

Urban Capital and Pseudo-modernization of Agriculture in the Rural Hinterland of Northeast Brazil

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ABSTRACT

The expansion of capitalized cattle ranching in the Agreste of Northeast Brazil is an example of the penetration of urban speculative capital in the rural hinterland of the large urban centers of Brazil. Polarized development and urban-industrial accumulation have generated intense rural land speculation which takes the form of cattle ranching because this is the farm activity which best fits the investment interests and lifestyle of urban-based, absentee landowners. The impact of this trend has been particularly negative in a poor, densely populated zone like the Agreste. In such a zone, ranching is an inefficient land use system which causes the expropriation of the peasantry, large-scale unemployment, and extreme social polarization.

THE SPECULATIVE NATURE OF THE MERCHANT ROAD TO CAPITALISM

We wish to question a common assumption held by Brazilian planners, development technocrats, and social scientists that large landowners, and urban-based entrepreneurs in particular, make exemplary capitalist farmers. These *empresarios* are supposed to apply their administrative know-how in the countryside, to better allocate modern productive inputs, to attain economies of scale and so operate highly efficient model farms (Brum 1988; CODEVASF 1979; Galvao 1986; Sorj 1986; Souza 1979). One can, in fact, encounter actual cases where urban-based landowners are innovative entrepreneurs, as historically in the rise of capitalized rice and wheat farming in the South (Brum 1988) and in private-sector capitalized irrigation of the Northeast (Bicalho 1985). However, these areas are located in the interior, far from the large consumer markets they serve and the entrepreneurs involved are small-town people who have ties to agriculture. They are not agents of urban capital in the economic and sociological sense of the term.

It is far more common in Brazil for entrepreneurs of the large urban centers to engage in land speculation or in pseudo-modernized cattle ranching as a disguised form of land speculation rather than in more productive land use systems. This occurs on a large scale on the Amazonian frontier, in depressed peripheral regions like the Northeast, and even in the more developed southeast. In fact, ranching as a means to lay claim to land is as old as the latifundium in Brazil. The difference today is that ranches are given a modernized appearance so as to increase their value through cosmetic improvement as well as to expel troublesome resident peasants and so avoid disappropriation for agrarian reform (Frank 1967; Goodman and Redclift 1981; Graziano da Silva 1981; Ianni 1979; Martínez-Alier 1974).

We will also question an interesting, but perhaps outdated, distinction made by Janvry between the *junker* road and the merchant road to capitalist agriculture (Janvry 1981 111-113, 169-171). This distinction is based on the assumption that the merchant road is productive and efficient while the junker road is not. Janvry derives his model of the junker road from Lenin's classic models of [end p. 35] Prussian junkers and U.S. farmers. The junker road is the transformation of pre-capitalist latifundia into large-scale capitalist estates. This productive unit predominates in countries where the junker landed elite retain control over the State and agricultural technological innovation is biased toward mechanization rather than biochemical technologies. Mechanization generally does not increase land yields but it does reduce labor and management needs. This, in turn, reduces labor costs on the farm and throughout the economy as a whole because a huge contingent of landless and proletarianized peasants arises and depresses wage levels in the city and in the countryside. Biochemical technologies, on the other hand, increase yields but they increase labor and management needs. Intensifying production per area also threatens the junker elite's monopoly over land and ultimately over labor power. These technologies are thus adopted only in countries where the bourgeoisie as a whole dominates the State and where the farmer road is taken, i.e. where commercial and family farms predominate. In his model of the merchant road to capitalism, Janvry correctly identifies the growing importance of merchants and the new bourgeoisie of professionals, military, and technocrats as rural landowners in Latin America. He even considers this group to be more important for the rise of commercial farms than the upper and middle class rural bourgeoisie which emerges from the farmer road. Land-saving green revolution methods and infrastructure are utilized on medium-sized farms, with absentee management and a proletarianized work force (Janvry 1981, 109, 112).

Our basic point of disagreement with Janvry's otherwise brilliant analysis of Latin American agriculture concerns the type of "modernization" that takes place on urban-owner farms in Brazil. We will demonstrate that merchant road landowners, in fact, have more in common with junkers than with other commercial farmers. Like junkers, urban-based owners also adopt extensive cattle-raising and labor-saving technology in order to reduce labor and management needs. Many small and medium sized commercial farms in south and southeast Brazil, on the other hand, use these inputs to "magnify" family labor and increase the amount of land which can be tilled much in the same way that U.S. farmers do (Bicalho 1989; Brum 1988; Goodman and Redclift 1981; Loureiro 1987; MacLennan and Walker 1980). Furthermore, the industrialization of Brazil has proceeded to such a point that junkers, the upper and even some of the middle class rural bourgeoisie, have been merged into the urban-industrial class structure and the bourgeoisie at large is firmly in control of the economy so that it is no longer valid to distinguish junker and merchant road landowners.

Adapting a concept from Harvey (1985), we call this growing importance of urban-based farm ownership the urbanization of capital in agriculture. This process is particularly strong in the rural hinterland of the large Brazilian cities where many large and medium farms are owned for portfolio diversification, social status, and for weekend leisure. Farming is often merely a secondary activity and even when it is still the principal source of income it must be adapted to the urban lifestyle of the owner, rather than the owner's lifestyle being adapted to the needs of farming. We will demonstrate how ranching is eminently adapted to the needs of this type of landowner.

The urbanization of capital in Brazilian agriculture has gained momentum in recent decades because of the fundamental shift in the economy to export-led diversification of industrialization. Within this development model, the State has promoted the integration of agriculture with industry. Agriculture has become a major consumer of manufactured labor-saving productive inputs, and farm produce increasingly is industrially processed for export (Baer 1985; Brum 1988; Graziano da Silva 1981; SOJ 1986). All branches of industry have expanded rapidly and the large cities of Brazil have become what Armstrong and McGee (1985) call urban theaters of accumulation upon which capital of national and international origin converges, and where wealth and income are highly concentrated among the upper classes.

In a context of high rates of inflation, capital of urban origin is invested in relatively cheap rural land, especially land located in the rural hinterland of the large cities, i.e. within 150 kilometers. This kind of investment is usually made individually by liberal professionals, merchants, and civil servants rather than by financial institutions or agribusinesses. Great social disparity has arisen between vacationing members of the upper classes and their farm hands and caretakers who earn the minimum wage.

Whether this is the predominant trend in any given rural hinterland depends on the existence of a large metropolitan produce market. The close proximity to a large consumer market in the industrialized southeast of Brazil permits intensive cropping of vegetables and fruit, which is a classic way for small-scale farming to resist expropriation in less-developed and developed countries alike (Janvry 1981; Lawrence 1988; Pyle 1986; Wolf 1966). In Brazil these crops are of secondary importance to the basic diet and less subject to urban-industrial biased price controls. Thus, a number of farmers with small- and medium-sized [end p. 36] holdings can make the transition to capitalized agriculture. The presence of these farmers counter balances the encroachment of urban investors, preventing outright social polarization from arising (Bicalho 1989; Hoefle 1989; Loureiro 1987).

In depressed peripheral regions, like northeast Brazil, where the market for vegetables and fruits is restricted, fewer medium-scale farmers survive in the rural hinterland of the large cities and urban-based owners predominate. Peasants are still numerous in these regions, and, when they do not fit into city oriented investment schemes, they are expropriated, causing extreme social polarization to arise.¹ The case of capitalized cattle raising in the Agreste zone of the Northeast will serve as an example of this process.

THE STUDY AREA AND RESEARCH METHODOLOGY

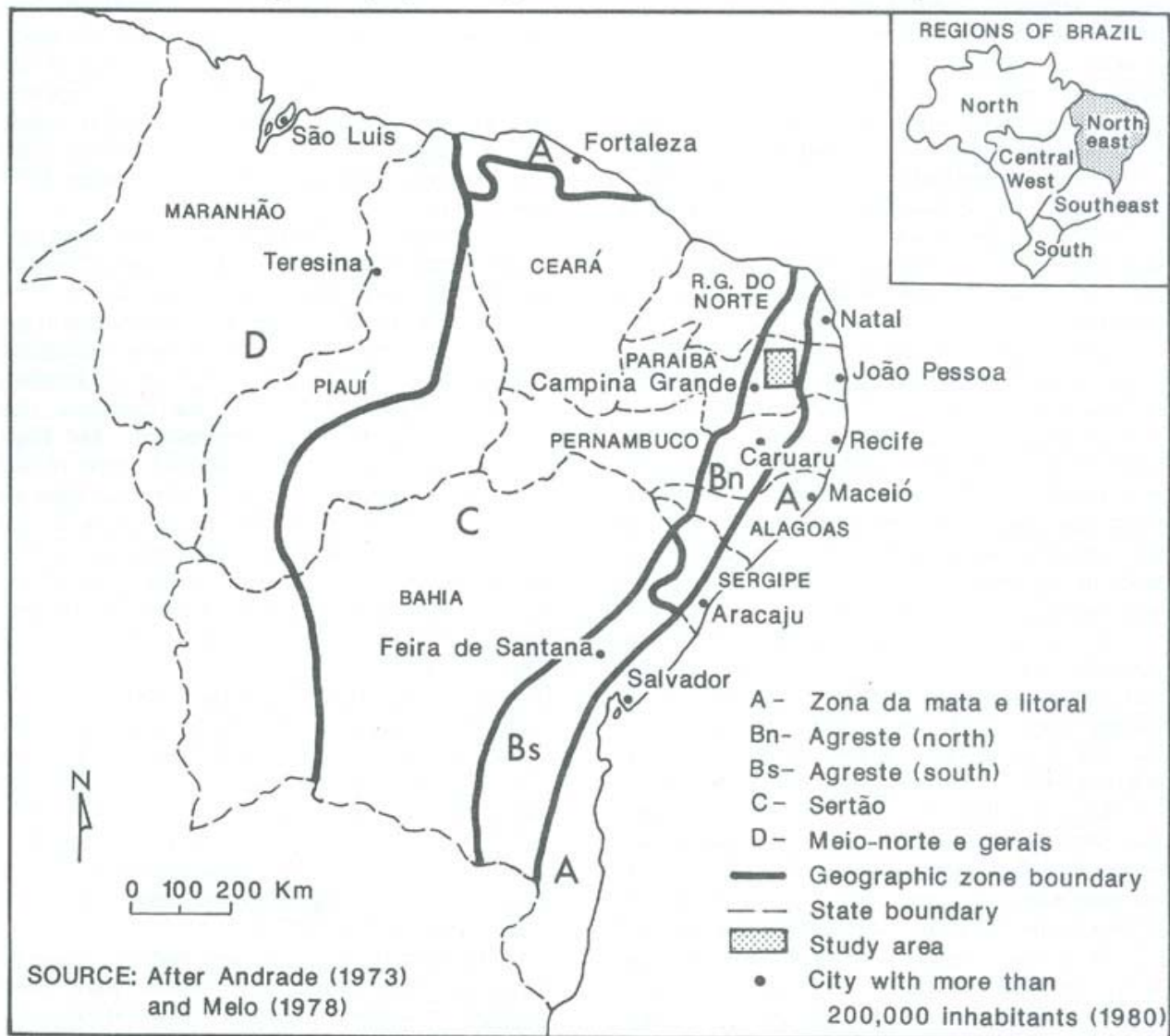


Fig. 1. Location of the study area and geographic regions of Northeast Brazil.

Northeast Brazil is a depressed peripheral region with acute problems of land concentration and fragmentation, unemployment, rural exodus, and poverty. Great ecological, economic, and social diversity exist in the region ranging from the populous cities and settled countryside of the humid Zona da Mata and semi-humid Agreste zones of the eastern seaboard, to the open spaces of the semi-arid Sertão, and, finally, to the frontier areas of the semi-humid and humid Meio-Norte and Gerais located in the western part of the region (Figure 1). Change in agrarian structure varies from the classic agribusiness export cropping in the Zona da Mata, to peasant expropriation due to urban encroachment in the Agreste, to a slow farmer road transition in the Sertão and, finally, to violent conflict between peasant free-holders and encroaching large ranchers in the Meio-Norte and Gerais (Andrade 1973; Diniz 1982; Bicalho and Hoefle 1984; Melo 1980, 1983).

Extensive cattle raising was the first land use [end p. 37] system of the Agreste during the colonial period but from 1800 onward rural activities shifted to mixed farming. The Agreste became the bread basket of the Northeast, supplying a variety of staples to the sugarcane plantations and cities of the coast as well as to the pastoral Sertão. In the northern part of the Agreste, i.e. the part from the state of Sergipe to the state of Rio Grande do Norte, cropping became especially important and population grew rapidly. By 1960, the population density reached 56 inhabitants per km² (Andrade 1973; Melo 1980).

At that time various types of farms existed side-by-side. Large farms and latifundia with from 75 to up to 30,000 hectares utilized the labor of "internal" peasants: *moradores*, resident part-time crop workers who also had access to a subsistence plot of half a hectare, and *rendeiros*, small tenant farmers who rented 2 to 3 hectares of land, which during the dry season

and when finally fallowed, yielded native pasture for the landowner's livestock. Some moradores were also present on medium sized farms with 30 to 74 hectares of land but the family labor force was also important. Family workers were the predominant form of labor employed on small farms with 8 to 29 hectares. Minifundia holdings with less than 8 hectares were of insufficient size for a family's livelihood and their owners were "external" peasants who rented additional land on large farms and worked as dayworkers at seasonal peaks of demand.

Even before the rise of capitalized ranching in the Agreste, small land-owners faced difficulties with declining farm size. As holdings were partitioned through time, a growing number of farmers were pushed into an external and finally to an impoverished internal peasant status. To avoid this, many emigrated to the Amazonian frontier where they could be independent farmers or they went to work in capitalized agriculture and industry in the southeast and south of Brazil.

Within this context, the increasing concentration of capital in the urban centers of the Northeast and the owner-worker conflicts in the early 1960s caused a wholesale break with what Sá (1975) calls the "pre-capitalist latifundium/tenant farmer-minifundium" agrarian structure and put an end to the "functional dualism" which existed between the subsistence peasant sector and the capitalist sector of the Brazilian economy. The Zona da Mata is the zone which is located closest to the large urban centers of the Northeast but urban speculators have only been able to operate on the urban fringe and on the seashore. Sugarcane plantations have dominated the Zona da Mata since colonial times and they are still highly profitable enterprises. Instead of losing ground, these agribusinesses have actually expanded the area they occupy. In response to favorable prices and to the owner-worker conflicts, productive processes became capital intensive and the work force fully proletarianized (Andrade 1988; Melo 1975).

The Agreste is the next closest zone to the urban centers. As the two main cash crops of the zone, cotton and sisal, have been depressed for decades, it became the focus for the activities of speculative urban capital. Due to the owner-worker conflicts, speculation took the form of the expansion of capitalized cattle ranching. This development exacerbated old problems and provoked a crisis in food production and employment opportunity, and led to large-scale expropriation of the peasantry. Increased emigration resulted and population grew at a scant rate of 1.2 percent annually between 1960 and 1980, well below the national rate of 2.7 percent.

To exemplify this modern-day "enclosure," we present research findings from an area of advanced penetration of capitalized cattle ranching in the Agreste of Paraíba state. Research in this area was undertaken as part of a long-term research project in the Agreste and Sertão, which involved more than two years of resident fieldwork between 1977 and 1981.

The Agreste of Paraíba state is quite representative of the Agreste, encompassing the differences in altitude, soils types, climatic conditions, land use systems, and demographic trends present in the zone as a whole. There are four basic ecological and agrarian zones of the Agreste of Paraíba: the High Agreste, the Brejo, the Piedmont, and the Lower Paraíba River Depression. The High Agreste is located on the leeward slope of the Borborema Plateau which gradually falls from an altitude of 500 meters to 200 meters as one moves westward toward the Sertão. Soils become poorer, climatic conditions drier and annual rainfall decreases from 800 to less than 400 mm. The Brejo is located on the fertile windward escarpment, of the Borborema. It has a humid climate with annual rainfall varying from 1,000 to 1,400 mm. The Piedmont is a transitional area between the humid Brejo and drier areas located further away from the escarpment. As one moves eastward from the escarpment rainfall drops from 1,200 to 800 mm. The Lower Paraíba Depression is a low-lying drier area which is largely bypassed by the moisture-laden clouds arriving from the coast. Rainfall ranges from 600 to 800 mm.

Historically, the land use systems, agrarian structure, and demographic trends have been strongly influenced by this environmental variation. Sugarcane, fruit, and staples have long [end p. 38] predominated in the Brejo. In the past mixed farming with a cropping emphasis prevailed in the Piedmont while mixed farming with a stock-raising emphasis prevailed in the drier areas. From the 1960s onward, though, state development incentives and labor legislation have brought economic and social considerations to the fore. Consequently, sugarcane has advanced against staples in the Brejo and in the eastern part of the Lower Paraíba Depression, while capitalized ranching has advanced against cotton, sisal, and staples in the High Agreste in the Piedmont and in the rest of the Lower Paraíba Depression. Besides these major trends, small enclaves specializing in the cultivation of black pepper, cashews, potatoes, tomatoes, and yams have arisen in some places and a major area of pineapple farming has arisen near Sape.

Field research focused on the county of Guarabira and surrounding counties encompassing the Brejo and Piedmont areas. In 1980 Guarabira had an urban population of 31,544 and can be considered a small-medium city by regional standards. The city is an important center of commerce and services for the northern part of the Agreste in Paraíba. Detailed questionnaires were applied to 67 landowners and 30 workers and small tenant farmers. In addition, a local census taker was contracted to apply urban questionnaires to 192 families in the shanty towns of Guarabira where expropriated peasants live.

A second phase of the field research was undertaken in the counties surrounding the town of Cajá-Cuba (pop. approx. 800).

The town is located in the Lower Paraíba Depression along the main highway into the interior, mid-way between João Pessoa (pop. 525,582), the state capital, and Campina Grande (pop. 228,303), the second largest city and a center of light manufacturing. Cajá-Cuba is also located near the junctions of the three major asphalt roads which serve the Agreste of Paraíba. The town itself reflects its location. It is a growing shanty town of expropriated peasants who left the capitalized ranches served by these highways. Fifty expropriated peasant families living in town were interviewed. In the rural hinterland, 32 farm owners and 20 workers were interviewed. Interviews in the rural zone of the Cajá area were undertaken in the form of a loose survey in order to identify similar trends to those which had been identified in Guarabira. Therefore, most of the rural quantitative data presented here will refer to Guarabira where sampling was undertaken in a formal manner.

In addition to questionnaires, interviews of rural extension agents were conducted in the counties studied and in other counties in the Agreste of Paraíba. Reconnaissance trips were also made throughout the Agreste of other states. Census data is used to formally generalize trends for the Agreste as a whole. Unfortunately, data are only available up to 1980, the date of the last census. This notwithstanding, contact was maintained with informants and professional colleagues in the Northeast who affirm that the situation in the Agreste today is much the same as that observed by the researchers during the period of field study.

RURAL ACTIVITY SPECIALIZATION

Before the rise of capitalized stock-raising, farmers of the Agreste planted a large number of products for self-provision as well as for the regional market. Cotton, sisal, sugarcane, and tobacco were planted on a cash crop basis together with staples such as beans, fruit, maize, manioc, and sweet potatoes on a semi-subsistence or even semi-commercial scale. In this system of shifting agriculture, cattle were raised in fallow areas, and during the dry season grazed on the stubble of cotton, beans, and maize. Only modest areas of planted pastures and fodder were set aside for supplementing pasture in the dry season. The most common types of feed were *palma forrageira* (an *Opuntia* thornless cactus), manioc root, and sisal pulp. The latter was a crop byproduct but the use of the others involved considerable labor expenditure.

During the 1960s cotton and sisal, the two most important of the older cash crops of the Agreste, entered into a long period of decline due to competition with synthetic fibers on the world market. Farmers began to plant new cash crops, such as black pepper, cashews, oranges, pineapples, potatoes, saffron, tomatoes, and yams (Table 1). Specialized farming areas of these crops arose in response to the demand of the slowly expanding urban market of the Northeast, the rich southeastern and, to a lesser extent, to export markets. However, much of this specialization involved small enclaves because by local dietary standards most of the new crops are expensive luxury items, which limits their consumption in a poor region like the Northeast. Furthermore, high transport costs and thousands of kilometers distance from the main southeastern consumer market for these products puts local farmers at a disadvantage to farmers closer to these markets. Export markets show some promise but most farmers of a peripheral region like the Northeast only have limited knowledge of the potential of these markets.

A few of the new cash crops, such as potatoes, saffron, tomatoes, and yams, can be grown by smallholders but others, such as black pepper, cashews, oranges, pineapples, sugarcane, and cattle, are more easily undertaken by medium and [end p. 39] because initial investment is high, and, depending on the activity, a farmer may have to wait from one to three years before selling the produce. This requires sizeable amounts of seed capital and savings as well as fairly large land holdings which poor farmers of the Agreste simply do not possess.

Table 1. Change in Output of Farm Products of the Northern Agreste

Products	1950 (m. tons)	1960 (m. tons)	1970 (m. tons)	1980 (m. tons)	Change 1960/1980
STAPLES					
Beans	88,146	103,759	74,586	48,073	-53.7%
Maize	148,056	189,576	102,675	47,059	-75.2%
Manioc	827,507	1,060,691	917,914	846,645	-20.2%
Sweet Potatoes	16,825	11,453	27,663	26,158	128.4%
CASH CROPS					
Cotton	48,977	64,305	36,354	39,936	-37.8%
Sisal	684,639	749,864	587,208	13,187	-98.2%
Sugarcane	453,844	851,807	2,348,428	3,446,508	304.6%
Tobacco	10,651	17,858	27,680	28,134	57.5%
NEW CASH CROPS					
Cashews	1,415	6,890	10,379	7,600	10.3%
Oranges	35,748	57,251	91,301	261,643	360.0%
Pineapples	24,969	29,960	89,850	91,020	203.8%
Tomatoes	31,975	29,371	52,447	43,447	47.9%
Yams	2,894	8,779	15,247	17,577	100.2%
LIVESTOCK					
Cattle (steers)	977,943	1,178,876	1,540,444	2,432,346	106.3%
Milk (1,000l.)	74,280	92,038	130,993	224,366	143.8%

Source: Fundação IBGE (1955b, 1966b, 1983b)

During the 1970s, capitalized cattle ranching became the predominant activity in the Agreste. It arose on what were previously large- and medium-sized cotton and sisal farms located in areas of better quality soils in typical semi-humid areas of the Agreste. During this period, sugarcane also expanded in the Agreste, but mainly in the few humid areas of the zone where climatic conditions are not favorable for cattle raising or on the eastern edge of the Agreste where new technologies have permitted the expansion of sugarcane from the Zona da Mata into what were previously marginal lands. In this latter case sugarcane competes directly with ranching. The enclaves of new cash crops are usually located in areas of arenaceous soils which are suitable for these crops but not for cotton and sisal. These areas for the most part had been relegated to small holders in the past and so today they resist the advance of capitalized ranching.

Large- and medium-sized farms of the Agreste have thus become specialized in cattle raising, and artificial pasture now covers what had been fallow crop lands in the previous shifting agricultural system. Pangola grass (*Digitaria decumbens*) is the preferred type of pasture because it requires little labor input. Cattle graze by themselves in fenced areas so that only one cowhand is needed per 50-100 hectares of pasture. More productive irrigated fodder grasses are not used because they must be cut and shredded for feed and so more labor is required. As we will see below, ranchers want to reduce labor and management needs and not increase them.

As a consequence of the expansion of pasture, cropping area has ceased to expand in most places and has been drastically reduced where capitalized ranching has advanced most. Cropping area on the farms studied in Guarabira fell by 61 percent and the proportionate share of cropland in total farm land dropped from 43 percent to 17 percent between 1960 and 1977. During the same period, pasture increased its share from 32 to 61 percent [end p. 40] of total farm land. Most of the northern Agreste is following the same trend. Over a 20 year period from 1960 to 1980 crop land increased a mere 3 percent and this figure includes the cropping enclaves. At the same time, the area in artificial pasture increased by 267 percent. The share of crop land in total farm land fell from 31 to 24 percent during this period and artificial pasture increased its share from 9 to 27 percent. Before the rise of capitalized ranching, when mixed farming still prevailed, crop land had increased historically. For example, in a ten year period from 1950 to 1960, crop land increased by 49 percent in the northern Agreste (Fundação (IGBE 1955b; 1966b; 1983b).

Where stock-raising has become the predominant activity, the staple cropping that still exists is undertaken mainly for

subsistence on small and minifundia holdings while on larger farms it is undertaken to expand pasture. In the latter case, ranchers take advantage of the growing surplus of rural workers to clear fallow and woodlands in order to plant pangola grass. In an arrangement which Graziano da Silva (1981) has called attention to elsewhere in Brazil, land-poor peasants are allowed to plant short-cycle crops for one or two years without paying rent, on the condition that the land is left completely cleared and, often, planted with pasture. They move from field to field until the farm is fully covered with pasture at which time they are dismissed. Hence, this is the reason they are called "the rich man's tractor." In this case the peasants help the rancher execute their own expropriation. Alternatively, when a rancher is in a hurry, pasture can be planted by the mass of underemployed day-workers who now live off the farm. It should be noted that once pangola grass is planted, its deep roots make it nearly impossible to remove, so that the change over to artificial pasture is a permanent one.

PROFITS, LABOR AND URBAN INVESTMENT

Ranchers usually give three main reasons why they prefer cattle-raising to cropping: 1) stock-raising is consistently more profitable than most staple cropping, 2) it resolves the "labor problem," and 3) it fits neatly into the interests of urban-orientated land-owners. In addition, ranching is subject to less market risk because operating costs are lower and seasonal price fluctuation is not as pronounced as in cropping. Environmental risk, in the form of disease and occasional drought, is also more of a problem for cropping than for ranching, but it must be remembered that we are dealing with a semi-humid zone and not a semi-arid or arid zone like the Sertão where stock-raising is the most appropriate dry farming land use. At any rate, Agreste ranchers are large property owners who could easily withstand the risk associated with cropping if it suited their purposes. Low profitability is indeed a problem for a number of crops long planted in the Agreste. After 1960 the price of cotton and staples remained relatively stagnant for nearly two decades so that by the time of the field research in the late 1970s, only small farmers who use mainly "unpaid" family labor could plant these crops (Tables 2 and 3). For example, if a large farmer, who uses exclusively hired labor, planted cotton and staples in 1977, he lost from US\$2 to US\$160 per hectare depending on the crop as compared with a profit of US\$61 to US\$79 per hectare for cattle raising. The ratio of profit to cost is quite favorable in stock-raising. Once the initial expenses of the stock-raising system have been met, usually financed by long-term subsidized bank loans, and work done at little cost by land-poor peasants, operating costs are low, for example US\$21 to US\$27 per hectare in 1977 as compared with US\$189 to US\$321 per hectare for staples and cotton.

Looking at it this way, one might conclude that stock-raising is an optimal means for large landowners to maximize income under conditions of unfavorable prices for food crops (cf. J anvy 1981, 147). However, this is true only when ranching is compared to staple cropping. A number of new cash crops, and even a traditional one like sugarcane, can offer a large farmer substantially higher profits per hectare than beef or dairy farming, varying from US\$230 to US\$2,721 in 1977. However, most farmers with medium and large holdings possess enough land to earn an adequate income from cattle raising or land is merely a low-risk, low-income investment for portfolio diversification as the "structuralists" correctly hold.

In fact, ranch owners are more preoccupied with labor relations and long-term political costs than with merely maximizing short-term profits. From their point of view the main problem with cropping is the high input of labor required. Cost is not the principal concern because farm wages are extremely low in the Agreste, US\$1.88 per day in 1978. Owners want to reduce the amount of labor employed, irrespective of its cost and at the same time to exploit their land directly because the Peasant League conflicts and progressive farm labor legislation of the early 1960s thoroughly alarmed them. The low labor input of capitalized ranching therefore "cures" what ranchers term the "worker headache," i.e. it allows them to expel internal peasants.

While fruit and cereals require from 55 to 153 man-days of work a year per hectare depending [end p. 41] on the crop, the stock-raising system introduced needs less than 10. On most ranches, this work can be done by one or two hired cowhands who are easier to control, and who as waged workers, do not acquire a claim to land rights over time (*usucapião*). A system of capitalized agriculture was thus adopted not to reduce labor costs nor even to earn more income but rather to remove peasants so as to avoid paying the full social cost of labor and, to a lesser extent, in reaction to a perceived threat of disappropriation for agrarian reform which existed in the 1960s and 1970s. In this case capital-intensive methods are adopted as labor-expelling devices and not as labor-saving or labor-expanding devices.

Table 2. Change in Producer Prices for Farm Products of the Agreste (1948/50=100)

Product	1959/61	1967/69	1977	1986
STAPLES				
Beans	134.8	108.1	167.6	137.4
Maize	115.1	91.3	101.1	110.1
Manioc	129.3	106.6	413.2	132.2
Rice	100.8	92.1	95.1	99.1
CASH CROPS				
Cotton	100.1	68.2	105.7	75.3
Sisal	54.4	28.2	n.a.	n.a.
Sugarcane	91.7	110.6	142.9	87.7
NEW CASH CROPS*				
Pineapples	108.4	127.6	n.a.	n.a.
Tomatoes	190.3	574.0	100.0**	92.8**
LIVESTOCK				
Beef	157.9	179.7	253.1	318.9

Source: Patrick (1972) and Fundação Getulio Vargas (1978; 1987).

Note: While this index is based on prices adjusted for inflation, we hesitate to use the term "real prices" because the post-1970 consumer price index used for adjusting prices *systematically* underestimates inflation, so that farm prices actually increased less than this table shows.

*As the new cash crops of the Agreste are not important nationally, little price information is available.

**After 1969, the base-year for tomatoes is 1977 due to the non-availability of comparative data.

Perhaps the most important stimulus to the expansion of capitalized stock-raising is the fact that it is the rural activity which best fits the way of life of urban professionals, merchants, and urban-based farmers, i.e. it is easily managed by absentee

landowners. Among the group of large landowners, 87 percent of those interviewed in Guarabira and Cajá were found to be ranchers who live in medium and large cities; of the landowners with medium-sized parcels, only 27 percent were found to live in medium and large cities. Ranching also takes up little of their time. This is important for landowners whose principal occupation is not farming, and this kind of owner makes up a considerable portion of the ranching group. Nearly two-thirds of the landowners with large parcels and a quarter of those with medium-sized holdings were found to earn more than 75 percent of their income from urban sources.

Other landowners with large and medium-sized holdings depend on farming for most of their income, but they live in the cities for social reasons---to further their children's education and to have access to cultural and leisure activities. They can be considered urban-based absentee owners. For them ranching is the activity which best reconciles their rural and urban interests. Little supervision of daily activities is necessary. The pilfering of produce is kept to a minimum, and a complex hierarchy of workers is unnecessary.

Leisure considerations are also important. When the owner is tired of the noise and tension of the city, he can spend a weekend or the summer vacation on the ranch. Parents and children bring along friends, which earns them status. From an urban perspective, ranching provides better leisure activities than cropping. Milking cows and riding horseback are far more interesting than contemplating a bean field. In fact, in this respect the Northeast is rapidly catching up with the national trend for this kind of leisure. So much so that a number of entrepreneurs make a good living renovating run-down farms, turning them into model ranches and the selling them for a handsome profit much like entrepreneurs do in the richer regions of Brazil.

Consequently, capitalized ranches of the Agreste tend to cluster around medium-sized cities of the zone and along paved highways leading to the large Northeastern cities. Such ranch locations offer easy access for urban-based owners and this explains the spatial distribution of capitalized ranches rather than conventional considerations of reducing transport costs or access to consumer markets.

FARM PRODUCTIVITY

While the new system of cattle raising uses such technical innovations as planted pasture, pasture divisions with rotation of use, purchased animal feed, improved breeds, and the greater use of vaccines, which, together with the use of wage labor, satisfy the most demanding definitions of capitalized agriculture, the productivity per hectare **[end p. 42]**

Table 3. Annual Operating Costs and Profits Per Hectare for Agreste Farm Activities, 1977 (in US\$)

Crop	Cost Per Hectare*			Net Profit per Hectare**		
	Small Farm	Medium Farm	Large Farm	Small Farm	Medium Farm	Large Farm
STAPLE CROPS						
Beans-maize-cotton	16	106	197	175	85	-6
Manioc	0	160	321	238	78	-83
Rice	3	115	227	64	-48	-160
Sweet Potatoes	0	94	189	187	93	-2
CASH CROPS						
Cashews-black pepper	0	115	230	512	397	282
Oranges	0	60	119	349	289	230
Pineapples	512	579	628	1584	1525	1467
Sugarcane-spirits	-	-	535	-	-	2721
Yams	105	265	425	384	224	64
CATTLE RAISING						
Beef	8	14	21	21	92	86
Dairy	8	16	27	80	72	61

Source: Field research.

* Cash operating costs only. Substantial use of purchased inputs, such as fertilizers and pesticides are used regularly only on yams, on pineapples and in cattle raising, so that the use of more or less waged labor is the most important monetary cost incurred for most crops. Work of a farmer supervising laborers or his and his family's work is not counted as a cash cost.

** Production per hectare multiplied by price received less cost of production.

has not increased significantly. Mere pseudo-modernization has occurred. The ranches have all the trappings of being highly productive but the pastures only have one or two steers per hectare. If available fodder or irrigated pasture were used the productivity could be two to three times as high but that would involve much higher labor input which ranchers want to avoid. In fact, the present system is not even much of an improvement on the mixed farming system where one steer needed one to two hectares of fallow land with native pasture.

This occurs because owners are more interested in giving their properties the appearance of being fully utilized than in actually undertaking the effort and expense needed to do so. In fact, they can make more money by diverting subsidized credit for the purchase of cattle to other more lucrative investments like urban and rural land speculation. Bank inspectors are forever on their guard to prevent this, but they are not very successful. Ranchers use a number of tricks to fool inspectors. For example, they can borrow cattle from neighbors or they can bring in their own cattle from another ranch on inspection day. And, there is nothing better than a couple shots of scotch beforehand to put the inspector in a cooperative mood and to blur his memory of the cattle seen on previous visits.

As a result, the production of food in the Agreste has suffered both because of the shift to cattle raising and because of the low productivity of the ranches. On the farms sampled for this study, staple cropping which was found to be far more productive than ranching, yields from 806,820 to 4,640,000 calories per hectare depending on the crop, and from 18,000 to 77,000 proteins per hectare. Beef cattle raising only yields 139,000 calories and 15,000 proteins per hectare and dairy farming 195,000 calories and 11,000 proteins per [end p. 43] hectare. This might seem to be a foregone conclusion for a biologist but it must be remembered that labor-intensive staple cropping with little or no modern biochemical input is being compared to capitalized ranching.

UNEMPLOYMENT AND RURAL POLARIZATION

The expansion of capitalized cattle raising has weighed heavily on both land-poor and landed peasants. Land-poor peasants have lost their livelihood and the same fate awaits landed peasants. Middle-scale farmers, therefore, have been divided into two increasingly polarized groups: landowners with medium-sized holdings, who now run their farms as large property owners do, and small farmers, who are being pushed into the rural poor group.

Due to their precarious financial situation within the new agrarian context, minifundia owners and small farmers come under great pressure to sell their land. They have been unable to switch to capitalized stock-raising because of the land extensive nature of the activity. They have lost access to rental lands, and those crops which are land intensive are either no longer very profitable, due to years of poor prices, or demand high initial investment and operating costs. This group of farmers rarely obtains the bank loans necessary to plant more lucrative cash crops except when they are located in the specialized enclaves and even then regional poverty limits the size of consumer markets for these crops. Elsewhere in the Agreste, credit goes to ranching and hence to larger landowners. In the study area, for example, 91 percent of the large ranchers interviewed receive government bank loans every year while 79 percent of small farmers rarely or never receive loans.

Small landowners are also caught in the trap of decreasing farm size. Due to laws of equal land inheritance, in the space of two generations a medium-sized farm is splintered into a number of minifundia holdings, and farther along in the process the descendants become landless peasants or emigrate elsewhere. Mini fundia farms have increased in number from 75 percent of all northern Agreste farms in 1950 to 84 percent in 1980, at the expense of small and medium-sized farms which fell from 19 to 11 percent of all farms during the same period (Fundação IBGE 1955b; 1983b).

Large farms too are subject to the same inheritance laws, but as their owners are members of the upper class their children move into urban professions more easily. It is common for only one or two upper class heirs to remain in farming and they often buy out the other heirs to the large parental farm. This of course does not happen all the time, so that a number of large farms are in fact subdivided. But this trend is counterbalanced by urban investors purchasing numerous farms and consolidating them into large ranches. Little change has thus occurred in the very unequal distribution of land. In 1980, 5 percent of the farmers owned 62 percent of the land which is about the same situation as in 1950.

The children of internal and external peasants no longer find rental land to till because it is being rapidly turned into pasture. In the Agreste of Pernambuco and Paraíba states, the most densely populated of the zone, rental land decreased from 9 percent of the total farm area in 1960 to 4 percent in 1980 (Fundação IBGE 1966b; 1983b). This reduction of about 110,000 hectares of rental land in these two states means that 22,000 minifundia holders are no longer able to rent the vital extra five hectares that are crucial for farming enough land to support a family. Alternatively, over 36,000 small tenant farmers cannot find the land necessary to remain in agriculture.

As a consequence, many internal peasants have been forced out of farming. Between 1960 and 1977, the number of small tenant farmers decreased by 48 percent and resident part-time crop workers by 66 percent on the sample of farms in the study area. In the northern Agreste as a whole, the number of part-time crop workers fell by 58 percent and their proportion of the total work force decreased from 24 to 13 percent between 1960 and 1980. One might expect that the number of permanent wage laborers, which includes cowhands and farm managers, would have increased during this period but, in fact, the number of these workers also fell by 16 percent. The type of pasture used requires few cowhands, and managers are not needed to supervise one or two cowhands. As a result, the entire rural work force fell by nearly 22 percent. These trends are the opposite of those for the 1950/60 period, i.e. before the advent of capitalized ranching, when all types of farm workers increased in number and the rural work force grew by 62 percent (Fundação IBGE 1955b; 1966b; 1983b).

The sudden outflow of people leaving the countryside has had an adverse effect on the local economy. Some expansion occurred in other sectors, but the economy as a whole has proven incapable of absorbing the mass of workers pushed out of farming. As a result, the number of underemployed and unemployed workers increased by 189 percent from 1960 to 1980, and their proportion of the total work force rose from 12 to 26 percent. This differs sharply from the 1950/60 period when the number of underemployed and [end p. 44] unemployed workers actually decreased by 13 percent (Fundação IBGE 1955a; 1966a; 1983a).

The expansion of ranching in the Agreste has thus caused rural exodus, large-scale unemployment, increased emigration to other regions of the country, and greater class division. Former internal peasants now live in the growing shanty towns which ring Agreste cities, while ranch owners live in the larger cities of the Northeast and have the lifestyle of the upper classes there. At the same time, the poor who are better off, are able to pay the bus ticket to emigrate from the Agreste. Of the minifundia and small farm owners interviewed, 43 percent of their adult children now live in southeast Brazil while 81 percent of the children of present and former internal peasants remain in the Agreste. The emigration of members of the middle rural stratas thus worsens social polarization to the point that a bi-modal class structure has emerged.

Infant mortality and diet best exemplify the class polarization that has taken place. On average, in Guarabira and in Cajá, for those peasants who have experienced expropriation, five to six children in ten die before one year of age as compared to one rancher's child in ten. A poor family of eight must try to survive on a diet of beans and manioc meal with only one kilogram of meat or dried fish per week while rancher families have a varied diet including fruit, vegetables and from 10 to 22 kilograms of meat a week.

STATE DEVELOPMENT POLICY AND CLASS INTEREST

The spread of capitalized ranching can be interpreted as having been largely an attempt by landowners of medium and large holdings in the Agreste to avoid facing up to the grievances of the rural lower classes as expressed in the peasant movements of the early 1960s. These grievances still remain and, in fact, have been sharpened by the actions of the owners. However, regional and federal development policy also had much to do with what has taken place.

As Janvry (1981) shows to be the case for much of Latin America, Brazil pursues "cheap food" policies. Economic ministries consider staple prices to be a question of "national security", i.e. food prices must be kept low in order to contain urban discontent and to protect the export competitiveness of industry. Since the early 1960s when agricultural prices seemed to be turning the terms of trade against industry, staple prices have been rigorously controlled at the consumer end and periodic importations are undertaken to cover shortfalls in production or to force down prices. Nearly all subsidized credit goes to export cropping by large farmers of the south and southeast and rarely to small staple farmers of peripheral regions like the Northeast, so that these farmers are doubly penalized (Goodman and Redclift 1981; Graziano da Silva 1981; Homen de Melo 1983; Sorj 1986).

In addition to the depressive effect of these national farm policies for staple cropping, regional development policy, has specifically encouraged ranching in the Agreste. In the 1960s a long-term shortfall in the supply of beef and milk for the growing urban market of the coastal cities was anticipated (Banco do Nordeste 1971) and, as a result, ranching was given priority even though within the regional context the Agreste is best suited for food cropping and the Sertão for stock-raising. This policy is particularly questionable given the fact that beef and milk are consumed mainly by the urban upper classes while beans, maize, and manioc are consumed by all classes throughout the Northeast.

With the Zona da Mata specialized in monocultures of sugarcane and export crops and the Agreste in stock-raising, it fell to the Sertão and to the frontier to produce staples for the Northeast. Given the problems associated with underdevelopment and recurrent drought in the Sertão and with distance and poor transport facilities on the frontier, such a scheme of regionalization of rural activities was bound to cause severe shortfalls in food production. And, it did fail dismally. Nearly continuous drought struck from 1975 to 1983 in the Sertão, and after 1970 speculative cattle ranching expanded on the frontier. By 1980, output of most staples had fallen by 15 to 29 percent from their 1960 levels (Table 4) while population had increased by 58 percent from 1960 to 1980.

The shortfalls had to be covered with imports from other parts of the country and from abroad which made a mockery of the 1960s and 1970s debate over the significance of the 1945-1970 expansion in northeastern staple production (cf. Goodman 1981; Patrick 1972). Prices only remained at "satisfactory" levels (i.e. from the urban viewpoint) because they simply were not permitted to rise. But this is hardly a planning victory because the short-sighted preoccupation with a more limited problem, i.e. the supply of milk and beef produce for the urban upper classes, caused the failure of two long-term goals in northeastern planning: increasing overall regional food production and reducing center-periphery dependency.

The consequences of this modern-day stock-raising "enclosure" in the Agreste have been so startling that the regional development agencies, and even the federal government, have become alarmed. To control the situation, past governments repressed workers' movements and simply [end p. 45] disappropriated a few large farms where violence erupted. One such farm in the study area was Fazenda Alagamar where in 1978 and 1979 new city owners tried to remove the internal peasants present on the farm. Violence erupted, the Church and urban allies came to the aid of the peasants, creating a situation very similar to the famous Galileia case which gave rise to the peasant movements of the early 1960s. Indicative of the gravity of the situation is the fact that two previous military presidents and a former head of national security visited the trouble spot. The farm was finally expropriated and Brazil's president was present at the ceremony turning the land over to the peasants.

Table 4. Change in Output of Food Products of the Northeast

Product	1950 (m. tons)	1960 (m. tons)	1970 (m. tons)	1980 (m. tons)	Change 1960/1980
BASIC STAPLES					
Beans	422,770	534,250	460,549	454,731	-15.0%
Maize	893,341	1,107,329	824,492	849,914	-23.2%
Manioc	4,613,267	5,477,277	5,150,444	4,257,263	-22.3%
Rice	371,040	715,115	798,826	1,267,955	77.3%
Sweet Potatoes	103,245	n.a.	121,937	73,063	-29.2%*
NON-BASIC FOOD CROPS					
Cashews	16,403	40,772	75,978	44,123	8.2%
Oranges	145,068	160,676	298,790	527,745	228.5%
Pineapples	45,968	62,078	155,741	184,515	197.2%
Sugarcane	10,703,214	17,963,960	23,455,219	44,336,921	146.8%
Tomatoes	34,690	37,288	89,092	179,694	381.9%
Yams	10,297	28,364	32,206	64,716	128.2%
LIVESTOCK					
Cattle (steers)	7,752,638	11,555,757	13,805,621	21,505,844	86.1%
Milk (1000 l)	381,196	466,455	819,289	1,583,666	239.5%

Source: Fundação IBGE (1955b; 1966b; 1983b).

*Change for 1950/1980

However, other than this, little has been done to change the course of events, perhaps because the landowners involved are extremely important businessmen and politicians. The northern Agreste is a priority area for the government's agrarian reform program. As occurred elsewhere in Brazil, this program has proven to be disappointingly short on results. In fact, it is hard to imagine a government controlled by urban-industrial interests --who also dabble in rural investment speculation and leisure activities--promoting agrarian reform in a rural hinterland area like the Agreste. This lack of interest in promoting agrarian reform is evident in the new federal constitution. The empty pastures of the Agreste are treated as "productive land" and so cannot be disappropriated. If agrarian reform is to be undertaken at all, it will have to be in distant places with relatively poor lands like the Sertão or the Amazon.

Meanwhile the Agreste simmers and if you ask any poor farmer about the pastures, he starts to talk about the Peasants Leagues. But without an agrarian reform achieved through legal channels, the only alternative left open is land invasion and violent confrontation with the military police like that occurring presently in southern Brazil. As Mendras (1976) shows, to raise peasants' hopes about agrarian reform, as the government did in the mid-1980s, and then to dash these hopes creates a potentially explosive situation. If land invasion in the Northeast increases in scale, the situation [end p. 46] could become very similar to that of the early 1960s. This in turn could usher in a return to political instability, violent repression of

worker and peasant movements, and more conservative modernization which would complete the process of peasant expropriation.

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NOTE

1. In this paper the concept of the "expropriation of the peasantry" describes a process whereby peasant farmers, working as either sharecroppers, tenants, renters, or employees with rights to a subsistence plot, lose access to the land as it is converted to pasture for cattle raising.

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SUMARIO

A penetração de capital urbano na agricultura é tratada numa "hinterlândia" rural de grandes centros urbanos na Região Nordeste do Brasil, onde vem ocorrendo uma expansão da pecuária bovina. O desenvolvimento polarizado, a acumulação urbano-industrial do país têm gerado forte especulação de terras nas áreas rurais próximas as grandes cidades, especulação esta que se associa a atividade pecuarista. A pecuária e a atividade rural que mais se adapta aos interesses de investimento e modo de vida do proprietário urbano. O impacto dessa tendência é particularmente negativo na Zona Agrestina da Região Nordeste, com o uso ineficiente dos recursos produtivos, expropriação do campesinato, altos níveis de desemprego e aguda polarização social.

RESUMEN

La penetración del capital especulativo de origen urbano en la agricultura de la zona tributaria de los grandes centros urbanos del Nordeste de Brazil, ha ocasionado la expansión de la ganadería. El desarrollo polarizado y la acumulación de capital urbano-industrial han generado especulación en los terrenos rurales accesibles a las zonas urbanas lo cual toma la forma de ganadería y conforma a los intereses financieros y sociales de los propietarios urbanos. El impacto de esta tendencia ha sido especialmente negativa en una zona pobre y densamente poblada como la Agreste del Nordeste. En una zona así, la ganadería es un uso ineficiente de la tierra, crea la expropiación del campesinado, altos niveles de desempleo, y

polarización social extrema. **[end p. 48]**

Urban Capital and Pseudo-modernization of Agriculture in the Rural Hinterland of Northeast Brazil

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ABSTRACT

The expansion of capitalized cattle ranching in the Agreste of Northeast Brazil is an example of the penetration of urban speculative capital in the rural hinterland of the large urban centers of Brazil. Polarized development and urban-industrial accumulation have generated intense rural land speculation which takes the form of cattle ranching because this is the farm activity which best fits the investment interests and lifestyle of urban-based, absentee landowners. The impact of this trend has been particularly negative in a poor, densely populated zone like the Agreste. In such a zone, ranching is an inefficient land use system which causes the expropriation of the peasantry, large-scale unemployment, and extreme social polarization.

THE SPECULATIVE NATURE OF THE MERCHANT ROAD TO CAPITALISM

We wish to question a common assumption held by Brazilian planners, development technocrats, and social scientists that large landowners, and urban-based entrepreneurs in particular, make exemplary capitalist farmers. These *empresarios* are supposed to apply their administrative know-how in the countryside, to better allocate modern productive inputs, to attain economies of scale and so operate highly efficient model farms (Brum 1988; CODEVASF 1979; Galvao 1986; Sorj 1986; Souza 1979). One can, in fact, encounter actual cases where urban-based landowners are innovative entrepreneurs, as historically in the rise of capitalized rice and wheat farming in the South (Brum 1988) and in private-sector capitalized irrigation of the Northeast (Bicalho 1985). However, these areas are located in the interior, far from the large consumer markets they serve and the entrepreneurs involved are small-town people who have ties to agriculture. They are not agents of urban capital in the economic and sociological sense of the term.

It is far more common in Brazil for entrepreneurs of the large urban centers to engage in land speculation or in pseudo-modernized cattle ranching as a disguised form of land speculation rather than in more productive land use systems. This occurs on a large scale on the Amazonian frontier, in depressed peripheral regions like the Northeast, and even in the more developed southeast. In fact, ranching as a means to lay claim to land is as old as the latifundium in Brazil. The difference today is that ranches are given a modernized appearance so as to increase their value through cosmetic improvement as well as to expel troublesome resident peasants and so avoid disappropriation for agrarian reform (Frank 1967; Goodman and Redclift 1981; Graziano da Silva 1981; Ianni 1979; Martínez-Alier 1974).

We will also question an interesting, but perhaps outdated, distinction made by Janvry between the *junker* road and the merchant road to capitalist agriculture (Janvry 1981 111-113, 169-171). This distinction is based on the assumption that the merchant road is productive and efficient while the junker road is not. Janvry derives his model of the junker road from Lenin's classic models of [end p. 35] Prussian junkers and U.S. farmers. The junker road is the transformation of pre-capitalist latifundia into large-scale capitalist estates. This productive unit predominates in countries where the junker landed elite retain control over the State and agricultural technological innovation is biased toward mechanization rather than biochemical technologies. Mechanization generally does not increase land yields but it does reduce labor and management needs. This, in turn, reduces labor costs on the farm and throughout the economy as a whole because a huge contingent of landless and proletarianized peasants arises and depresses wage levels in the city and in the countryside. Biochemical technologies, on the other hand, increase yields but they increase labor and management needs. Intensifying production per area also threatens the junker elite's monopoly over land and ultimately over labor power. These technologies are thus adopted only in countries where the bourgeoisie as a whole dominates the State and where the farmer road is taken, i.e. where commercial and family farms predominate. In his model of the merchant road to capitalism, Janvry correctly identifies the growing importance of merchants and the new bourgeoisie of professionals, military, and technocrats as rural landowners in Latin America. He even considers this group to be more important for the rise of commercial farms than the upper and middle class rural bourgeoisie which emerges from the farmer road. Land-saving green revolution methods and infrastructure are utilized on medium-sized farms, with absentee management and a proletarianized work force (Janvry 1981, 109, 112).

Our basic point of disagreement with Janvry's otherwise brilliant analysis of Latin American agriculture concerns the type of "modernization" that takes place on urban-owner farms in Brazil. We will demonstrate that merchant road landowners, in fact, have more in common with junkers than with other commercial farmers. Like junkers, urban-based owners also adopt extensive cattle-raising and labor-saving technology in order to reduce labor and management needs. Many small and medium sized commercial farms in south and southeast Brazil, on the other hand, use these inputs to "magnify" family labor and increase the amount of land which can be tilled much in the same way that U.S. farmers do (Bicalho 1989; Brum 1988; Goodman and Redclift 1981; Loureiro 1987; MacLennan and Walker 1980). Furthermore, the industrialization of Brazil has proceeded to such a point that junkers, the upper and even some of the middle class rural bourgeoisie, have been merged into the urban-industrial class structure and the bourgeoisie at large is firmly in control of the economy so that it is no longer valid to distinguish junker and merchant road landowners.

Adapting a concept from Harvey (1985), we call this growing importance of urban-based farm ownership the urbanization of capital in agriculture. This process is particularly strong in the rural hinterland of the large Brazilian cities where many large and medium farms are owned for portfolio diversification, social status, and for weekend leisure. Farming is often merely a secondary activity and even when it is still the principal source of income it must be adapted to the urban lifestyle of the owner, rather than the owner's lifestyle being adapted to the needs of farming. We will demonstrate how ranching is eminently adapted to the needs of this type of landowner.

The urbanization of capital in Brazilian agriculture has gained momentum in recent decades because of the fundamental shift in the economy to export-led diversification of industrialization. Within this development model, the State has promoted the integration of agriculture with industry. Agriculture has become a major consumer of manufactured labor-saving productive inputs, and farm produce increasingly is industrially processed for export (Baer 1985; Brum 1988; Graziano da Silva 1981; SOJ 1986). All branches of industry have expanded rapidly and the large cities of Brazil have become what Armstrong and McGee (1985) call urban theaters of accumulation upon which capital of national and international origin converges, and where wealth and income are highly concentrated among the upper classes.

In a context of high rates of inflation, capital of urban origin is invested in relatively cheap rural land, especially land located in the rural hinterland of the large cities, i.e. within 150 kilometers. This kind of investment is usually made individually by liberal professionals, merchants, and civil servants rather than by financial institutions or agribusinesses. Great social disparity has arisen between vacationing members of the upper classes and their farm hands and caretakers who earn the minimum wage.

Whether this is the predominant trend in any given rural hinterland depends on the existence of a large metropolitan produce market. The close proximity to a large consumer market in the industrialized southeast of Brazil permits intensive cropping of vegetables and fruit, which is a classic way for small-scale farming to resist expropriation in less-developed and developed countries alike (Janvry 1981; Lawrence 1988; Pyle 1986; Wolf 1966). In Brazil these crops are of secondary importance to the basic diet and less subject to urban-industrial biased price controls. Thus, a number of farmers with small- and medium-sized [end p. 36] holdings can make the transition to capitalized agriculture. The presence of these farmers counter balances the encroachment of urban investors, preventing outright social polarization from arising (Bicalho 1989; Hoefle 1989; Loureiro 1987).

In depressed peripheral regions, like northeast Brazil, where the market for vegetables and fruits is restricted, fewer medium-scale farmers survive in the rural hinterland of the large cities and urban-based owners predominate. Peasants are still numerous in these regions, and, when they do not fit into city oriented investment schemes, they are expropriated, causing extreme social polarization to arise.¹ The case of capitalized cattle raising in the Agreste zone of the Northeast will serve as an example of this process.

THE STUDY AREA AND RESEARCH METHODOLOGY

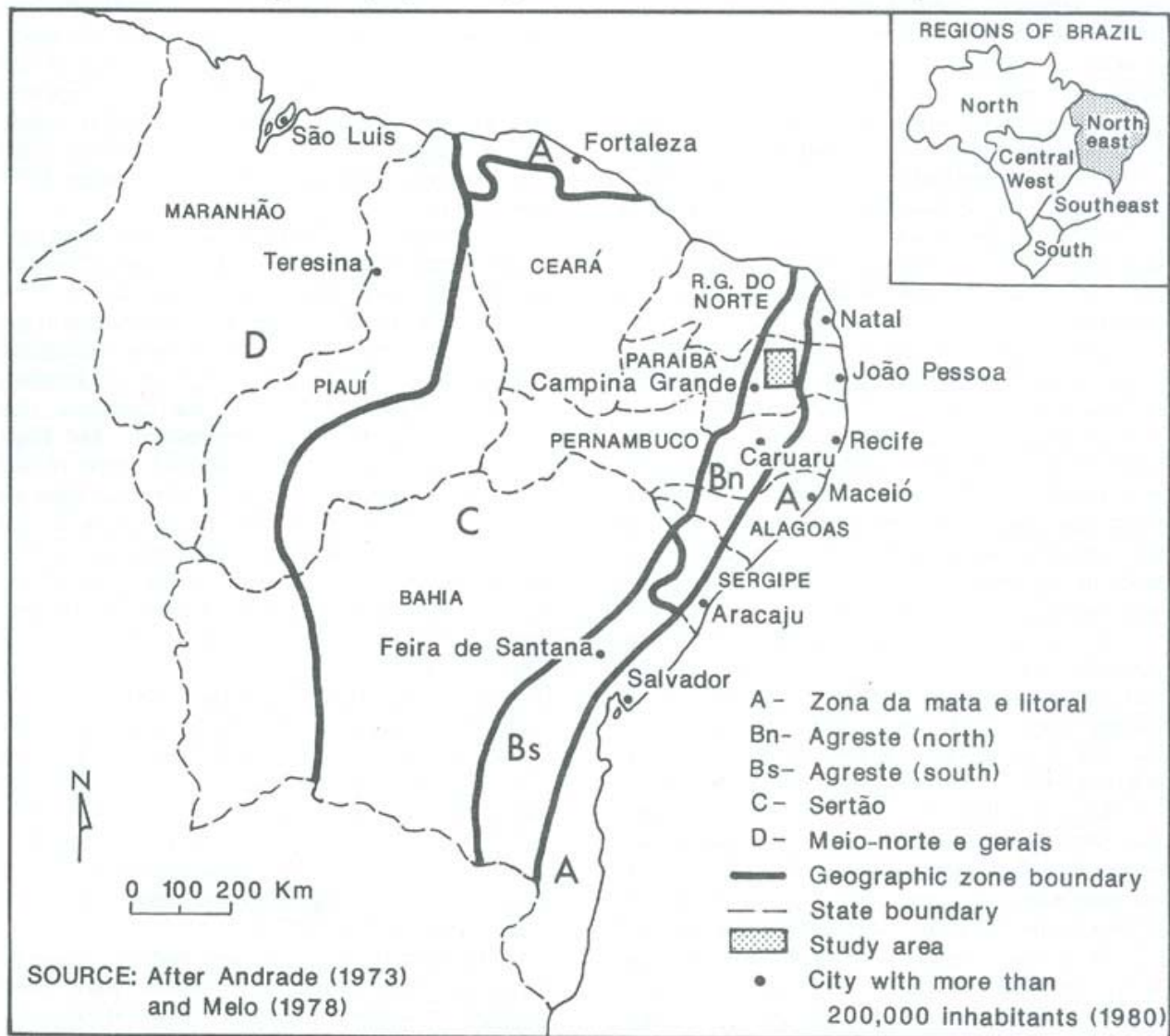


Fig. 1. Location of the study area and geographic regions of Northeast Brazil.

Northeast Brazil is a depressed peripheral region with acute problems of land concentration and fragmentation, unemployment, rural exodus, and poverty. Great ecological, economic, and social diversity exist in the region ranging from the populous cities and settled countryside of the humid Zona da Mata and semi-humid Agreste zones of the eastern seaboard, to the open spaces of the semi-arid Sertão, and, finally, to the frontier areas of the semi-humid and humid Meio-Norte and Gerais located in the western part of the region (Figure 1). Change in agrarian structure varies from the classic agribusiness export cropping in the Zona da Mata, to peasant expropriation due to urban encroachment in the Agreste, to a slow farmer road transition in the Sertão and, finally, to violent conflict between peasant free-holders and encroaching large ranchers in the Meio-Norte and Gerais (Andrade 1973; Diniz 1982; Bicalho and Hoefle 1984; Melo 1980, 1983).

Extensive cattle raising was the first land use [end p. 37] system of the Agreste during the colonial period but from 1800 onward rural activities shifted to mixed farming. The Agreste became the bread basket of the Northeast, supplying a variety of staples to the sugarcane plantations and cities of the coast as well as to the pastoral Sertão. In the northern part of the Agreste, i.e. the part from the state of Sergipe to the state of Rio Grande do Norte, cropping became especially important and population grew rapidly. By 1960, the population density reached 56 inhabitants per km² (Andrade 1973; Melo 1980).

At that time various types of farms existed side-by-side. Large farms and latifundia with from 75 to up to 30,000 hectares utilized the labor of "internal" peasants: *moradores*, resident part-time crop workers who also had access to a subsistence plot of half a hectare, and *rendeiros*, small tenant farmers who rented 2 to 3 hectares of land, which during the dry season

and when finally fallowed, yielded native pasture for the landowner's livestock. Some moradores were also present on medium sized farms with 30 to 74 hectares of land but the family labor force was also important. Family workers were the predominant form of labor employed on small farms with 8 to 29 hectares. Minifundia holdings with less than 8 hectares were of insufficient size for a family's livelihood and their owners were "external" peasants who rented additional land on large farms and worked as dayworkers at seasonal peaks of demand.

Even before the rise of capitalized ranching in the Agreste, small land-owners faced difficulties with declining farm size. As holdings were partitioned through time, a growing number of farmers were pushed into an external and finally to an impoverished internal peasant status. To avoid this, many emigrated to the Amazonian frontier where they could be independent farmers or they went to work in capitalized agriculture and industry in the southeast and south of Brazil.

Within this context, the increasing concentration of capital in the urban centers of the Northeast and the owner-worker conflicts in the early 1960s caused a wholesale break with what Sá (1975) calls the "pre-capitalist latifundium/tenant farmer-minifundium" agrarian structure and put an end to the "functional dualism" which existed between the subsistence peasant sector and the capitalist sector of the Brazilian economy. The Zona da Mata is the zone which is located closest to the large urban centers of the Northeast but urban speculators have only been able to operate on the urban fringe and on the seashore. Sugarcane plantations have dominated the Zona da Mata since colonial times and they are still highly profitable enterprises. Instead of losing ground, these agribusinesses have actually expanded the area they occupy. In response to favorable prices and to the owner-worker conflicts, productive processes became capital intensive and the work force fully proletarianized (Andrade 1988; Melo 1975).

The Agreste is the next closest zone to the urban centers. As the two main cash crops of the zone, cotton and sisal, have been depressed for decades, it became the focus for the activities of speculative urban capital. Due to the owner-worker conflicts, speculation took the form of the expansion of capitalized cattle ranching. This development exacerbated old problems and provoked a crisis in food production and employment opportunity, and led to large-scale expropriation of the peasantry. Increased emigration resulted and population grew at a scant rate of 1.2 percent annually between 1960 and 1980, well below the national rate of 2.7 percent.

To exemplify this modern-day "enclosure," we present research findings from an area of advanced penetration of capitalized cattle ranching in the Agreste of Paraíba state. Research in this area was undertaken as part of a long-term research project in the Agreste and Sertão, which involved more than two years of resident fieldwork between 1977 and 1981.

The Agreste of Paraíba state is quite representative of the Agreste, encompassing the differences in altitude, soils types, climatic conditions, land use systems, and demographic trends present in the zone as a whole. There are four basic ecological and agrarian zones of the Agreste of Paraíba: the High Agreste, the Brejo, the Piedmont, and the Lower Paraíba River Depression. The High Agreste is located on the leeward slope of the Borborema Plateau which gradually falls from an altitude of 500 meters to 200 meters as one moves westward toward the Sertão. Soils become poorer, climatic conditions drier and annual rainfall decreases from 800 to less than 400 mm. The Brejo is located on the fertile windward escarpment, of the Borborema. It has a humid climate with annual rainfall varying from 1,000 to 1,400 mm. The Piedmont is a transitional area between the humid Brejo and drier areas located further away from the escarpment. As one moves eastward from the escarpment rainfall drops from 1,200 to 800 mm. The Lower Paraíba Depression is a low-lying drier area which is largely bypassed by the moisture-laden clouds arriving from the coast. Rainfall ranges from 600 to 800 mm.

Historically, the land use systems, agrarian structure, and demographic trends have been strongly influenced by this environmental variation. Sugarcane, fruit, and staples have long [end p. 38] predominated in the Brejo. In the past mixed farming with a cropping emphasis prevailed in the Piedmont while mixed farming with a stock-raising emphasis prevailed in the drier areas. From the 1960s onward, though, state development incentives and labor legislation have brought economic and social considerations to the fore. Consequently, sugarcane has advanced against staples in the Brejo and in the eastern part of the Lower Paraíba Depression, while capitalized ranching has advanced against cotton, sisal, and staples in the High Agreste in the Piedmont and in the rest of the Lower Paraíba Depression. Besides these major trends, small enclaves specializing in the cultivation of black pepper, cashews, potatoes, tomatoes, and yams have arisen in some places and a major area of pineapple farming has arisen near Sape.

Field research focused on the county of Guarabira and surrounding counties encompassing the Brejo and Piedmont areas. In 1980 Guarabira had an urban population of 31,544 and can be considered a small-medium city by regional standards. The city is an important center of commerce and services for the northern part of the Agreste in Paraíba. Detailed questionnaires were applied to 67 landowners and 30 workers and small tenant farmers. In addition, a local census taker was contracted to apply urban questionnaires to 192 families in the shanty towns of Guarabira where expropriated peasants live.

A second phase of the field research was undertaken in the counties surrounding the town of Cajá-Cuba (pop. approx. 800).

The town is located in the Lower Paraíba Depression along the main highway into the interior, mid-way between João Pessoa (pop. 525,582), the state capital, and Campina Grande (pop. 228,303), the second largest city and a center of light manufacturing. Cajá-Cuba is also located near the junctions of the three major asphalt roads which serve the Agreste of Paraíba. The town itself reflects its location. It is a growing shanty town of expropriated peasants who left the capitalized ranches served by these highways. Fifty expropriated peasant families living in town were interviewed. In the rural hinterland, 32 farm owners and 20 workers were interviewed. Interviews in the rural zone of the Cajá area were undertaken in the form of a loose survey in order to identify similar trends to those which had been identified in Guarabira. Therefore, most of the rural quantitative data presented here will refer to Guarabira where sampling was undertaken in a formal manner.

In addition to questionnaires, interviews of rural extension agents were conducted in the counties studied and in other counties in the Agreste of Paraíba. Reconnaissance trips were also made throughout the Agreste of other states. Census data is used to formally generalize trends for the Agreste as a whole. Unfortunately, data are only available up to 1980, the date of the last census. This notwithstanding, contact was maintained with informants and professional colleagues in the Northeast who affirm that the situation in the Agreste today is much the same as that observed by the researchers during the period of field study.

RURAL ACTIVITY SPECIALIZATION

Before the rise of capitalized stock-raising, farmers of the Agreste planted a large number of products for self-provision as well as for the regional market. Cotton, sisal, sugarcane, and tobacco were planted on a cash crop basis together with staples such as beans, fruit, maize, manioc, and sweet potatoes on a semi-subsistence or even semi-commercial scale. In this system of shifting agriculture, cattle were raised in fallow areas, and during the dry season grazed on the stubble of cotton, beans, and maize. Only modest areas of planted pastures and fodder were set aside for supplementing pasture in the dry season. The most common types of feed were *palma forrageira* (an *Opuntia* thornless cactus), manioc root, and sisal pulp. The latter was a crop byproduct but the use of the others involved considerable labor expenditure.

During the 1960s cotton and sisal, the two most important of the older cash crops of the Agreste, entered into a long period of decline due to competition with synthetic fibers on the world market. Farmers began to plant new cash crops, such as black pepper, cashews, oranges, pineapples, potatoes, saffron, tomatoes, and yams (Table 1). Specialized farming areas of these crops arose in response to the demand of the slowly expanding urban market of the Northeast, the rich southeastern and, to a lesser extent, to export markets. However, much of this specialization involved small enclaves because by local dietary standards most of the new crops are expensive luxury items, which limits their consumption in a poor region like the Northeast. Furthermore, high transport costs and thousands of kilometers distance from the main southeastern consumer market for these products puts local farmers at a disadvantage to farmers closer to these markets. Export markets show some promise but most farmers of a peripheral region like the Northeast only have limited knowledge of the potential of these markets.

A few of the new cash crops, such as potatoes, saffron, tomatoes, and yams, can be grown by smallholders but others, such as black pepper, cashews, oranges, pineapples, sugarcane, and cattle, are more easily undertaken by medium and [end p. 39] because initial investment is high, and, depending on the activity, a farmer may have to wait from one to three years before selling the produce. This requires sizeable amounts of seed capital and savings as well as fairly large land holdings which poor farmers of the Agreste simply do not possess.

Table 1. Change in Output of Farm Products of the Northern Agreste

Products	1950 (m. tons)	1960 (m. tons)	1970 (m. tons)	1980 (m. tons)	Change 1960/1980
STAPLES					
Beans	88,146	103,759	74,586	48,073	-53.7%
Maize	148,056	189,576	102,675	47,059	-75.2%
Manioc	827,507	1,060,691	917,914	846,645	-20.2%
Sweet Potatoes	16,825	11,453	27,663	26,158	128.4%
CASH CROPS					
Cotton	48,977	64,305	36,354	39,936	-37.8%
Sisal	684,639	749,864	587,208	13,187	-98.2%
Sugarcane	453,844	851,807	2,348,428	3,446,508	304.6%
Tobacco	10,651	17,858	27,680	28,134	57.5%
NEW CASH CROPS					
Cashews	1,415	6,890	10,379	7,600	10.3%
Oranges	35,748	57,251	91,301	261,643	360.0%
Pineapples	24,969	29,960	89,850	91,020	203.8%
Tomatoes	31,975	29,371	52,447	43,447	47.9%
Yams	2,894	8,779	15,247	17,577	100.2%
LIVESTOCK					
Cattle (steers)	977,943	1,178,876	1,540,444	2,432,346	106.3%
Milk (1,000l.)	74,280	92,038	130,993	224,366	143.8%

Source: Fundação IBGE (1955b, 1966b, 1983b)

During the 1970s, capitalized cattle ranching became the predominant activity in the Agreste. It arose on what were previously large- and medium-sized cotton and sisal farms located in areas of better quality soils in typical semi-humid areas of the Agreste. During this period, sugarcane also expanded in the Agreste, but mainly in the few humid areas of the zone where climatic conditions are not favorable for cattle raising or on the eastern edge of the Agreste where new technologies have permitted the expansion of sugarcane from the Zona da Mata into what were previously marginal lands. In this latter case sugarcane competes directly with ranching. The enclaves of new cash crops are usually located in areas of arenaceous soils which are suitable for these crops but not for cotton and sisal. These areas for the most part had been relegated to small holders in the past and so today they resist the advance of capitalized ranching.

Large- and medium-sized farms of the Agreste have thus become specialized in cattle raising, and artificial pasture now covers what had been fallow crop lands in the previous shifting agricultural system. Pangola grass (*Digitaria decumbens*) is the preferred type of pasture because it requires little labor input. Cattle graze by themselves in fenced areas so that only one cowhand is needed per 50-100 hectares of pasture. More productive irrigated fodder grasses are not used because they must be cut and shredded for feed and so more labor is required. As we will see below, ranchers want to reduce labor and management needs and not increase them.

As a consequence of the expansion of pasture, cropping area has ceased to expand in most places and has been drastically reduced where capitalized ranching has advanced most. Cropping area on the farms studied in Guarabira fell by 61 percent and the proportionate share of cropland in total farm land dropped from 43 percent to 17 percent between 1960 and 1977. During the same period, pasture increased its share from 32 to 61 percent [end p. 40] of total farm land. Most of the northern Agreste is following the same trend. Over a 20 year period from 1960 to 1980 crop land increased a mere 3 percent and this figure includes the cropping enclaves. At the same time, the area in artificial pasture increased by 267 percent. The share of crop land in total farm land fell from 31 to 24 percent during this period and artificial pasture increased its share from 9 to 27 percent. Before the rise of capitalized ranching, when mixed farming still prevailed, crop land had increased historically. For example, in a ten year period from 1950 to 1960, crop land increased by 49 percent in the northern Agreste (Fundação (IGBE 1955b; 1966b; 1983b).

Where stock-raising has become the predominant activity, the staple cropping that still exists is undertaken mainly for

subsistence on small and minifundia holdings while on larger farms it is undertaken to expand pasture. In the latter case, ranchers take advantage of the growing surplus of rural workers to clear fallow and woodlands in order to plant pangola grass. In an arrangement which Graziano da Silva (1981) has called attention to elsewhere in Brazil, land-poor peasants are allowed to plant short-cycle crops for one or two years without paying rent, on the condition that the land is left completely cleared and, often, planted with pasture. They move from field to field until the farm is fully covered with pasture at which time they are dismissed. Hence, this is the reason they are called "the rich man's tractor." In this case the peasants help the rancher execute their own expropriation. Alternatively, when a rancher is in a hurry, pasture can be planted by the mass of underemployed day-workers who now live off the farm. It should be noted that once pangola grass is planted, its deep roots make it nearly impossible to remove, so that the change over to artificial pasture is a permanent one.

PROFITS, LABOR AND URBAN INVESTMENT

Ranchers usually give three main reasons why they prefer cattle-raising to cropping: 1) stock-raising is consistently more profitable than most staple cropping, 2) it resolves the "labor problem," and 3) it fits neatly into the interests of urban-orientated land-owners. In addition, ranching is subject to less market risk because operating costs are lower and seasonal price fluctuation is not as pronounced as in cropping. Environmental risk, in the form of disease and occasional drought, is also more of a problem for cropping than for ranching, but it must be remembered that we are dealing with a semi-humid zone and not a semi-arid or arid zone like the Sertão where stock-raising is the most appropriate dry farming land use. At any rate, Agreste ranchers are large property owners who could easily withstand the risk associated with cropping if it suited their purposes. Low profitability is indeed a problem for a number of crops long planted in the Agreste. After 1960 the price of cotton and staples remained relatively stagnant for nearly two decades so that by the time of the field research in the late 1970s, only small farmers who use mainly "unpaid" family labor could plant these crops (Tables 2 and 3). For example, if a large farmer, who uses exclusively hired labor, planted cotton and staples in 1977, he lost from US\$2 to US\$160 per hectare depending on the crop as compared with a profit of US\$61 to US\$79 per hectare for cattle raising. The ratio of profit to cost is quite favorable in stock-raising. Once the initial expenses of the stock-raising system have been met, usually financed by long-term subsidized bank loans, and work done at little cost by land-poor peasants, operating costs are low, for example US\$21 to US\$27 per hectare in 1977 as compared with US\$189 to US\$321 per hectare for staples and cotton.

Looking at it this way, one might conclude that stock-raising is an optimal means for large landowners to maximize income under conditions of unfavorable prices for food crops (cf. J anvry 1981, 147). However, this is true only when ranching is compared to staple cropping. A number of new cash crops, and even a traditional one like sugarcane, can offer a large farmer substantially higher profits per hectare than beef or dairy farming, varying from US\$230 to US\$2,721 in 1977. However, most farmers with medium and large holdings possess enough land to earn an adequate income from cattle raising or land is merely a low-risk, low-income investment for portfolio diversification as the "structuralists" correctly hold.

In fact, ranch owners are more preoccupied with labor relations and long-term political costs than with merely maximizing short-term profits. From their point of view the main problem with cropping is the high input of labor required. Cost is not the principal concern because farm wages are extremely low in the Agreste, US\$1.88 per day in 1978. Owners want to reduce the amount of labor employed, irrespective of its cost and at the same time to exploit their land directly because the Peasant League conflicts and progressive farm labor legislation of the early 1960s thoroughly alarmed them. The low labor input of capitalized ranching therefore "cures" what ranchers term the "worker headache," i.e. it allows them to expel internal peasants.

While fruit and cereals require from 55 to 153 man-days of work a year per hectare depending [end p. 41] on the crop, the stock-raising system introduced needs less than 10. On most ranches, this work can be done by one or two hired cowhands who are easier to control, and who as waged workers, do not acquire a claim to land rights over time (*usucapião*). A system of capitalized agriculture was thus adopted not to reduce labor costs nor even to earn more income but rather to remove peasants so as to avoid paying the full social cost of labor and, to a lesser extent, in reaction to a perceived threat of disappropriation for agrarian reform which existed in the 1960s and 1970s. In this case capital-intensive methods are adopted as labor-expelling devices and not as labor-saving or labor-expanding devices.

Table 2. Change in Producer Prices for Farm Products of the Agreste (1948/50=100)

Product	1959/61	1967/69	1977	1986
STAPLES				
Beans	134.8	108.1	167.6	137.4
Maize	115.1	91.3	101.1	110.1
Manioc	129.3	106.6	413.2	132.2
Rice	100.8	92.1	95.1	99.1
CASH CROPS				
Cotton	100.1	68.2	105.7	75.3
Sisal	54.4	28.2	n.a.	n.a.
Sugarcane	91.7	110.6	142.9	87.7
NEW CASH CROPS*				
Pineapples	108.4	127.6	n.a.	n.a.
Tomatoes	190.3	574.0	100.0**	92.8**
LIVESTOCK				
Beef	157.9	179.7	253.1	318.9

Source: Patrick (1972) and Fundação Getulio Vargas (1978; 1987).

Note: While this index is based on prices adjusted for inflation, we hesitate to use the term "real prices" because the post-1970 consumer price index used for adjusting prices *systematically* underestimates inflation, so that farm prices actually increased less than this table shows.

*As the new cash crops of the Agreste are not important nationally, little price information is available.

**After 1969, the base-year for tomatoes is 1977 due to the non-availability of comparative data.

Perhaps the most important stimulus to the expansion of capitalized stock-raising is the fact that it is the rural activity which best fits the way of life of urban professionals, merchants, and urban-based farmers, i.e. it is easily managed by absentee

landowners. Among the group of large landowners, 87 percent of those interviewed in Guarabira and Cajá were found to be ranchers who live in medium and large cities; of the landowners with medium-sized parcels, only 27 percent were found to live in medium and large cities. Ranching also takes up little of their time. This is important for landowners whose principal occupation is not farming, and this kind of owner makes up a considerable portion of the ranching group. Nearly two-thirds of the landowners with large parcels and a quarter of those with medium-sized holdings were found to earn more than 75 percent of their income from urban sources.

Other landowners with large and medium-sized holdings depend on farming for most of their income, but they live in the cities for social reasons---to further their children's education and to have access to cultural and leisure activities. They can be considered urban-based absentee owners. For them ranching is the activity which best reconciles their rural and urban interests. Little supervision of daily activities is necessary. The pilfering of produce is kept to a minimum, and a complex hierarchy of workers is unnecessary.

Leisure considerations are also important. When the owner is tired of the noise and tension of the city, he can spend a weekend or the summer vacation on the ranch. Parents and children bring along friends, which earns them status. From an urban perspective, ranching provides better leisure activities than cropping. Milking cows and riding horseback are far more interesting than contemplating a bean field. In fact, in this respect the Northeast is rapidly catching up with the national trend for this kind of leisure. So much so that a number of entrepreneurs make a good living renovating run-down farms, turning them into model ranches and the selling them for a handsome profit much like entrepreneurs do in the richer regions of Brazil.

Consequently, capitalized ranches of the Agreste tend to cluster around medium-sized cities of the zone and along paved highways leading to the large Northeastern cities. Such ranch locations offer easy access for urban-based owners and this explains the spatial distribution of capitalized ranches rather than conventional considerations of reducing transport costs or access to consumer markets.

FARM PRODUCTIVITY

While the new system of cattle raising uses such technical innovations as planted pasture, pasture divisions with rotation of use, purchased animal feed, improved breeds, and the greater use of vaccines, which, together with the use of wage labor, satisfy the most demanding definitions of capitalized agriculture, the productivity per hectare **[end p. 42]**

Table 3. Annual Operating Costs and Profits Per Hectare for Agreste Farm Activities, 1977 (in US\$)

Crop	Cost Per Hectare*			Net Profit per Hectare**		
	Small Farm	Medium Farm	Large Farm	Small Farm	Medium Farm	Large Farm
STAPLE CROPS						
Beans-maize-cotton	16	106	197	175	85	-6
Manioc	0	160	321	238	78	-83
Rice	3	115	227	64	-48	-160
Sweet Potatoes	0	94	189	187	93	-2
CASH CROPS						
Cashews-black pepper	0	115	230	512	397	282
Oranges	0	60	119	349	289	230
Pineapples	512	579	628	1584	1525	1467
Sugarcane-spirits	-	-	535	-	-	2721
Yams	105	265	425	384	224	64
CATTLE RAISING						
Beef	8	14	21	21	92	86
Dairy	8	16	27	80	72	61

Source: Field research.

* Cash operating costs only. Substantial use of purchased inputs, such as fertilizers and pesticides are used regularly only on yams, on pineapples and in cattle raising, so that the use of more or less waged labor is the most important monetary cost incurred for most crops. Work of a farmer supervising laborers or his and his family's work is not counted as a cash cost.

** Production per hectare multiplied by price received less cost of production.

has not increased significantly. Mere pseudo-modernization has occurred. The ranches have all the trappings of being highly productive but the pastures only have one or two steers per hectare. If available fodder or irrigated pasture were used the productivity could be two to three times as high but that would involve much higher labor input which ranchers want to avoid. In fact, the present system is not even much of an improvement on the mixed farming system where one steer needed one to two hectares of fallow land with native pasture.

This occurs because owners are more interested in giving their properties the appearance of being fully utilized than in actually undertaking the effort and expense needed to do so. In fact, they can make more money by diverting subsidized credit for the purchase of cattle to other more lucrative investments like urban and rural land speculation. Bank inspectors are forever on their guard to prevent this, but they are not very successful. Ranchers use a number of tricks to fool inspectors. For example, they can borrow cattle from neighbors or they can bring in their own cattle from another ranch on inspection day. And, there is nothing better than a couple shots of scotch beforehand to put the inspector in a cooperative mood and to blur his memory of the cattle seen on previous visits.

As a result, the production of food in the Agreste has suffered both because of the shift to cattle raising and because of the low productivity of the ranches. On the farms sampled for this study, staple cropping which was found to be far more productive than ranching, yields from 806,820 to 4,640,000 calories per hectare depending on the crop, and from 18,000 to 77,000 proteins per hectare. Beef cattle raising only yields 139,000 calories and 15,000 proteins per hectare and dairy farming 195,000 calories and 11,000 proteins per [end p. 43] hectare. This might seem to be a foregone conclusion for a biologist but it must be remembered that labor-intensive staple cropping with little or no modern biochemical input is being compared to capitalized ranching.

UNEMPLOYMENT AND RURAL POLARIZATION

The expansion of capitalized cattle raising has weighed heavily on both land-poor and landed peasants. Land-poor peasants have lost their livelihood and the same fate awaits landed peasants. Middle-scale farmers, therefore, have been divided into two increasingly polarized groups: landowners with medium-sized holdings, who now run their farms as large property owners do, and small farmers, who are being pushed into the rural poor group.

Due to their precarious financial situation within the new agrarian context, minifundia owners and small farmers come under great pressure to sell their land. They have been unable to switch to capitalized stock-raising because of the land extensive nature of the activity. They have lost access to rental lands, and those crops which are land intensive are either no longer very profitable, due to years of poor prices, or demand high initial investment and operating costs. This group of farmers rarely obtains the bank loans necessary to plant more lucrative cash crops except when they are located in the specialized enclaves and even then regional poverty limits the size of consumer markets for these crops. Elsewhere in the Agreste, credit goes to ranching and hence to larger landowners. In the study area, for example, 91 percent of the large ranchers interviewed receive government bank loans every year while 79 percent of small farmers rarely or never receive loans.

Small landowners are also caught in the trap of decreasing farm size. Due to laws of equal land inheritance, in the space of two generations a medium-sized farm is splintered into a number of minifundia holdings, and farther along in the process the descendants become landless peasants or emigrate elsewhere. Mini fundi a farms have increased in number from 75 percent of all northern Agreste farms in 1950 to 84 percent in 1980, at the expense of small and medium-sized farms which fell from 19 to 11 percent of all farms during the same period (Fundação IBGE 1955b; 1983b).

Large farms too are subject to the same inheritance laws, but as their owners are members of the upper class their children move into urban professions more easily. It is common for only one or two upper class heirs to remain in farming and they often buy out the other heirs to the large parental farm. This of course does not happen all the time, so that a number of large farms are in fact subdivided. But this trend is counterbalanced by urban investors purchasing numerous farms and consolidating them into large ranches. Little change has thus occurred in the very unequal distribution of land. In 1980, 5 percent of the farmers owned 62 percent of the land which is about the same situation as in 1950.

The children of internal and external peasants no longer find rental land to till because it is being rapidly turned into pasture. In the Agreste of Pernambuco and Paraíba states, the most densely populated of the zone, rental land decreased from 9 percent of the total farm area in 1960 to 4 percent in 1980 (Fundação IBGE 1966b; 1983b). This reduction of about 110,000 hectares of rental land in these two states means that 22,000 minifundia holders are no longer able to rent the vital extra five hectares that are crucial for farming enough land to support a family. Alternatively, over 36,000 small tenant farmers cannot find the land necessary to remain in agriculture.

As a consequence, many internal peasants have been forced out of farming. Between 1960 and 1977, the number of small tenant farmers decreased by 48 percent and resident part-time crop workers by 66 percent on the sample of farms in the study area. In the northern Agreste as a whole, the number of part-time crop workers fell by 58 percent and their proportion of the total work force decreased from 24 to 13 percent between 1960 and 1980. One might expect that the number of permanent wage laborers, which includes cowhands and farm managers, would have increased during this period but, in fact, the number of these workers also fell by 16 percent. The type of pasture used requires few cowhands, and managers are not needed to supervise one or two cowhands. As a result, the entire rural work force fell by nearly 22 percent. These trends are the opposite of those for the 1950/60 period, i.e. before the advent of capitalized ranching, when all types of farm workers increased in number and the rural work force grew by 62 percent (Fundação IBGE 1955b; 1966b; 1983b).

The sudden outflow of people leaving the countryside has had an adverse effect on the local economy. Some expansion occurred in other sectors, but the economy as a whole has proven incapable of absorbing the mass of workers pushed out of farming. As a result, the number of underemployed and unemployed workers increased by 189 percent from 1960 to 1980, and their proportion of the total work force rose from 12 to 26 percent. This differs sharply from the 1950/60 period when the number of underemployed and [end p. 44] unemployed workers actually decreased by 13 percent (Fundação IBGE 1955a; 1966a; 1983a).

The expansion of ranching in the Agreste has thus caused rural exodus, large-scale unemployment, increased emigration to other regions of the country, and greater class division. Former internal peasants now live in the growing shanty towns which ring Agreste cities, while ranch owners live in the larger cities of the Northeast and have the lifestyle of the upper classes there. At the same time, the poor who are better off, are able to pay the bus ticket to emigrate from the Agreste. Of the minifundia and small farm owners interviewed, 43 percent of their adult children now live in southeast Brazil while 81 percent of the children of present and former internal peasants remain in the Agreste. The emigration of members of the middle rural stratas thus worsens social polarization to the point that a bi-modal class structure has emerged.

Infant mortality and diet best exemplify the class polarization that has taken place. On average, in Guarabira and in Cajá, for those peasants who have experienced expropriation, five to six children in ten die before one year of age as compared to one rancher's child in ten. A poor family of eight must try to survive on a diet of beans and manioc meal with only one kilogram of meat or dried fish per week while rancher families have a varied diet including fruit, vegetables and from 10 to 22 kilograms of meat a week.

STATE DEVELOPMENT POLICY AND CLASS INTEREST

The spread of capitalized ranching can be interpreted as having been largely an attempt by landowners of medium and large holdings in the Agreste to avoid facing up to the grievances of the rural lower classes as expressed in the peasant movements of the early 1960s. These grievances still remain and, in fact, have been sharpened by the actions of the owners. However, regional and federal development policy also had much to do with what has taken place.

As Janvry (1981) shows to be the case for much of Latin America, Brazil pursues "cheap food" policies. Economic ministries consider staple prices to be a question of "national security", i.e. food prices must be kept low in order to contain urban discontent and to protect the export competitiveness of industry. Since the early 1960s when agricultural prices seemed to be turning the terms of trade against industry, staple prices have been rigorously controlled at the consumer end and periodic importations are undertaken to cover shortfalls in production or to force down prices. Nearly all subsidized credit goes to export cropping by large farmers of the south and southeast and rarely to small staple farmers of peripheral regions like the Northeast, so that these farmers are doubly penalized (Goodman and Redclift 1981; Graziano da Silva 1981; Homen de Melo 1983; Sorj 1986).

In addition to the depressive effect of these national farm policies for staple cropping, regional development policy, has specifically encouraged ranching in the Agreste. In the 1960s a long-term shortfall in the supply of beef and milk for the growing urban market of the coastal cities was anticipated (Banco do Nordeste 1971) and, as a result, ranching was given priority even though within the regional context the Agreste is best suited for food cropping and the Sertão for stock-raising. This policy is particularly questionable given the fact that beef and milk are consumed mainly by the urban upper classes while beans, maize, and manioc are consumed by all classes throughout the Northeast.

With the Zona da Mata specialized in monocultures of sugarcane and export crops and the Agreste in stock-raising, it fell to the Sertão and to the frontier to produce staples for the Northeast. Given the problems associated with underdevelopment and recurrent drought in the Sertão and with distance and poor transport facilities on the frontier, such a scheme of regionalization of rural activities was bound to cause severe shortfalls in food production. And, it did fail dismally. Nearly continuous drought struck from 1975 to 1983 in the Sertão, and after 1970 speculative cattle ranching expanded on the frontier. By 1980, output of most staples had fallen by 15 to 29 percent from their 1960 levels (Table 4) while population had increased by 58 percent from 1960 to 1980.

The shortfalls had to be covered with imports from other parts of the country and from abroad which made a mockery of the 1960s and 1970s debate over the significance of the 1945-1970 expansion in northeastern staple production (cf. Goodman 1981; Patrick 1972). Prices only remained at "satisfactory" levels (i.e. from the urban viewpoint) because they simply were not permitted to rise. But this is hardly a planning victory because the short-sighted preoccupation with a more limited problem, i.e. the supply of milk and beef produce for the urban upper classes, caused the failure of two long-term goals in northeastern planning: increasing overall regional food production and reducing center-periphery dependency.

The consequences of this modern-day stock-raising "enclosure" in the Agreste have been so startling that the regional development agencies, and even the federal government, have become alarmed. To control the situation, past governments repressed workers' movements and simply [end p. 45] disappropriated a few large farms where violence erupted. One such farm in the study area was Fazenda Alagamar where in 1978 and 1979 new city owners tried to remove the internal peasants present on the farm. Violence erupted, the Church and urban allies came to the aid of the peasants, creating a situation very similar to the famous Galileia case which gave rise to the peasant movements of the early 1960s. Indicative of the gravity of the situation is the fact that two previous military presidents and a former head of national security visited the trouble spot. The farm was finally expropriated and Brazil's president was present at the ceremony turning the land over to the peasants.

Table 4. Change in Output of Food Products of the Northeast

Product	1950 (m. tons)	1960 (m. tons)	1970 (m. tons)	1980 (m. tons)	Change 1960/1980
BASIC STAPLES					
Beans	422,770	534,250	460,549	454,731	-15.0%
Maize	893,341	1,107,329	824,492	849,914	-23.2%
Manioc	4,613,267	5,477,277	5,150,444	4,257,263	-22.3%
Rice	371,040	715,115	798,826	1,267,955	77.3%
Sweet Potatoes	103,245	n.a.	121,937	73,063	-29.2%*
NON-BASIC FOOD CROPS					
Cashews	16,403	40,772	75,978	44,123	8.2%
Oranges	145,068	160,676	298,790	527,745	228.5%
Pineapples	45,968	62,078	155,741	184,515	197.2%
Sugarcane	10,703,214	17,963,960	23,455,219	44,336,921	146.8%
Tomatoes	34,690	37,288	89,092	179,694	381.9%
Yams	10,297	28,364	32,206	64,716	128.2%
LIVESTOCK					
Cattle (steers)	7,752,638	11,555,757	13,805,621	21,505,844	86.1%
Milk (1000 l)	381,196	466,455	819,289	1,583,666	239.5%

Source: Fundação IBGE (1955b; 1966b; 1983b).

*Change for 1950/1980

However, other than this, little has been done to change the course of events, perhaps because the landowners involved are extremely important businessmen and politicians. The northern Agreste is a priority area for the government's agrarian reform program. As occurred elsewhere in Brazil, this program has proven to be disappointingly short on results. In fact, it is hard to imagine a government controlled by urban-industrial interests --who also dabble in rural investment speculation and leisure activities--promoting agrarian reform in a rural hinterland area like the Agreste. This lack of interest in promoting agrarian reform is evident in the new federal constitution. The empty pastures of the Agreste are treated as "productive land" and so cannot be disappropriated. If agrarian reform is to be undertaken at all, it will have to be in distant places with relatively poor lands like the Sertão or the Amazon.

Meanwhile the Agreste simmers and if you ask any poor farmer about the pastures, he starts to talk about the Peasants Leagues. But without an agrarian reform achieved through legal channels, the only alternative left open is land invasion and violent confrontation with the military police like that occurring presently in southern Brazil. As Mendras (1976) shows, to raise peasants' hopes about agrarian reform, as the government did in the mid-1980s, and then to dash these hopes creates a potentially explosive situation. If land invasion in the Northeast increases in scale, the situation [end p. 46] could become very similar to that of the early 1960s. This in turn could usher in a return to political instability, violent repression of

worker and peasant movements, and more conservative modernization which would complete the process of peasant expropriation.

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NOTE

1. In this paper the concept of the "expropriation of the peasantry" describes a process whereby peasant farmers, working as either sharecroppers, tenants, renters, or employees with rights to a subsistence plot, lose access to the land as it is converted to pasture for cattle raising.

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SUMARIO

A penetração de capital urbano na agricultura é tratada numa "hinterlândia" rural de grandes centros urbanos na Região Nordeste do Brasil, onde vem ocorrendo uma expansão da pecuária bovina. O desenvolvimento polarizado, a acumulação urbano-industrial do país têm gerado forte especulação de terras nas áreas rurais próximas as grandes cidades, especulação esta que se associa a atividade pecuarista. A pecuária e a atividade rural que mais se adapta aos interesses de investimento e modo de vida do proprietário urbano. O impacto dessa tendência é particularmente negativo na Zona Agrestina da Região Nordeste, com o uso ineficiente dos recursos produtivos, expropriação do campesinato, altos níveis de desemprego e aguda polarização social.

RESUMEN

La penetración del capital especulativo de origen urbano en la agricultura de la zona tributaria de los grandes centros urbanos del Nordeste de Brazil, ha ocasionado la expansión de la ganadería. El desarrollo polarizado y la acumulación de capital urbano-industrial han generado especulación en los terrenos rurales accesibles a las zonas urbanas lo cual toma la forma de ganadería y conforma a los intereses financieros y sociales de los propietarios urbanos. El impacto de esta tendencia ha sido especialmente negativa en una zona pobre y densamente poblada como la Agreste del Nordeste. En una zona así, la ganadería es un uso ineficiente de la tierra, crea la expropiación del campesinado, altos niveles de desempleo, y

polarización social extrema. **[end p. 48]**