pure form. All the settlements we visited are following ,in one way or another ,some kind of communal organisation. Some make collective use of machinery,others gather together in order to harvest their crops and to sell the output ,and all have created "Associations" within the settlement to discuss their problems and share their experiences. Furthermore ,the decision concerning which model of organisation to adopt has to be taken by the settlers themselves in accordance with their past traditions,internal unity ,mutual trust and personal expectations .It is true that the Novo Holandés

experience of collective organisation has been shown to be quite successful, especially if we take into account the fact that "average income", in their case, means that all the settlers earn a reasonable income, while in the others almost 50% of the settlers are still living in quite miserable conditions. Nevertheless, as it was shown above, there is empirical evidence to suggest that abundant credit facilities have played a more important role in their income and investment than their collective pattern of organisation.

6.6 -SUMMARY AND CONCLUDING REMARKS:

At the beginning of this thesis we presented some guidelines for the evaluation of the performance of the different settlements. We have argued that "positive integration" would be necessary in order to guarantee a steady process of income generation and re-distribution. Integration means that these settlers are in permanent contact with the market: trading, purchasing, contracting loans, taking information etc, and are on the way to adopting selected elements of modern technology which they regard as appropriate for their activities.

When this happens, (positive integration) the agrarian reform process has not only played a social role, but has also created new economic units in conditions able to compete within the market. Although the settlers still lack many of the most basic things that the urban sectors already have, such as electricity, adequate schools and health services, sanitary conditions, roads etc, a reasonable percentage of the settlers have significantly improved their standard of life.

According to the results of our field research approximately 62% of the total number of settlers has earned more than one minimum wage per month in the last year and,

within this group, 30% has earned more than three minimum wages, without including the imputed income represented by self-consumption. Therefore, a significant number of settlers have at least overcome the minimum threshold of poverty (the first 62%) and a reasonable group is undergoing a steady process of income generation, which was our initial hypothesis.

This leads us to conclude that the land reform settlements are not merely "ghettos" in which the poor and landless congregate, and who are being protected for political and social (humanitarian) reasons as has been alleged by some right wing sectors in Brazil. (U.D.R) (CNRA, 1988, pg 16). On the contrary, the recent process of land settlement has reduced the degree of inequality in the areas where it has happened which, according to Ghose (1980), is the main consequence of most agrarian reforms in the world. Since the pre-existing inequality was very high, due to the presence of large landowners in these areas, its elimination improves the pattern of income distribution and furthermore alleviates levels of poverty. (Ghose, 1980).

In this section we have also detected the factors which contribute to the success of some settlers, in terms of their economic performance. Access to markets and to agricultural policies (Credit) have been shown to be strongly correlated (positively) with the average income of the settlements, while other factors, such as the use of modern technology and the forms of organisation seem less strongly correlated, or indeed were the result of the former factors.

The degree of openness to markets, that is of commoditisation, has been crucial, in the short term, to the capacity to generate reasonable amounts of income for the settlers. Commoditisation, however, has not happened in the traditional way, that is, as a consequence of capitalist expansion or, to use a very classical expression, as a consequence of capitalist "penetration". In these cases, it

has occurred from below, as a struggle over conditions of production. This concept of "active" market integration from above instead of the traditional "passive" integration explains better the dynamic of the Brazilian land settlements than traditional arguments. Ellis (1988) complements this idea, saying that the pre-existing characteristics of those markets need to be improved in order to facilitate integration.

Actually, the system of credit for agrarian reform (PROCERA) is meant to fulfill this condition. In fact most settlers were able to devote themselves wholly to production for the market because they could count on the support of official credit and grants, under more favourable conditions than other small farmers. Moreover, despite the delays and short-comings, this access to financial resources allowed them, moreover, to make important investments within their households, which in the future will help to ensure a steady process of income generation.

However, although credit was important and positively correlated to income, the proximity to the market has strengthened the process of commoditisation, at least in one settlement. The case of Bõa Esperança confirms the "Localisation Theory" (Alonso, 1972,), which states that the value of each unit of output tends to increase near the "central places", while the size of the area tends to decrease. So, these settlers in fact took advantage of a "locational income" embodied within the prices of their output.

The use of modern technology, although important, appears to be dependent on access to credit and markets, hence it is not determinant. We also have demonstrated that the settlements' land productivity did not differ from regional and national rates of productivity which, in turn, were very low if compared to international levels. As a matter of fact, the settlers and small farmers as a whole, have found room to survive and even develop their activities, because of

the relative lack of competitive pressures arising from markets in Brazil.

The low opportunity cost of labour has also been an important factor to make the land settlements more cohesive. In the recessionary situation of the Brazilian economy, the settlers have no other option than to stick to the land and to develop their activities there. The low degree of off-farm employment and, on the other hand, the absence of land re-sales or abandonment suggest that the settlements have proved to be the best employment alternative available. In that sense, the current economic situation appears to be ideal for the implementation of rural projects and settlements.

The final issue concerns the diverse forms of organisation adopted by the settlers. The evidence collected in our field research, although not representative of the process of agrarian reform as a whole, supports the idea that the collective form of organisation improves the income distribution profile within the settlements. However, we have pointed out (chapter 5) to new problems arising from this pattern of organisation, such as the risk of bureaucratisation, the separation of managerial functions from the manual tasks, the difficulties of controlling production on large areas and to control the labour of the settlers, the settlers' preference to live over their own plots of land and to decide about their activities, etc.

Apart from these problems, our data has not shown important differences in terms of economic efficiency between the settlements which shared the land and those which did not. Although mechanisation of large areas can be easier to implement in the collective system, the settlers in Macali managed to solve this problem by purchasing tractors in groups and using them at different times. Furthermore, it is difficult to demonstrate that a more specialized division of tasks between the settlers would improve labour productivity. In rural areas, the same

person is capable of doing diverse jobs, such as sowing, weeding, spraying insecticides or harvesting. That is, labour specialisation is not as necessary as in the industrial sector. In addition, small farmers acting individually have more facility to diversify their output according with their necessities, and can also assimilate some of the advantages of the collective pattern of organisation without giving up their independence. Communal harvesting, purchases of inputs in groups, or marketing in large quantities, are usual in Macali, Boa Esperança and F. Conquista.

In sum, once the land was re-distributed, the supply side factors have not proved to be the most important in the process of income generation. That is, both the use of modern technology and forms of organisation appear to be dependent on other factors, or simply neutral. The demand side factors, however, that is the degree of openness to markets and access to favourable conditions of credit and prices, are strongly correlated with the success of the settlers' experience.

CONCLUSION

This thesis has examined some aspects of the agricultural policies adopted by Brazil in the 1980s and the agrarian reform launched in the middle of the decade. Although the analysis of agricultural policy helps to contextualize the process of agrarian reform, other issues related to this relationship remained obscure. These include the real effect on small farm production of the withdrawal of credit subsidies and the decrease in credit supply, as well as the impact on regional development of the elimination of fiscal incentives.

The analysis of these questions is inhibited by the lack of current census data. Nevertheless this thesis suggests several lines of analysis we might follow in addressing this problem. These can be synthesized as the effect of market-orientated policies on small farming production and on the process of agricultural modernization.

Firstly, as shown above, because of the stagnation of the traditional model of import substitution, economic liberalization based on market-orientated policies has become unavoidable. In the 1960s and 1970s the former model generated high economic growth rates and an important process of industrialization. On the other hand, it gave rise to industrial and agricultural sectors strongly and inertially dependent on the State. Moreover, there is growing consensus in Brazil that the prolonged protection of the productive sector has resulted in low productivity, reinforcing the role of the State in the economy. Rural development was neglected on the spurious grounds that the urban sector offered better alternatives to the peasantry and small farmers.

However, the recent bankruptcy of Brazilian public sector demonstrated that this kind of relationship between the private sector and the State was no longer viable. When the import substitution model began to show signs of stagnation in the late 1970s, the State started to rely heavily on foreign exchange resources in order to finance its public deficit. In the early 1980s, when the debt crisis restricted these resource inflows, the government shifted to public bonds in order to finance the State activities. Currently, both financial sources are exhausted and, there is no other alternative than to radically change the role of the State in society.

As is well-known, the implementation of market-orientated policies -privatisation of State companies, openness to foreign competition, elimination of unnecessary civil servants, elimination of subsidies-will certainly increase the already high unemployment rates in the cities and, also, will reduce the financial support for the process of agricultural modernization. Nevertheless, despite the immediate social effects of this change, it is unthinkable to try to reinstate the former pattern of State-private sector relations, based on protection and subsidies which, moreover, failed to integrate all the population into society. Therefore, the suggestion is that we look forward beyond the current situation, in order to analyse the effects of the current process on the rural sector and to propose solutions for some important structural problems. Failure to address these problems certainly would create a barrier to the very implementation of more liberal market-orientated policies.

In this context agrarian reform and rural development programmes, appear in the current scenario, to have a renewed role. That is, to re-integrate returning urban migrants in rural areas and, principally, to accelerate the integration of small producers into the modernized

agricultural sector .

Market-orientated policies for the agricultural sector, would eliminate the traditional credit subsidies for large farmers and instead ,establish price incentives. However, the implementation of these changes can not be as erratic and confused as was the case in the 1980s. Moreover, it is necessary to eliminate all the remaining subsidies, such as the Pro-alcohol, incentives to buy land in Amazonia, wheat price supports and so on, and to re-direct these resources to the resolution of structural problems. Indeed, market forces can not resolve structural problems such as chronic droughts, rural infrastructure, transport and land concentration, as the purely economicist liberal framework would suggest.

During the 1980s, agricultural policy has been merely one side of the "adjustment" policies, without generating a new pattern of development for the rural sector. In fact, the current situation is characterised by a transition process in which the former structures of relationships between State and productive sector are being dismantled .

Nonetheless, without the resolution or alleviation of crucial problems, such as income concentration and the absorption of surplus urban labour, finding a way out of the current crisis will be virtually impossible.

This thesis has demonstrated that credit subsidies directed exclusively towards small farmers , such as the PROCERA system, represent a workable way of integrating these people into dynamic and modern market relationships. Furthermore , this line of credit absorbs an insignificant proportion of the total resources usually devoted to subsidies for large farms. Past experience, also, has shown that large farmers continue to produce and generate even larger harvests , despite the decrease of credit, if internal prices are set in accordance with international prices and the internal demand for food.

Apart from short-term problems ,which might emerge in the "adjustment" period,the thesis also suggests that small farming ,after the phase of integration can survive and even compete with large farming under equal conditions of prices,credit and access to markets.The low levels of productivity in Brazilian agriculture and the absence of significant scale economies offer enough room for small farming ,making integration viable.The structure of agricultural production has remained more "competitive" or ,in other words ,more atomised among a large number of producers,despite the oligopsonistic power of some intermediaries and the agroindustrial sector.However,the process of market liberalisation along with other measures to improve the working of markets would weaken this power, and therefore facilitate competition in the rural sector.

Conditions for agrarian reform would have been more conducive to success if the reorientation of agricultural policy had occurred before and not after the launching the land reform.Nevertheless,it would be interesting to investigate the effects of market-orientated policies on the rural sector ,notably the extent to which land concentration has been halted and landowners adaptation to using market mechanisms.This kind of study would also indicate the structural problems which need to be resolved in order to facilitate this adjustment.

The thesis has suggested that a policy based on higher interest rates and reduced credit supply alone ,does not improve the working of markets.On the contrary,this limited approach has left the situation of small farming unchanged,or even worse because of the increased financial risk, while large farmers have tended to absorb growing amounts of the available credit.

The analysis of the regional agrarian structures has shown that heterogeneity,rather than uniform conditions,characterises the rural sector in Brazil.A

change in the agricultural policy will indeed have uneven effects when applied to these heterogeneous agrarian structures and regional economies.

The process of agrarian reform accordingly could not be implemented in a uniform way due to the regional specificities. These, in turn, have obliged the authorities to adopt regional strategies tailored to the different stages of agricultural modernization achieved in the regions. In the South of Brazil, where the modernization process initially occurred, and where agrarian reform has achieved its main goals, as shown in chapter four, the introduction of full market mechanisms is likely to provoke less damaging effects. In fact, an agrarian reform today must re-direct and focus its efforts on the regions where structural problems are still present, namely, the Southeast and the Northeast of Brazil.

Nevertheless, both the market-orientated agricultural policy and land reform failed to achieve their goals. As this thesis reveals, land reform barely reached 10% of its announced goals for the period. The programme of agrarian reform was obstructed by several factors, such as the effective mobilisation of anti-reformist forces, ill-prepared institutions, ambitious and exaggerated targets. All these factors combined with a political and economic conjuncture disturbed by unsuccessful macro-stabilisation programmes and erratic agricultural policies to provoke the breakdown of the land reform process soon after it was launched.

Despite the adverse conditions which surrounded the brief process of expropriations and settlements, the land reform has achieved some cases of positive integration. The field research has shown that market integration is the crucial determinant of economic success for the land reform settlements, together with access to specially targeted agricultural programmes. The particular form of organisation adopted by the settlers does not appear to

be a significant factor in determining economic performance.

Access to markets, in turn, determines the adoption of modern technology. That is, it is the commoditisation process which induces technological innovation, rather than the other way round, as was thought in the 1970s, when the authorities used to encourage small farmers to adopt all sorts of "modern" technology via subsidised credit, in a clearly paternalistic way. This led to increased indebtedness among small farmers and subordination to intermediaries and agroindustry due to the existence of "imperfect" markets and lack of management skills and knowledge of markets among those "protected" small farmers. Ultimately, gains in productivity generated by the modern technology were diverted towards banks, agroindustries and intermediaries.

This thesis also suggests that the "flexible forms of organization" of the settlements facilitate the process of market integration. The combination of individualized cropping with some forms of joint marketing and financial organization has allowed some of the settlements in our survey to internalize scale economies linked to marketing while taking advantage of individual management of the labour process. In this sense, the absence of bureaucratic paternalism is positively related with economic success within the settlements.

Apart from the economic aspects of the process of integration, the recent experience of land reform gives some clues about the role that the rural social movements may play in a renewed process of agrarian reform in the future. Irrespective of their unrealistic land reform goals at the beginning of the process, these movements have played a crucial role: firstly, in the conquest of land for the landless and, secondly, in the organization of the settlements. Without the experience and lessons gained in this previous struggle, the subsequent organization of

the settlements to face markets and adapt to changing agricultural policies would have been more difficult.

Nevertheless, the question of land re-distribution always is threatened by the risk that the process will run out of control. In order to counter landowners' antagonism, it must be made clear that the land reform programme will be restricted to underutilised lands. Secondly, the programme should avoid explicit or implicit references to utopian goals, such as "transition to socialism in the process of land reform", which, by the way, was never proposed by either Marx or Lenin.

In a pragmatic process of agrarian reform, rural social movements ought to organize the settlers in order to reinforce demands for conditions which facilitate economic integration. In that sense, these movements take into their hands the resolution of the structural problems and counter attempts to implement liberal, market-orientated policies without giving weight to social objectives.

ANNEXES

ANNEX 1

AGRICULTURAL POLICIES IN THE 1980s.

Table A.1.1 Agricultural Policy's Synopsis (1980-1985)

1980	1981	1982	1983	1984
<u>RURAL CREDIT</u>				
Res. N°671, BC. Indexation 45% End of subsidies to investment in machinery. End of subsidy to fertilizers.	Res 698, BC More private Bank's partici- pation in rural credit	CMN. 12/82 Index: 80% End of tied credit system of 15% to modern inputs	CMN 12/83 Index: 100%	Elimination of the Move- ment Account between Bank of Brazil and Central Bank.
VBCs: 90% small 40% large				80% small 60% large
<u>MINIMUM PRICES</u>				
Preferential treatment for food prod. and small farmers		Base Prices announced be- fore the new crop and inde- xed until the harvest.		Higher level for minimum prices
<u>EXPORT INCENTIVES</u>				
			Currency Devaluation of 30% Subsidized advanced loans for export Fiscal incenti- ves to new prod. Opening of new markets	Export Corridors network of ports and roads.
<u>OUTPUT RATE OF GROWTH</u>				
-2.8	0.8	6.6	-0.4	5.7

Table A.1.2 Impacts of the Cruzado Plan on the Agricultural Sector.
(From Feb.1986 to November 1986)

1-Output Price Freezing

Prices frozen

Wage Increased $\rightarrow \Delta W/p \rightarrow \Delta$ Demand for food.

Δ Supply of Food: because:

- Prices seasonal fluctuations were not allowed.
- Previous prices were low because of imports and stock sales.
- Bad previous harvest (1985).

↓

Pressure on prices

Lack of food supply \rightarrow

Excessive FOOD IMPORTS

because of :
False declarations about crop
loses to PROAGRO (insurance)
Especculation with prices.

2-Inputs price Freezing.

Inputs prices without rigid

control \rightarrow left to bargain \rightarrow increase in costs

↓

disruption of intersectoral relations \rightarrow small farmers'

damaged.

3-Foreign Exchange rates.

Foreign exchange

rates frozen \rightarrow overvaluation \rightarrow less international competitiveness \rightarrow Food imports Increase.
Exports decrease.

4-Loans indexation rules

End of monetary

indexation \rightarrow decrease finance especulation $\rightarrow \Delta$ Productive investment \rightarrow Increase in debts.

\rightarrow Increase in cash banks deposits \rightarrow increase Supply of Money \rightarrow " in loans.

Synopsis Table A.1.3 : Markets and Agricultural Policies between 1985 and 1987.

<u>1985</u>	<u>Economic facts</u>	<u>Government reaction</u>
Credit restrictions		
Bad climatic conditions	→ Poor harvest(1984/85) → Increase in prices	FOOD IMPORTS STOCK SALES ↓ Decrease in prices (Pre- Cruzado)
<hr/>		
<u>1986(February)</u>	(Cruzado plan :details in the next table)	
Output Price Freezing	→ Lack of Supply of Food	→ IMPORTS
<hr/>		
<u>1986(August)</u>	To encourage food production → <u>Programme of Goals: (D N° 93.118/8/86)</u>	
	-Minimum prices constant 3 years for domestic products	
	-VBCs(Credit) more favourable for small farms	
	-Increased obligations for banks to lend to small farms and food production	
	-Emphasis to storage ,tarnsportation and irrigation	
	-Regionalization of cropping: soy-beans in the MidWest and corn in the south.	
	-More credit for long term investment	
<hr/>		
<u>1986(November)-1987</u>		
-Failure of the Cruzado Plan to contain prices	→ Interest Rates out of control ↓	Indexation of Loans → Farmers protest and claim for minimum prices' increase.
-New System of Minimum Prices Indexation only for domestic products:	Interest rates indexed by farm's gate prices index(IPR) Minimum prices adjusted by increase in costs of production(IPP) → "Sectoral Inflation"	
→ Government fails to announce the index rates → Protests (FAA)	→ Inclusion of all products in the Index and real increase of minimum prices.	

Table A.1.4 Agricultural Policies between 1987 and 1989

1987	1988	1989
<u>Marketing Policy</u>		
-Emergency actions for storage.		
-Harvest sold to the government (AGFs)		
-Minimum prices indexed ORTN instead of IPP.	- End of minimum price indexation	
<u>Rural Credit</u>		
-Debts amnesty: including indexation charges after 28/02/1986.	- VBCs favouring food production (100%) and small farming	- Discussion of the "Agricultural Law"
-Loans fully indexed ORTN instead of IPR	Target → farmer instead of the product	
-Credit for investment 12 years term	- Official credit only for small and medium farmers	
	Green account and the private system for large farmers	
<u>Export Facilities</u>		
-Inclusion of export commodities in the minimum price system.	- Exclusion of export commodities from minimum prices	
-Monthly currency mini-devaluations.	- Currency Overvaluation	- Currency Devaluations
<u>Import Agreement</u>		
-Food imports from Argentina.		
Protocol N° 22, Integration Agreement.		

ANNEX 2

DISTRIBUTION OF FEDERAL BUDGET EXPENDITURES IN AGRICULTURE.

Most authors (Martini, 1989; Rezende, 1987) emphasise devaluations, special subsidies, and the minimum price policy as the main factors in explaining the successful agricultural performance. In fact, the maintenance of these compensatory measures has forced governments to devote huge amounts of financial resources to the agricultural sector as the following table shows:

Table A.2.1 Aggregate Expenditure and Agricultural Expenditure In the federal Budget. (US\$billhons and %)

Year	Global Expenditure	Agricultural Expenditure	Percentage Agricult .
1980	23.6	3.8	16.1
1981	25.3	2.8	11.1
1982	27.1	2.8	10.3
1983	19.3	1.2	6.2
1984	19.3	1.8	9.3
1985	23.9	3.7	15.5
1986	43.6	6.3	14.4
1987	45.2	9.0	19.9

Source: data from Gasques et al (1988, pg 28). Calculation ours.

Note: includes the monetary and the fiscal budgets.

As can be observed, the share of resources devoted to the agricultural sector diminished until 1985 and then began to grow again. Actually, agricultural production started to grow after 1985, coincidentally when these resources were increasing.

The following table shows the distribution of these resources between the different activities:

Table A.2.2 Percentage Distribution of Federal Budget
within Agriculture.

Items	Effective Expenditures (Deficit in %)	
	1986	1987
<u>1-Short Term Agricultural Policy.</u>		
-Special Wheat Policy :	46.7	34.4
-Programme of support to Alcohol and sugar-cane :	14.1	24.2
-Subsidy to Rural Credit :	1.2	14.9
-Public Food Stocks :	9.8	5.6
-Minimum Price policy :	3.4	9.2
-Agricultural Insurance :	11.6	2.6
Sub-Total :	<u>86.8</u>	<u>90.9</u>
Total amount in US\$(millions):	US\$ 3479.5	US\$ 3637.4
<u>2-Long Term Agricultural Policies:</u>		
-Agricultural Research :	2.2	1.5
-Technical advice and rural extension :	0.8	0.9
-Storage :	0.1	0.3
-Settlement of rural workers: (Agrarian reform) :	2.3	1.6
-Rural Electrification :	-	0.2
-Irrigation :	<u>7.8</u>	<u>4.6</u>
Sub-total :	<u>13.2</u>	<u>9.1</u>
Total amount in US\$:	US\$ 535,0	US\$ 361.2
<hr/> Total :	<hr/> US\$ 4014.5	<hr/> US\$ 3998.6

Source: SEPLAN, extracted from Delgado(1988)

This table illustrates very well the striking amount of resources absorbed by the sugar-cane and wheat sectors within the whole budget. (68.6% of the total budget). Short-term policies have increased its participation from one year to the other, especially in the issues related to the minimum price policy (public stocks and minimum prices).

On the other hand, resources allocated to long term policies, such as agrarian reform are insignificant if compared with the others, showing the real importance given to these policies by the government.

Agriculture's performance is still boosted by public

resources ,despite the changes which have been introduced in the credit policy.The folowing table shows the evolution of the federal budget during the decade:

Table A.2.3 Agriculture Federal Expenditure (%).

ITEM	1980	1981	1982	1983	1984	1985	1986	1987.
R & D	: 2.3	5.3	6.4	10.6	7.4	3.5	2.4	1.8
Agrarian org.:	0.4	0.5	0.8	1.0	1.4	1.1	2.2	2.3
Food Supply	:76.6	74.1	65.1	46.0	66.1	84.4	79.2	75.4
Rural advise								
/extension*	: 14.2	5.5	10.1	14.4	7.2	2.9	8.2	3.0
Adminitration:	1.6	4.6	2.6	4.6	2.7	1.7	1.2	2.9
Integrated								
Projects	: 0.5	1.7	3.8	5.1	2.9	1.4	1.6	0.3
Others	: 4.4	8.3	11.2	18.3	12.3	5.0	5.2	14.3
								**
Total	:100	100	100	100	100	100	100	100

Source:Extracted from Gasques et al (1988,pg 29)

Grouping and callulations are ours.

*:includes agricultural insurance.

** :includes this year irrigation.

Note :These resources are net of income deductions.

As the other tables have shown ,the food provisioning policies have absorbed most of the federal resources during the whole period,leaving just marginal resources for structural problems.Government expenditure on provisioning,(minimum prices,stocks) supposedly is aimed to stabilize internal prices,by avoiding seasonal flucuations and excessive speculation.Nevertheless,the effect has been the opposite.According to Gasques et al(1988) : " Government expenditures have had an inflationary effect because spending was concentrated on a

few products (wheat and alcohol) and it has benefited activities not directly linked with the problem of food provisioning" (Ibid 24). This report also says that "most of those resources have been applied to sub-programmes ,as such: Financial support to Sugar-Cane and Alcohol Factories, IAA 's payments of foreign debt service (Sugar Cane and Alcohol Institute: IAA)" (Ibid 27).

In sum, instead of collaborating to lessen inflationary expectations by reducing prices ,these resources have aggravated the fiscal deficit problem with the only purpose of favouring inefficient enterprises. (Usineiros).

The remaining categories within the budget ,like agrarian organization, for instance, (including agrarian reform ,colonization and settlement) slightly increased their participation in 1986 due to the announcement of the programme of agrarian reform, but even with that increase ,the amount of money devoted to this sector ,has only been equivalent to the administrative cost of maintaining the agricultural apparatus.

In fact, the main concern of the different governments has been to foster agricultural supply through short-term policies ,either for exports or for food consumption, and to maintain its gigantic alcohol programme, despite the criticism from all sectors of society against this policy. However it is clear to most economists that food supply would respond anyway if demand for food existed. Both international and internal demand have induced a supply response whenever prices have been allowed to be more freely in the market.

On the contrary ,the sectors which really needed federal support ,because the market can not deal with structural problems, such as agrarian reform, irrigation, rural electrification, research and extension have been relegated to the second place .

Although federal intervention has been succesful in boosting output, it has not improved productivity

significantly (land yields) as the following table indicates:

Table A.2.4 Average Productivity levels(Yields)
Tons/hectare.

Product	1980	1981	1982	1983	1984	1985	1986	1987	1988
Domestic market									
Rice	: 1.6	1.3	1.6	1.5	1.7	1.9	1.9	1.7	1.9
Potatoes	: 10.7	11.2	11.8	10.8	12.6	12.6	11.4	12.4	13.2
Beans	: 0.4	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.5
Manioc	: 11.6	11.9	11.3	10.8	11.7	12.4	12.5	12.1	12.3
Corn	: 1.8	1.8	1.7	1.7	1.7	1.9	1.6	2.0	1.9
External market									
Cotton	: 1.0	1.1	1.1	1.1	1.1	1.2	1.1	1.3	1.5
Cocoa	: 0.7	0.7	0.7	0.6	0.6	0.7	0.7	0.5	0.6
Coffee	: 0.9	1.6	1.0	1.5	1.1	1.5	0.8	1.5	0.9
Orange	: 94.7	99.0	98.3	94.0	102.	107.	94.5	101.	94.0
Soy-Beans	: 1.7	1.8	1.6	1.8	1.6	1.8	1.5	1.9	1.7
Administered									
Sugar-cane	: 57.0	55.2	59.9	62.1	60.8	63.8	60.5	62.3	62.7
Wheat	: 0.9	1.2	0.6	1.2	1.5	1.6	1.4	1.8	1.7

Source: IBGE, Yearly Statistical Data.

The only products which really have improved their productivity levels are :wheat (90%), sugar-cane (11%), potatoes (23%). The other products remained stagnant (beans, cocoa, coffee, soy-beans) or have experienced insignificant increments of productivity (less than 10%).

Wheat has shown an extraordinary improvement on account of the immense quantity of resources allocated to this sector by successive governments, but in general terms the productivity profile of Brazilian agriculture has not improved, in our view, because of the lack of resources allocated to resolving the structural problems, such as irrigation, research (new varieties), and also agrarian reform, which have improved land yields significantly.

ANNEX 3**INCOME DISTRIBUTION IN RURAL AREAS.**

According to the liberalization approach, the increase in interest rates on rural credit would ; firstly, lead farmers to apply the money more rationally, that is respecting factor endowments and factor prices. Secondly, it would distribute available credit more widely avoiding its concentration in the hands of the better off farmers. Having produced more labour absorption (due to the advantage of labour in relation to the higher cost of capital) , and having expanded also the credit to a greater number of farmers, this policy would improve the income distribution profile.

Although complete elimination of credit subsidies was delayed and other subsidies remained intact, credit policy has changed radically , if compared with the seventies. However, the anticipated tendency towards a more even distribution of income profile is not yet revealed by the available data , as the following table indicates:

Table A.3.1 Income Distribution. Persons with
Earnings and older than 10 years.

	Gini	50% Poorest	10% Richest	5% Richest.
=====				
Pea/Rural:				
1980		18.3	43.7	32.9
1985	0.548	16.2	44.5	32.4
1986	0.521	17.2	41.7	29.6
1987	0.544	16.0	43.6	31.4

Pea/Urban:				
1980		13.8	47.0	33.8
1985	0.589	13.0	46.8	33.2
1986	0.583	13.5	47.2	33.8
1987	0.591	13.1	47.6	34.3

Pea/Total:				
1980	0.580	14.2	47.8	34.8
1985	0.599	12.6	48.0	34.5
1986	0.589	13.3	47.8	34.6
1987	0.603	12.5	48.7	35.4
=====				

Source: Hoffman 1989, Hoffman 1983.

The share of the poorest sector only improved in 1986, when the Cruzado Plan introduced a significant change in the real wages. After that moment, the income distribution profile came back to normal; that is, the tendency to become more unequal.

The table also shows that the income distribution in rural areas is less concentrated than in the urban sector (Gini index 0.544 in the rural sector and 0.591 in the urban sector.). This obviously does not mean that rural incomes are higher than in urban areas, as the next table reveals:

Table A.3.2 Average Income and Poverty Line.

Income	1985	1986	1987
PEA Rural:			
Percentage without earnings :	27.1	23.4	24.4
Average Income (CZ\$) :	4426.0	6283.0	4421.0
PEA Urban:			
Percentage without earnings:	6.2	4.6	6.0
Average Income	: 9774.0	13620.0	10775.0
Poverty Line:			
Percentage under 1 minimum wage	: 39.4	27.9	36.0

Source: Hoffman 1983, Hofmann 1989.

Indeed, rural average incomes are equal to less than one half of the urban average incomes and, furthermore around 25% of people living in rural areas have no monetary income at all.

Considering employed people only, the agricultural sector contains the greater percentages of workers earning less than 1 minimum wage or up to 2 minimum wages, if compared with the industrial sectors of the country, as the following table illustrates:

Table A.3.3 Income Distribution per Activities.
Income of employed people only.

Sector	Less 1mw	1-2	2-5	5-10	More 10mw.
Agriculture:					
1982	65.9	22.3	8.8	2.1	0.9
1986	44.4	30.7	17.8	4.5	2.6
Variation	-21.5	+8.4	+9.0	+2.4	+1.7
Building Industry :					
1982	27.1	43.3	24.7	3.1	1.8
1986	16.6	32.2	40.2	7.9	3.1
Variation	-10.5	-11.1	+15.5	+4.8	+1.3
Industry :					
1982	24.1	32.6	29.2	9.2	4.9
1986	18.4	24.7	36.5	12.3	8.1
Variation	-5.7	-7.9	+7.3	+3.1	+3.2
Total :					
1982	40.8	27.4	21.4	6.7	3.7
1986	30.3	24.6	28.4	10.0	6.7
Variation	-10.5	-2.8	+7.0	+3.3	+3.0

Source: IBGE, PNADS, 1982 , 1986.

With regard to the improvement that occurred in 1986, it can be reasonably explained by the dynamism in the agricultural sector (euphoric expectations about the end of indexation), and the increased demand for labour which consequently occurred. The following table shows the change in salaries during this year:

Table A.3.4 Average Workers Salary Variations in Rural Establishments

Category	1985/75	1985/80	1985/84	1986/85
Manager	-18.9	-15.9	11.5	22.4
Foreman	-14.1	-12.7	10.7	14.8
Tractor-driver	-21.1	-13.0	11.6	9.1
Permanent workers	-13.1	-12.5	12.5	0.0
Eventual Workers	-24.0	-21.0	13.8	17.9

Source: Prognostico 85/86, Instituto de Economia Agricola.
Secretaria de Agricultura de São Paulo.

Although higher wages have been obtained by qualified employees (tractor drivers, managers etc), some improvement also occurred within the category of casual workers. In 1986, however, the tendency towards lower wages was slightly and only temporarily changed, as the next data reveal:

Table A.3.5 Wage Indices and Unemployment Rates.

Year	Average Salary	Minimum Wage	Rural wages	Unemployment
1980	100.0	100.0	100.0	5.4
1981	106.2	102.5	96.5	6.9
1982	120.5	106.9	90.0	4.0
1983	163.6	90.8	79.7	5.6
1984	91.0	84.2	75.2	4.8
1985	98.7	86.2	58.5	3.1
1986	107.4	81.5	101.6	3.6
1987	92.1	58.8	85.3	3.7
1988 (June)	94.2	56.2	46.2	3.8

Source: FGV (Getulio Vargas Foundation). Indexation: IGP-DI base 1980.
Minimum wage: DIEESE.

The value of average salaries did not fall so much, due to the influence of high salaries within this average. Rural wages on the contrary were falling sharply, reaching less than half of the 1980's real value in June 1988, and decreasing even more than the real value of the minimum wage.

The declining tendency in the real value of the minimum wage aggravates the general effect of income concentration, because those who earned less than 1 minimum wage in 1980 lost almost half of their real income in 1988. That is, the worst off in the society have become poorer in the eighties.

ANNEX 4

LIST OF SETTLEMENTS

A.4.1 : List of settlements in CEARA.

<u>Name of the project</u>	<u>Area(has)</u>	<u>N°of settlers</u>	<u>Has /Family</u>
1-Guriou	5.139	231	22,2
2-Carneiro	3.827	50	76,5
3-California	1.269	39	32,5
4-Monte Castelo	3.469	85	40,8
5-Massapé	1.822	53	34,3
6-Grossos	822	16	51,3
7-Ipueira da Vaca	7.236	120	60,3
8-São Bõa Ventura	938	29	32,3
9-Muxure Velho	1.577	43	36,6
10-Santana	3.213	101	31,8
11-Laginhas	2.472	77	32,1
12-Buriti	300	9	33,3
13-São Jose	1.349	43	31,3
14-Caçimba de Dentro	1.967	56	35,1
15-Alvacan	1.755	50	35,1
16-Lagõa Verde	854	21	40,6
17-Fazenda Serrote	8.760	200	43,8
18-Sabiaguaba	864	28	30,8
19-Lagõa Mineiro	6.112	135	45,2
20-Matriz	1.796	57	31,5
21-Morro Agudo	3.418	102	33,5
22-Aleixo	779	16	48,0
23-Maceio	4.102	120	34,1
24-Faz. Macaco	1.288	38	33,8
25-Faz. Suiza	2.056	50	41,1
26-Uba	2.233	74	30,1
27-Lagõa do Mato	2.463	78	31,5
28-Mulungu	1.207	36	33,5
29-Boqueirão	3.102	190	16,3
30-Riacho das Lajes	693	22	31,5
31-Serrote Branco	5.363	167	32,1
32-Lagõa dos Quintas	535	17	31,4
33-Ibuassu Velho	1.447	45	32,1

Total: 84.227 2.398 Average 35,1

Source: MIRAD. List of settlements. 1988.

A.4.2: List of Settlements in Rio de Janeiro

2.1 Settlements under MIRAD's Supervision

Project name	Area Hectares	N° Families	Area/ Family	Nearest centre.
F. Alpina (87)	1.103	69	15,9	20 km
Barra Gde (85)	595	50	11,9	18 "
Bõa Esp. (86)	279	49	5,7	5 "
Cpos Novos (86)	3.203	182	17,6	5 "
Cantagalo (87)	1.749	89	19,6	18 "
Imburgo (86)	1.206	191	6,3	17 "
N. Horizonte (87)	4.335	261	16,6	42 "
Sabugo (86)	1.386	103	13,4	5 "
Sta Rosa (87)	370	112	3,3	16 "
Sto Ignacio (87)	705	51	13,8	3 "
S. J. B. Morte (82)	3.904	214	18,2	40 "
São Roque (87)	750	28	26,8	22 "
Taquari (85)	959	62	15,4	25 "
Total	: 20.545	1461		
Average	: 1.580	112	14,2	18 km.

Source: MIRAD, List of Settlements, 1988.

2.2 State Sponsored Settlements

Project	Year	Total area (has)	Cultivated Area	N° Families	Area per Family
Campo Alegre	1984	2059	849	600	3,4
Italva	1987	1388	1100	210	6,6
Pedra Lisa	1987	78	50	25	3,1
Normandia	1960	120	80	14	8,5
São Domingos	1987	705	180	59	11,9
São Lourenço	1982	90	90	13	6,9
Sol da Manhã	1986	500	400	72	6,9
Vitoria União	1986	600	100	61	9,8
Cachoeira. G.	1984	328	164	110	2,9
F. Conquista	1986	620	355	38	16,3
Total	:	6488	3368	1202	
Average	:	650 has	337	120	7,6

Source: SEAF. Evaluation Reports . 1988.

Note: At first sight, the cultivated area appears to represent a very low percentage of the total area, but it must be observed that within almost all the settlements there are lands that are unsuitable for cultivation, such as mountains, natural forests, swamps, marshes etc.

A.4.3: List of Settlements in Rio Grande do Sul.

Name of the project	Area(has)	N°of Settlers	Area/ Family
<u>State Settlements:</u>			
1-N. S. Aparecida	580	58	10,0
2-C. Nova Esperança	2.550	125	20,4
3-Rincão de Ivaí	1.370	103	13,3
4-Macali I	923	68	13,6
5-Macali II	558	36	15,5
6-Brilhante	1.640	102	16,1
7-União da Vitória	172	16	10,8
8-Nova Ronda Alta	108	10	10,8
9-N. S. Conquistadora.	187	15	12,5
10-Bom Retiro	1.210	66	18,3
11-Potreiro Bonito	143	12	11,8
12-Santo Isidoro	202	22	9,2
13-Cemapa	<u>296</u>	<u>23</u>	<u>12,9</u>
Subtotal :	9.939	656	Average: 13,5
<u>MIRAD Settlements:</u>			
1-Faz. São Pedro	2.296	127	18,1
2-Encruzilhada Natalino	8.005	220	36,3
3-Bela Vista	973	40	24,3
4-Santa Rita	1.000	40	25,0
5-Faz, Seival	1.283	70	18,3
6-Cortiçeira	711	35	20,3
7-Itapui Meridional	1.101	80	12,6
8-Santa Tecla	<u>1.120</u>	<u>60</u>	<u>18,7</u>
Subtotal :	16.489	672	Average: 21,7

Source: MIRAD. List of settlements. (1988).

Emater, Evaluation Reports, 1988.

ANNEX 5

COMMUNAL SETTLEMENTS ECONOMIC PERFORMANCE

5.1 THE HOLANDES ECONOMIC PERFORMANCE.-Business evolution.

The Holandes settlement started in May 1987 (one year and half before our research) without any kind of capital endowment and before the PROCERA system had begun to inject some financial resources into the agrarian reform programmes. Although Novo Holandés is managed as a real business, the lack of accounting systems obliges us to reconstitute the facts and business activities from the data obtained by interviews.

-First Harvest, 1987:

As soon as the settlers were selected, they submitted a project to Mirad asking for resources to plant 350 has of wheat. This was the only crop which could be planted that winter. Mirad delivered CZ\$ 2.000.000 IN cash within the C.A.F system. (Crédito de Assistência e Fomento). Normally this credit is devoted to the construction of houses and to feed the people until they start to produce. Nevertheless, they decided to use it within the production process, and to live temporarily in the big shed they have in the area.

As soon the area had been planted, they presented another project to the Bank of Brazil to finance the costs of the same crop. (CZ\$ 3.600.000).

That harvest was a success, yielding 602,1 tons of cereal (net of losses and seeds stock), which in terms of productivity is similar to the regional average.

According to our reconstitution, it was sold for 13.384 OTN's. (CZ\$ 7.000.000). The net result of this harvest is shown in the following table:

Total revenue.....CZ\$ 7.000.000=	13.384 Otn's.
Minus:	
Fertilizers:..... 3506,66 Otn's	
Fuel :..... 327,70 "	
Seeds :..... 2606,00 "	
Lime :..... 1043,64 "	
Pesticides :..... <u>182,63 "</u>	<u>7.126,63 Otn's</u>
BALANCE =	6.257,37 Otn's

Actually, the costs of production were covered by the grant from Mirad; therefore the gross product (13.384 Otn's) and not the net product must be regarded as their initial balance or working capital .

After paying off the debt to the Bank of Brazil , they used most of the balance to buy 2 new fully equipped tractors and one big harvester. In sum, they had an excellent harvest and with these earnings they could repay their debts and even make some investments in machinery.

-Second Harvest, 87/88:

In order to plant for the summer harvest they contracted a loan with the Bank of Brazil (B.B) under normal conditions of interest rates . That is , the same the Bank charged to small producers in the South of Brazil. (Full indexation plus an annual rate of interest of 12%). It must be emphasised that by the time the agrarian reform process was launched the subsidized system of rural credit had been abolished . The new

beneficiaries of the agrarian reform (before Procera) had to rely on the commercial financial market and accept practically the same conditions as the large landowners.

The total amount borrowed was equivalent to 12.676 Otn's (CZ\$ 10.400.000).

The output of the summer harvest was as follows:

Product	Area(has)	Output(t)	Yield(NH)	Yields(Sarandí)
Soy-Beans	360	624,3	1.7	1.3
Corn	80	240,0	3.0	1.5
Beans	10	11,8	1.2	0.3
Rice	4	4,5	1.1	1.1
Sugar Cane	2	30,0		
Manioc	2	5,0	2.5	1.0

NH: Novo Holandés.

Sarandí: Agricultural Census, IRGE 1985.

Yields for this harvest exceeded regional productivity levels (District of Sarandí) for all the products, the most notable being the case of corn which was double the regional average. High levels of productivity therefore increased their total revenue, basically in relation to the tradeable products. Holandes settlers decided to market the total output of soy-beans (minus a reserve of seeds) and to devote the other products to consumption.

The financial result was approximately the following:

Table A.5.1 Financial Results at the Holandés Settlement

Gross product (Soy-Beans).....	18.168	Otn's	
Minus:			
-Costs of production:			
Fertilizers.....	..4175	Otn's	
Fuel.....	426	"	
Rented Tractor.....	208	"	
Seeds.....	2045	"	
Pesticides.....	626	"	
Calcareous.....	3339	"	10.809
<u>Otn's</u>			
Working Profit:			7.359 "
-Minus :Trading costs.....	881	"	
Taxes.....	800	"	1.680 "
Net balance :			5.679 "

This harvest had indeed, been better than the former; yet they were able to sell a good proportion of it and, moreover, they had an important quantity of different cereals for consumption. As credit was in excess of their requirements for cropping they refunded the loan (B.B) and still made some investments.

-Third Harvest ,1988.

By the end of the summer they planted wheat again and covered these costs by borrowing the equivalent of 12.330 Otn's from the B.B ,at the same interest rate as the previous year. The harvest yielded 104 t of wheat and gross revenue of 2310,50 Otn's. After deducting the costs of production they had a net product of 1838 Otn's.

In fact ,this harvest was poorer than the others due to losses suffered during the winter drought. Although PROAGRO

(agricultural insurance) covered part of the loss, they still had to bear a slight net loss .

-Fourth Harvest, 1988/89:

At the time of our visit to the settlement (Dez 1988), they had already planted the following areas:

Soy-beans:	270	has
Corn	: 30	"
Beans	: 2	"
Rice	: 1	"
Pastures	: 30	"

It must be noted that this harvest belongs only to the 24 families who remained in the community system. For this harvest they again used the Bank of Brazil credit, borrowing the equivalent of 6.061,7 Otn's.

In sum, from the operational point of view, the Holandes Settlement reveals practically the same behaviour as any other capitalist farm, borrowing money at commercial rates, using modern technology, and making rational use of their lands. This activity allowed the reproduction of their initial endowment, plus some investments, and left the settlement slightly indebted in the last harvest. (6.061 Otn's) The debts are less than in the former periods, due to the fact that they have already accumulated some working capital and also because they had begun to use the Procera system by that time as we see below.

From the financial point of view, the situation appears to be healthy. According to the data collected in the interviews and the analysis of some documents, we have reconstructed an estimated balance sheet :

Table A.5.2 Estimated Balance Sheet :Holandés.

ASSETS		LIABILITIES	
-Working capital		Short Term Liabilities	
Cash	: 1000	B.B	6060
Stocks	: 2000	Contractors	1500
-Fixed capital:		Long Term Liabilities	
Machinery	: 31300	Procera	31500
Materials	: 10400	Undistributed	
		Profits	5640
Total	: 44700	Total	: 44700

Note: The balance estimated above is based on the interviews and documents.

At the time of the research they had the following stock of machinery: 4 tractors, 2 harvesters completely equipped, 8 machines for output processing, 1 truck, 1 car, and several motors and implements. Furthermore, they increased their livestock and today have the following range of animals: 91 cows, 300 swine. They also planted 500 fruit-trees, and 5000 forestation trees; and accumulated a seed-stock of 1200 bags. (1 bag=60 kgs of seed).

The balance shows that practically all the investment (fixed capital) could be made using long term loans (basically Procera loans). Nevertheless, due to the very favourable conditions of this loan - a grace period of 3 years before starting repayments, a total term of 8 years, and 35% of indexation - the repayment will not burden the settlers too much in the future.

The balance is highly positive in view of the short period of activities of the settlement - 1½ years - . They have accumulated fixed capital of U\$ 150.000 (total) or U\$ 4285 per family. Moreover, though most of these investments have been made with the Procera credit, they had implanted other things, such as the electrical grid, using commercial credit. Overall, despite some short

term debts ,the general cash flow appears to be quite reasonable.

-Profit Distribution

As we said before , profit-sharing was not made in accordance with any analytical or formal accounting procedures, nor in relation to any previous decision taken in the assembly .That is ,whilst investments were being made and different bills being paid,they used to share part of the surplus which was in the settlements' bank account. During 1988 they distributed the following amounts of money to each settler:

<u>Date</u>	<u>CZ\$</u>	<u>Otn'S</u>
Jan 88	40.000	67
Fev 88	20.000	29
May 88	50.000	44
July88	56.000	35
Sept88	50.000	21
Dez 88	<u>40.000</u>	<u>8</u>

Total: 204 Otn's= 25 minimum wages.

This amount was the return on 11 months of work.Hence each family received 2,27 minimum wages per month as **net monetary income**.

In contrast to the other settlements analysed in this chapter, in this case all the settlers have the same income.In the other settlements they had "on average" approximately the same ,but some of the settlers had earned 10 minimum wages and others less than 1 per month.

Furthermore,the Holandes 'settlers have the following non- monetary sources of income:

- Consumption of rice,beans,corn and manioc.
- Consumption of vegetables.
- Livestock output.

The amount of money which has been distributed does not correspond ,as we said before,to any pre-established criteria,apart from their own intuition and judgement.However ,as the following numbers show, this intuition was not very far from the real possibilities they had:

-First Harvest Profit: 6257 Otn's
 -second " " : 5678 "
 -Third " loss

Total profit:11935 "

Total profit shared : 7140

That is , profit distribution was approximately 60% of total profits,leaving 40% for future investments .Although this percentage had not been defined beforehand it appears to be quite reasonable as a rule of thumb.

-Utilization of modern technology.

Although the Holandes settlers have partially followed the modern technological "package",they are progressively shifting towards "appropriate technology".

They use modern machinery for practically all activities,from ploughing to harvesting.They have their own tractors and harvesters working day and night on these tasks,with the sole exception of weeding , which is done manually or with the use of animal traction .Weeding is being done manually so as to avoid the excessive utilization of herbicides.They also intend to mechanize weeding in order to free the work force for other activities.

ANNEX 5.2

GURIOU ECONOMIC PERFORMANCE .-Community Production.

One year and a half after the settlement started ,the area was still quite idle,as the following table illustrates:

Table A.5.3.Degree of Land Utilization in Guriou.

Type of Plantation	Guriou (*)		Mangue Seco		Córrego Braço	
	Has	%	Has	%	Has	%
Individualized areas:						
Permanent Crops	6.4		72.0		40.3	
Temporary Crops	79.9		73.5		29.0	
Community Areas:						
Permanent Crops	23.5		47.0		24.0	
Temporary Crops	22.0		9.0		6.0	
SUBTOTAL:	131.8	23%	201.5	6%	99.3	9%
Forest and moors :	430.6	74%	3087.0	94%	954.3	91%
Urban areas :	20,0		20,0		8,0	
TOTAL :	582.4	100%	3308.5	100%	1061.6	100%

(*):Percent of cropped land ,and iddle land over total area available.
Source:Ceará,Evaluation Reports.

The productive utilization of the settlement's lands is far from complete.Guriou's settlers apparently advanced more in terms of land utilization(23%) than the others.But,in fact, in this case individual areas are proportionally more responsible for the land utilization than in the other villages.

The settlement is still under-utilised due to several factors. First, because the lands are covered with vegetation, which needs to be cut in order to plant temporary crops. Secondly, because not all the lands that appear to be idle can be cultivated, as we saw in the description of the soils. Thirdly, due to the significant time taken to establish new permanent plantations, notably of cashew or coco (two or three years to have results). Fourthly, in order to develop big areas with crops, like beans or corn, the soils must be treated with lime, chemically fertilized, and irrigated for some time.

Therefore, at least in the short term, the settlers have to survive to a great extent through the exploitation of the permanent plantations that already existed and, secondly, from the output generated by the new crops.

So far, they have produced two harvests, part in the communal areas and part in the collective areas (groups of ten people). Furthermore, they also have their individual plots and fishing, which we will evaluate afterwards. The results for communal agriculture are as follows:

Table A.5.4 .Communal Output at Guriou.

Product	Mangue Seco		Guriou	
	Output (Kgs)	Has	Kgs	Has
1987				
Coco nuts	14.000	22	12.000	30
Cashew nuts	1.500	31	600	25
1988				
Cashew nuts			1.500	25
Corn	4.000	4	1.680	
Beans	1.600	4	1.700	
Rice			1.480	
Banana			3.000	

The technology so far used to produce this output was traditional. The soils were prepared and ploughed using animal power or manual labour, low levels of fertilizers, and harvesting was predominantly done by hand. Therefore, lacking machinery, they have had to utilise large quantities of labour, mainly to prepare soils for cultivation. Hence, all the 87 members of Guriou's association worked one day a week, and 2 days in the case of Mangue Seco.

Despite this very traditional technology, yields were quite reasonable, at least for the corn harvest and beans, which achieved output per ha similar to the Northeast average. (1)

(1) The average yield for beans in the Northeast is 400kg per ha, while at Camocim the average is less than 200 kgs per ha; Corn=1000 kgs per ha, while in Camocim it is 500 kgs per ha.

Trading is being done collectively, that is , the Association collects communal produce and also buys the collective and individual output .Cereals and other products are then cleaned and stored within communal warehouses and , whenever prices go up, the association sells the products to intermediaries. The latter classify and transport the production to the market. Despite the fact that they are still losing the margin represented by intermediaries' profits , at least they retain control over the decision of when to sell the product, on account of the new form of commercialization and storage adopted. In the case of cashew nuts, which it is their most valuable product, they internalized a differential of 80% , because they were able to wait until the price went up.

The output sold yielded 880,58 OTN's (2) to Guriou and 1.869.02 OTN's to Mangue Seco. After deducting 30% for the accumulation fund , they shared the remaining 70% between the associates. This product has been distributed part in money and part in kind, representing approximately 2,5 minimum wages to Mangue Seco's associates and 1,2 minimum wages to Guriou's. This profit distribution was made in February 1988, for the first time.

(2) OTNs are bills issued by the federal government , whose nominal value is used to index other assets and liabilities as well as prices. The nominal value of one OTN was approximately equal to U\$ 7 at the official exchange rate or U\$ 5.5 at the black market rate in December 1987.

During this first period (18 months) the settlers only received a total amount of money equivalent to two minimum wages, that is ,one minimum wage for each nine months. Obviously that they had to complement their income with other activities as we shall see later .However, the profit- sharing reflects the weakness of the communal production. If they had not captured the mercantile profit, there probably would not have been any profit to distribute. The only way out to this situation would be to expand production . Since cashew nuts demand more time to mature, they will have to improve cereal crops in the short run so that their basic needs can be covered.

The Settlement received some financial resources from Mirad and other institutions , which helped to develop some productive activities and also to make ends meet for the settlers.

In June 1987, the Settlement received a grant for food and development (Credito de Alimentação e Fomento) which Mirad gives to settlers during their first six months. They get one minimum wage per family for food and one for basic technical improvements during this period.

The Guriou settlement as a whole (the three villages) received an amount equivalent to 14.813 OTN's for development and 3.593 OTN's for food . Instead of dividing it among the residents, they decided to spend it collectively on a big purchase of goods. In this way, they obtained a discount which benefited the community. The remainder was immediately invested in the financial market to avoid its devaluation. It happened to be the greatest financial investment to be made in the local bank in Camocim, and this fact strengthened their image with local bankers. Afterwards , they started to use this money collectively to purchase some machinery and implements. They bought fodder , machinery, cattle bells, and different tools. Some money was invested in the enlargement of their cashew and coconut plantations , to buy more cattle and in

the organization of a mini-agricultural office to administer the use of the communal tools. They still (in 1988) maintain a bank deposit of 4.000 OTN's to be used for future investments, and mainly to cover extra expenses, such as health problems among the community.

At the end of the following year (1988), the settlement received the PROCERA credit. The total amount given was 17.446 OTN's, with 13.610 Otn's for the community activities and 3.836 OTN's for individual contracts.

The first stage of Procera's credit allowed the community to make the following investments:

-Enlargement of Cashew plantation:	83,8 has
- " of Coco " :	7,0 has
-Other permanent crops :	32,0 has
-Temporary crops :	<u>150,0 has.</u>
Subtotal:	272,8 has
-Livestock (cows and bulls) :	63 animals.
-Pumping engine :	2
-Irrigation equipment and motors:	2
-Fishery equipment :	1

The investments made with this credit were mostly oriented towards increasing productive capacity. The cultivated area is going to expand by approximately 180%, though they will obtain results only after two years. On the other hand, these permanent crops, once they begin to produce, will demand far less work than temporary crops. It will be a matter only of maintaining the trees, but without the hard work of having to prepare and plough the soils each year.

This part of the credit represents barely the first stage within the PROCERA programme. Settlers already have received 750TN's average per family, that is, 6% of the total credit which might be allocated within the Procera credit, if the settlement is able to report the outcomes of

each stage and plan the others. The remaining credit will probably permit further expansion of the productive sector.

Finally, it is worth emphasising that the settlement is not heavily indebted, due to the fact that it did not need to borrow from private financial institutions.

They are in debt to Procera (17.000 Otn's), with FADA-PAPP (1000 Otn's), and with EMBRATER (1500tn's). All these debts will begin to mature in the long term, and do not incur interest. On the contrary, they depreciate, since contract conditions are very favourable. They will repay the capital plus 35% of the inflation rate over it, which means that these debts are going to be liquidated by inflationary depreciation with the passage of time.

ANNEX 5.3

DESCRIPTION OF THE SPECIAL SYSTEM OF CREDIT FOR AGRARIAN REFORM: PROCERA.Objectives of the system:

The PROCERA system was created in 1985 (30/01/1985) by the National Monetary Council (CMN, vote N° 046/85) with the general purpose of helping to support a "pacifical, fair and rational agrarian reform". Its main beneficiaries are intended to be "the rural workers, tenants and sharecroppers that always have been outside from the official credit system because were not able to fulfill the bank's demand for collaterals".

More specifically, it attempts "to transform the land reform's settler into a viable small farmer".

Conditions of Loan re-payment:

The system offers attractive loan conditions. Loans have to be repaid in 8 years, with 3 years of grace. The repayment is made in six-monthly installments. The capital sum is indexed at 35% of the official rate of inflation, plus 3% interest. Loan limits are 1200 OTN's (approximately US\$9.000) per family with personal guarantees.

Other conditions:

- Only agrarian reform settlers can benefit from this system.
- The financial resources can only be used for one or more of the following activities:
 - To build a simple house.
 - To buy/build/implant : fences, barns, permanent crops, machinery, irrigation, processing machines, livestock (only for breeding).

- Preference is given to collective loans, that is, for loans made to groups of settlers.
- In case of death, the loan is automatically cancelled.
- If the household is sold, sanctions are applied against the settler.

Institutions in charge of the system.

In 4/9/1987 an agreement was established between several institutions to manage the system of credit. The system is organized as follows:

MIRAD authorities are in charge of the relationship with the Treasury (Central Bank) .

INCRA has to make technical reports about the potential use of the settlement area, and to advise the settlers about the system of credit.

EMATER has to supervise the settlements' activities and to report about their evolution.

BNDS (National Bank for Social and Economic Development) administers the financial resources and delivers the funds to the regional banks which, in turn, give the money to the settlers.

Evolution of PROCERA :

Only two years after the programme of agrarian reform was launched, the special system of credit for agrarian reform started to work. In the following year (1988), the system financed 244 projects (settlements) constituted by 28.000 families. That is, one half of the total number of settlers were benefited.

In September 1988, some settlers' representatives met in a congress to evaluate the working of the system. They concluded that:

- Only a few settlers rejected the system because of lack of understanding.
- The regional banks went to the settlements to explain the working of system. However, important delays have affected

the flow of money to the settlers.

-The system has worked without corruption and without political paternalism .

-The settlers' participation and opinions have been accepted .

-The experience of collective settlements was positively evaluated .

In sum, the settlers ,in general terms, were satisfied with the system and were supporting it firmly against some threatens of extinction coming from Federal authorities.

It is noteworthy that ,apart from Procera, the BNDS also opened a system of grants and loans to support small farmers,called "Small Farms Aid",which so far(1987-1988) has benefited around 50.000 families and some five hundred groups of small farmers.(condominios).The payment conditions are also subsidized(they repay only 50% of the loan).It focuses on the solution of storage problems,rural equipment and machinery, and small-scale swine production.

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