



policies that work

for sustainable
agriculture and
regenerating
rural economies

Public policies and participation for agricultural sustainability

Findings from
the case
study in
Rebouças,
Paraná, Brazil



Nelson Delgado
with Jorge Romano,
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**Policies that Work for Sustainable Agriculture and
Regenerating Rural Economies**



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Policies that work for sustainable agriculture and regenerating rural economies series

There are enough examples world-wide to suggest that agriculture which is pro-sustainability and pro-people is working. We now understand the concept of 'sustainable' agriculture is not confined within the farm boundary, but has strong links (and a potential to be a dynamic force within) a wider rural economy. So, 'sustainable agriculture' not only contributes to greater agricultural production, but also environmental regeneration and local economic development.

IIED's Sustainable Agriculture and Rural Livelihoods Programme has undertaken collaborative research to look at 'Policies that work for sustainable agriculture and regenerating rural economies'. The overall objective of this research is to understand the policy contexts and instruments that can promote sustainable agriculture and social change. This has been done in high, medium and low income countries in both the South and the North. 'Success stories' have been identified and the policy environment that has permitted these to emerge has been investigated. Are there lessons we can learn from these 'islands of sustainability' that will help us turn islands into continents?

This paper is one of a series of reports from the Policies that Work project, which give the research and methodological background and country specific findings. *The views and opinions reflected in this material do not necessarily reflect those of IIED, its partners or the project donors.*

Acronyms

ADECIR	Integrated Community Development Association of Rebouças
AS-PTA	Assessoria e Serviços a Projetos em Agricultura Alternativa (Assistance and Services for Alternative Agricultural Projects)
BNDES	Banco Nacional de Desenvolvimento Econômico e Social (National Bank for Economic and Social Development)
CMDR	The Municipal Council of Rural Development
CPDA	Curso de Pós-Graduação em Desenvolvimento, Agricultura (Post graduate Studies in Development, Agriculture)
DERAL	Departamento de Economia Rural (Department of Rural Economy)
EMATER	Empresa de Assistência Técnica e Extensão Rural (the state level agricultural extension service)
FAT	Fundo de Amparo do Trabalhador (the Worker's Support Fund)
FINAME	Financiamento de Máquinas e equipamentos (Financing of machines and equipment)
ICMS	Imposto de Circulação de Mercadoria e Serviços (sales tax)
IIED	International Institute for Environment and Development
INCRA	Instituto Nacional de Colonização e Reforma Agrária (National Institute for Colonization and Agrarian Reform)
NGO	Non-governmental Organisation
PROAGRO	Programa de Garantia para a Atividade Agropecuária (an agricultural insurance programme)
PRONAF	Programa Nacional de Fortalecimento da Agricultura Familiar (National Programme for Strengthening Family Farming)
PTW	Policies That Work
SARL	Sustainable Agriculture and Rural Livelihoods
SEAB	Secretaria de Estado da Agricultura e Abastecimento (State Secretary of Agriculture and Welfare)
STR	Sindicato de Trabalhadores Rurais, (Rural Worker's Union)
TJLP	Taxa de Juros de Longo Prazo (the long-term interest rates defined each quarter by the BNDES)
UFRRJ	Universidade Federal Rural do Rio de Janeiro (Federal University for Rural Studies, Rio de Janeiro)



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Introduction

One of the most notable characteristics of the current Brazilian agricultural and agrarian situation is social mobilisation's influence, especially by landless farmers, on the shaping of differentiated policies to meet the demands of family farming (including agrarian reform). Upon entering the political agenda, "family farming" introduced a big strategic ambiguity in the guidelines for Brazilian agricultural development. It prioritised the social virtues of the family unit, relegating family farming's role in the national agricultural economy to secondary importance. As a result, recent policies for family farming are more often than not oriented towards compensating social dues. Family farming's role in overcoming the structural obstacles to sustainable development of this major sector of Brazilian agriculture is therefore extremely limited.

Separating economic dimensions from social ones, agricultural policies in Brazil reveal very limited strategic thought about sustainable development. After all, the process of agricultural development is necessarily multidimensional and complex, requiring of policymakers approaches that consider all the aspects involved, including social, economic, environmental and cultural ones¹. Because compatibility of the diverse intervening dimensions on this process is difficult to achieve on a large (national, statewide) scale, more importance has been given to local as well as participatory development concepts in strategies to reach a more sustainable agriculture. The local level allows reconciliation of the interests of different stakeholders and the many aspects involved in the process of development, allowing their active participation in the shaping, implementation and monitoring of public policies.

¹ In this respect it is important to note that the environmental dimension of agriculture has rarely entered into discussions on policies for agricultural development. Environmental issues are still approached as an objective (and institutional) division between the "promoters of development" and the "defenders of nature".

Without strategic orientation which references the shaping process as well as assures the implementation of guidelines for public policies for family farming, local level policies (in the municipality, community or farm) have demonstrated enormous discrepancies between the specifically planned and outlined objectives and the results actually achieved through their implementation. This is the initial hypothesis of the research carried out in the municipality of Rebouças, in the central southern region of Paraná, Brazil in partnership between AS-PTA² and CPDA/UFRRJ³ and funded by the "Policies that work for sustainable agriculture" project (PTW) of IED⁴. This research endeavours to compare the objectives of the public policies that affect the local agro-ecosystems with their real impacts, whether positive or negative, in overcoming the structural problems that hinder the development of sustainable agriculture on a municipal and/or micro-regional level. The research attempts to evaluate how much the participation of local stakeholders in the shaping and implementation of public policies guarantees a higher effectiveness in promoting development of sustainable agriculture on the municipal level.

Besides providing support to local stakeholders, especially agricultural leaders and their organisations, in analysing the effects of the public policies on agriculture in the municipality, one aim of this research was to test the methodological and instrumental effectiveness of a participatory process for shaping and implementing public policies on a local level. As the social political dynamics in the municipality of Rebouças were intimately linked to the regional scope through the Forum of the Farmer's Organisation of the Central Southern Region of Paraná (Fórum das Organizações de Agricultores e Agricultoras da região Centro-Sul do Paraná), another intention of this research was that its methods of analysis, formulation and implementation of public policies be replicated in other municipalities in the region.

2 AS-PTA: Assessoria e Serviços a Projetos em Agricultura Alternativa (Assistance and Services for Alternative Agricultural Projects), a non governmental organization.

3 CPDA/UFRRJ: Curso de Pós-Graduação em Desenvolvimento, Agricultura e Sociedade da Universidade Federal Rural do Rio de Janeiro (Post graduate Studies in Development, Agriculture and Society in the Federal University for Rural Studies, Rio de Janeiro).

4 IED: International Institute for Environment and Development.

Conceptual and methodological aspects of the research

A basic premise of this research was the active participation of different stakeholders in agricultural development for the municipality of Rebouças. The assumption that the project's results would be locally incorporated, giving them political consequence, would only be fully realised if this were the case. The stakeholders' participation was necessary throughout the project from the initial definition of the main concepts and processes involved, through the field work itself up to the analysis and critique of the results found. This participation occurred both in the implementation of the research techniques in the field as well as in different seminars and meetings that took place in the municipality during the different phases of the project. An advisory group of 10 people, formed by representatives of the community and Producers Associations (including members of the Rural Development Council), technicians of the local EMATER⁵-PR office and employees and leaders of the local executive and legislative powers was established to communicate with the research team (composed of AS-PTA's staff and CPDA/UERRJ's researchers).

The research project was divided into four phases:

- Preliminary phase – Definition of the main concepts involved and the research process implemented;
- First phase – Appraisal of the municipality's agro-ecosystems;
- Second phase – Profile of the public policies and their impacts on the different agro-ecosystems in the municipality as well as of the local actors directly involved in the shaping and/or implementation of policies;

⁵ EMATER: Empresa de Assistência Técnica e Extensão Rural, the state level agricultural extension service (see Section 5.1, this report).

- Third phase – Preparation of alternative public policy proposals for promoting sustainability in the agro-ecosystems of the municipality.

The creation of a booklet for distribution and discussion with the different types of farmers was also planned. This booklet would present a profile of the municipality's agro-ecosystems and their main problems, deficiencies of the present public policies, and the alternative policy proposals prepared in this project.

2.1 Preliminary phase

In this phase, the researchers outlined the significance of the basic concepts involved in this project, prepared a proposal for the methods to be used, and finally, submitted these proposals to the advisory group.

Three basic concepts were debated: "sustainable agriculture", "public policies" and "stakeholders". For the sake of this research, agriculture is considered "sustainable" when it incorporates biological processes, minimises the use of non-renewable external inputs, encourages the full participation of producers and consumers in innovation and problem resolution, assures a more equal access to their rights, uses local knowledge, diversifies the production system and increases self confidence among the farmers (Guijt, 1996). Although somewhat abstract for general debate within the community, the guiding principles for building the concept of sustainability in agriculture have been debated and put into practice through a series of activities directed at technical education and participatory experimentation of innovative technologies. These activities have been promoted jointly by AS-PTA and farmers' organisations in the municipality, greatly easing the incorporation of the concept by local partners in the research⁶. The "public policies" were defined as interventions done by the governments (federal, state and/or municipal) as well as those by NGOs and private

⁶ The orientation of technological and institutional changes that promote a higher degree of autonomy to farmers, (both technically and for decision making as well as conserving natural resources that give physical and biological base to the agro-ecosystems) had already been widely debated and incorporated by farmers both in their meetings and in experimentation of techniques. In this process, agro-ecology has been used as a scientific base for the construction of innovative methods and techniques oriented towards sustainability.

organisations, as long as they were created to attend to public goals. Finally “stakeholders” are considered as institutions and/or groups of people – organised or not – that possess a common interest in a particular system of public policy. Passive stakeholders, those that do not currently have the power to change the system may be distinguished from active ones, who have power of decision (Grimble and Wellard, 1996).

2.2 First phase

In order to analyse the influence of public policies on the promotion of sustainable agriculture development at the municipal level, it was first necessary to create a profile of the existing agro-ecosystems, so that the specific impacts of the policies could then be characterised. To form an appraisal of the municipalities’ agro-ecological systems, secondary data was gathered, and an initial seminar with the advisory group as well as interviews with twenty farms were held. Information from these meetings and research, as well as a final synthesis from discussion with the advisory group established classifications of farmers based on the following criteria:

- **Components of the system:** size of the establishment, distribution of the productive areas, animal raising (types of animals, quantity, their role in the system); agricultural production (types of crops, volume of production, their role in the system);
- **Technical basis:** use of machines, equipment and animals in the different sub-systems of production; use of internal and external inputs (quantities, value, place and means of purchase); effects of the technical basis used upon agricultural sustainability;
- **Economics of the system:** the farmer’s standing (owner, leaseholder, squatter, etc.); organisation of work by production type; organisation of processing (familial, associative, with others, etc.); calendar of activities (times of deficit or surplus labour); monetary costs of the system (land rental, inputs, paid labour, etc.); processing and commercialisation costs; place and manner of sale; production to be

consumed on site (main products, seasonal distribution, times of crisis, etc.); origin and sum of monetary family income (sale of products, wages, partnerships, land rental, retirement pensions, etc.);

- Household living standards: number of people and family relationships; type and quality of the dwelling; educational level; health; sanitary conditions (access to water and septic tanks); level and type of social integration (religious community, associations, unions, political parties, sports and leisure); access to credit, technical assistance, governmental and non-governmental projects and programmes;
- Social background of the household: situation of the previous generation; background of the head of the house; contrast between the initial and current economic and social situation (rising, falling), causes (differences in access to public policies); social background of farmers from the same region;
- Current interests and future expectations: current social evaluation of the region's farmers according to the head of the household; self identification within the social map; problems and demands for public policies by different members of the family (men, women, young people, elders); strategies for economic and social continuation of the group; future scenarios for agriculture in the region;
- Public policies' influences on the functioning of the system.

2.3 Second phase

Interviews were held with local leaders (mayor, Municipal Secretary of Agriculture, president of the municipal STR⁷), and technicians of local institutions that mediate the implementation of public policies (bank directors and local and regional EMATER-PR agricultural extension

⁷ STR: Sindicato de Trabalhadores Rurais, (Rural Worker's Union) are independent membership organizations that operate at the municipal level and are federated at state and national levels. Members are usually poor farmers and issues tackled are often highly political and related to farmers' rights.

agents) and research was done with different documentation to gather secondary data. These activities provided a characterisation of the public policies affecting agriculture in the municipality as well as a profile of the main local stakeholders involved in the shaping and implementation of these policies.

The following variables were thus identified and analysed:

- The main national, state and local agricultural and agrarian policies which have affected the rural development of Rebouças;
- The institutional means through which these policies were implemented, with particular emphasis on the role, degree of accessibility and participation of the beneficiaries and the various mediators (NGOs, STR, co-operatives, mayors, associations, EMATER-PR, etc.) in this process;
- Local stakeholders involved, amongst them farmers' organisations, governmental agencies (national, state and local) NGOs (such as AS-PTA) and the areas in which they interacted;
- The results and effects of these policies on different agro-ecosystems and their conditions for sustainability, principally taking into account the differences between the policies' specific objectives and the results actually promoted with their implementation on the local level.

2.4 Third phase

Specifics of the agro-ecosystems appraised in the first phase of the research (including the interests, demands and the proposals of the different types of farmers and local participants) and their interaction with existing public policies characterised in the second phase were considered in order to develop a set of proposals for alternative public policies with a view towards sustainable rural development in Rebouças. The proposals developed were then discussed with more wide-ranging groups of stakeholders, both on the municipal level (in the Municipal Agricultural Conference) as well as on the regional (the Forum for Workers' Organisations and Rural Workers of the South Central Region of Paraná) and initially presented to the municipal authorities.

The municipality of Rebouças

The municipality of Rebouças is located in the central southern region of Paraná, Brazil, approximately 170 km from the state capital of Curitiba. The total area of the municipality is about 49,000 hectares (490 km). Of these, it is estimated that around 19,000 hectares (39% of the total area) are being used for annual crops and 13,400 (27% of the total) are used for pastures. The majority of the pasture land is used as community breeding areas, in an agrarian system typical of the region known as the "fazinal" system, wherein the animals are raised free range in a community's common area.

The municipality of Rebouças is marked by the great predominance of small farms, which in 1991 represented almost 80% of all rural properties and approximately 30% of the total area. The rural population, according to the 1991 census, accounted for 58% of the 12,914 inhabitants in the municipality.

Agriculture in the municipality is experiencing an unprecedented crisis as a result of successive economic frustrations from problems in the market place as well as with climate. Additionally, a series of structural obstacles have limited chances for advancement for the great majority of farmers in the municipality, even threatening their continuation as farmers. The various technical, economic and environmental factors that put a significant amount of farming families at risk are creating a rural exodus never seen before. Although these hindrances vary according to the categories of the farmers in the municipality, the problems related to marketing and degraded soils are felt by all.

The definition of the municipality of Rebouças as a geographical space for the preparation of this research was due to a combination of factors, among them:

- A predominance of family farming in rural areas;
- Farmers' increased organisation;
- The progressive incorporation of a proposal for sustainable rural development on the part of local organisations (STR, community associations and informal groups), especially following support given by AS-PTA since 1993;
- The election of important leaders from the family farmers' movements to local government positions. These need a platform that emphasises the reinforcement of organisation to obtain policies for the promotion of sustainable development in the municipality.

Descriptions of the farmers in the municipality

Characteristics of the agro-ecosystems and their principal obstacles, and proposals for alternative public policies for sustainability

A general profile of the agro-ecosystems in Rebouças was obtained by the aforementioned methods. The family farmers in the municipality were separated by the field research team according to the following distinctions: (1) predominant activity (cropping or animal raising), especially the presence of maté⁸ cultivation; (2) land situation (leasing or ownership), location (within or outside the faxinal); (3) method for working the land (with special attention to the type and use of machinery); origin and amount of income received; household situation (size, composition and quality of life); and (4) social background of the family and its level of sustainability.

The farmer characterisations fall into five main categories, with the following subcategories:

I Corn and bean producers

Landless

Poor small landowners

Well-off small landowners

Mechanised small farmers

II Maté producers

Small maté farmers

Traditional maté extractors

⁸ Translator's note: maté, orerva maté is used to make a tea that is a staple in southern South America.

III Soybean producers

Poor tenant farmers

Ascending modern producers

IV Tobacco producers

Small tenant farmers

Medium sized land owners

Large farmers

V Integrated livestock farmers

Dairy farmers

Poultry farmers

Integrated swine farmers

A description of the corresponding agro-ecosystems of each of these types of farmers follows, including their principal problems and the proposals for public policies shaped to encourage them into a transition towards greater sustainability.

I Corn and bean producers

Landless corn and bean producers

This group represents 15% of the rural population of the municipality and is located primarily in the faxinais⁹. Solidarity within the faxinais allows them to remain as farmers.

Their production varies with the number of children in the family, or with the availability of labour, the land rental conditions and the size of the land rented. The plot of land usually varies between less than 2 to 10 hectares¹⁰. Many of the small residential farmers in the faxinais do not even rent land; they receive their monetary income by selling their labour – during 3 months of the year – for the bean, corn and potato harvests. For these farmers, as well as for a large majority of the others,

⁹ In Macmeleiro, the most important faxinal of the municipality, almost 50% of the resident population is landless.

¹⁰ In this region, land is commonly measured in "alqueires", which are equal to 2.4 hectares.

another important (and often crucial) source of income is from the pensions of a retiree in the household.

The great majority of farmers use practically no chemical inputs and do not possess any equipment other than animal traction. Their production is low (5 to 6.3 sacks of beans per hectare)¹¹ and is generally sold immediately after harvest to pay off debts, making savings for the family's future needs difficult. The size of the plot of land rented, as well as the level of security in the rental arrangement (for example when the land belongs to the farmer's parents, from whom they will eventually inherit, or when there is a contract which makes bank loans possible) establishes a significant difference between tenant farmers. These favour investments, however rudimentary, and soil conservation (in some cases using organic fertiliser together with chemical inputs) and planting crops specifically for seed production. In these conditions, yield increases (doubles) but remains small due to financial limitations on investments. These stem from difficulties in accumulating savings or obtaining bank loans, the latter often due to tenant farmers' precarious economic situation or previous negative experiences with the banks.

When beneficial land renting conditions are added to a large familial labour force, ownership of animals, religious ties which provide solidarity outside the community, and possibilities for small complementary incomes (maté on parents' property or sporadic sale of fruits or animals), conditions are created that allow the group to continue farming, or even improve their quality of life.

The main problem for the tenant farmer is, obviously, that he or she does not have his or her own land to work. In addition, it is becoming increasingly difficult to rent land. When possible, besides ever increasing leasing costs, tenant farmers must accept extremely precarious arrangements. Landowners have not established formal contracts for fear that the tenant farmers may eventually claim land ownership. This lack of a formal contract disqualifies the tenant farmers from the majority of agricultural policies. Even EMATER-PR has not offered technical assistance to this type of farmer. In practice, they can be

¹¹ Beans, corn and soybeans are commonly measured in sacks of 60 kg.

considered for federal programmes against poverty, such as the programme "Comunidade Solidária", which provides basic food and household products.

In order to reverse these limitations at a state and federal level, local public policies implemented by the municipality could offer:

- a. Legalised contractual rental, with help from the STR;
- b. Increased food security by stimulating vegetable gardens;
- c. Improved housing;
- d. Maintenance and improvement of seed availability. It is currently virtually impossible for the farmer to keep seeds from one year to the next due to rental agreements wherein one third of the crop is paid to the land owner;
- e. Guarantees of free basic health services (including medicines) and education (including transportation and school materials).

In the case of landless farmers that live in the faxinais, a relationship with the owner of the property facilitates the necessary authorisations for them to benefit from public policies. In addition, their greater security with regard to permanency on that land presents them with greater potential to be included in technological reform processes, allowing them to quickly participate in proposals for agro-ecological conversion. They are a promising clientele for a municipal policy aimed at the conservation and sustained use of soils.

However, the fragility of these farmers in the face of the established economic process should be pointed out. As they cannot participate in existing co-operatives, they must submit themselves to the unfavourable prices and circumstances established by the traders. Their condition as "victims of the market" could be overcome if alternatives to the commercialisation and processing of their products were created. In this sense, the role of the co-operatives could be recreated, making them actors that facilitate the introduction of these producers into the market through, for example, a policy of price regulation. However, this type of solution would only be effective and long lasting if it corresponded to or

were linked with a federal and/or state policy such as a national and/or state programme for food security.

As landless farmers are vulnerable to the dangers of intoxication by pesticides in their periodic work in the bean and potato harvest, they may get special attention in a municipal health policy¹². With support from the STR, the municipality could implement a more effective local health policy, with doctors, nurses and health workers trained to deal with problems of intoxication. At the same time, local laboratories must be equipped to be able to conduct the necessary exams. Such a policy would imply a revision of the Government of Paraná Office of Health's general philosophy; currently, these cases are treated symptomatically *since, according to them, it is not possible to diagnose the problems as caused by agrotoxics*. This official recognition of the inability to diagnose the noxious effects of agrotoxics is largely due to the influence of agrochemical businesses upon state government officials.

Another possible health initiative that could be introduced by the municipal council, the STR and the various associations, would be a campaign offering information on the use of agrotoxics and their dangers. Local radio stations could play an active role in disseminating this information. The STRs and associations could also promote specific campaigns aimed at resistance, for example: "Do not harvest beans in areas where agrotoxics were recently sprayed". Another campaign could be for education, in an attempt to diminish and/or avoid the constant work accidents (for example those caused by harvesting potatoes barefoot). Projects aimed at the "rational" use of agrotoxics need integrated management plans for controlling damage from insects, disease and weeds based on techniques for ecological management of these pest populations¹³.

12 The policy recommendation may be made for most types of farmers, and in particular, for tobacco growers.

13 Since many ecological practices for management of insects, diseases and weeds are more effective in the long run, policies for step by step agri-ecological balance are not designed specifically for landless farmers since, as previously mentioned, they do not have control over their future use of the land they farm. As such, tenant farmers may receive the most benefits in improved work and health conditions if the owners of the land were to adopt the practices mentioned.

Evidently, the structural blocks that hinder the improved social and economical situation of these people may be best solved by land redistribution. As farmers, they are the principal target group for Agrarian Reform.

Poor small landowners

These farmers represent 25% of municipal farmers. Despite owning up to 7 hectares of land (either within and/or outside the faxinais), their low income and insecure situation puts them on the same level as landless farmers. Nevertheless, differences remain within this category, based not only on the size of land they own and the amount of family labour available, but also principally whether their land is inside or outside the faxinais.

Those that live within the faxinais have the possibility to organise their production based on self-sustenance. Additional income from retired members' pensions, renting part of their land, harvesting maté and occasionally working for others creates a higher chance to maintain their livelihood, despite their precarious situation. For those that live outside the faxinais, self-subsistence is more difficult due to the complications of maintaining animals, a vegetable garden and a maté grove. Maintenance of the household basically depends on all family members working outside the home, either permanently in town or temporarily in bean and potato harvests. Besides the fact that this weakens their economic and social survival, the group is physically weakened by the constant problems of agrochemical intoxication due to the poor working conditions they must accept. In this sense, the health policies previously suggested are equally valid for the farmers described here. The difficulties in harvesting, transporting and selling beans and corn are enormous, worsening substantially after the bankruptcy of a regional co-operative.

These families are potential beneficiaries of state and federal agricultural policies directed at family farming, and may also benefit from agrarian reform due to the small and insufficient size of their properties.

Local programmes that encourage product diversification and the adoption of agro-ecological practices would help them as well.

However, these programmes would clash with the constant incentive for mechanisation – particularly for the purchase of tractors – offered by (amongst others) bank officials, manufacturers of agricultural machinery and in some cases, even by EMATER-PR (to be detailed in the following chapter). There is a general expectation for the purchase of a tractor. This intensifies specialisation and exaggerated expenditure of resources while at the same time creating incentives for the adoption of a modernising technological package from the Green Revolution.

The municipal council is currently attempting to introduce some measures to confront soil degradation with a subsidy for purchasing limestone, rock phosphate and seeds for green manure. It is important to point out however, the risks of giving the input to farmers without previously or simultaneously offering technical assistance. One of the inherent risks is that the alternative technical proposals be received as a new “package” without development of their methodological components. This policy was originally conceived not only to facilitate the purchase of inputs, but also to implement a programme for technical education and trials. In this programme, the problems of soil fertility would be approached in an integral way, emphasising the need to discuss the production system as such, and not merely the individual use of inputs. An effective alternative local policy to resolve these questions must therefore implement a participatory process for technical education and experimentation in conjunction with the distribution of inputs.

Well-off small landowners

This group also represents a large part of the municipality's farmers. They have plots of up to 24 or 30 hectares, in which no more than 12 or 15 hectares (either their own or rented) are cultivated using animal traction and family labour (between 4 to 8 members).

Beans and corn are the main products, generally intercropped. The beans are sold, whereas the corn is consumed by the family and farm

animals. Until 1980 chemical fertilisers were not used, and seeds were produced on the property. More recently, commercial seeds are occasionally purchased. In order to confront increasing soil degradation, chemical fertilisers (about 4 sacks per hectare of beans)¹⁴ and limestone application and herbicide and pesticide use has intensified. Despite the increased use of external inputs, they have difficulty producing 21 sacks of beans or 46 sacks of corn per hectare. Successive use of the plots and increasing use of agrochemical inputs has contributed to the increasing degradation of natural resources. Some of the farmers in this category have already begun trials with the use of green manure and cover crops in their properties.

Besides their main crops, various animals (cows, pigs, chickens and horses) are raised for home consumption as well as for investment and sale. Limited quantities of rice, vegetables and fruits are produced for their own use as well.

They do not work outside the home, though they often exchange labour with neighbours. They may hire machines to prepare the soil in periods of high demand for labour.

Profitability of the crops has decreased considerably as the prices of inputs remain constantly high in comparison with the sale price of beans. Funds for the purchase of inputs come from the crops themselves. Some families depend on a complementary income from one or two retired members of the family, which, by its regularity, grants security to the group.

Differentiation within this category is usually associated with specialisation in a risky crop (beans) as main income, versus families that have varied sources of income from services offered to their neighbours (such as carpenter or bricklayer, etc.). Another subgroup may be those who diversify their production, including planting a winter crop (onions), allowing a better use of family labour during the entire year. A maté harvest is also a distinguishing element of this segment of farmers.

¹⁴ Chemical fertilizers are sold in 50 kg sacks.

When production is specialised, the system becomes unstable, subject to high risks in production and market levels, problems related to soil degradation, concentration of income in one period of the year and inefficient use of family labour for wintertime income sources.

To their credit, they are reluctant to accept taking out loans to purchase heavy agricultural machinery. They are self sufficient in their food and monetary needs. Nevertheless, they have a limited capacity to substantially convert their farming techniques to a more sustainable model. Maintenance of this livelihood depends on the division of the property amongst the next generation, who may not have the capacity to follow their parents' paths. Generally the parents began with a small parcel of land that they have been able to increase through their agricultural activities.

Significant positive impact for these farmers could be generated at very low cost by means of a few public policies. One example may be aid to associations for acquiring equipment such as a "rolo faca" (a type of mulching machine) for use by the community. A development fund of R\$ 10,000 (about US\$ 9,000¹⁵) per year would be sufficient for these types of equipment purchases. The fund could be derived through returns from PRONAF¹⁶ and the ICMS¹⁷. With the use of this equipment, other alternative techniques could be adopted without additional costs. Were the farmer to have access not only to the "rolo faca" and animal traction, but also to alternative inputs (such as biofertilisers, organic sprays, rock phosphate, etc.) his or her costs could be reduced, and new resources accumulated. This type of farmer is preferential for policies aimed at diversifying their agricultural income sources.

Mechanised small farmers

The mechanised small farmer represents 10% of the municipal population. They are also owners of 24 to 30 hectares, but their

15 Translator's note: Dollar equivalents are listed in the exchange rate prevalent at the conclusion of this research project, at 1.12 Brazilian R\$ per US Dollar, in 1999. At the time of translation (February 2000), the exchange rate was 1.80 Reals per Dollar.

16 PRONAF: Programa Nacional de Fortalecimento da Agricultura Familiar (National Programme for Strengthening Family Farming).

17 ICMS: Imposto de Circulação de Mercadorias e Serviços (sales tax).

ownership of machines obliges them to increase the areas planted (often twice the area of the land they own) in order to justify the purchase of this equipment and to pay off the debts accumulated with them. As such, they must rent land and increase the amount of work for family members. The debt incurred weakens the family economy and the agricultural sustainability of the system, with an obvious loss in the family's quality of life.

All activities are chemical/mechanised, causing production costs to be high due to input costs and (above all) the maintenance costs and debt payments for the purchase of the tractor. To these are added the costs and difficulties of storing their product, which cannot be done on the property, and therefore must be transported to neighbouring municipalities.

Despite help received from research and extension agencies, deterioration of the soils is aggravated due to the intensification of mechanised production and the fact that more than half of it is done on rented land. This makes the maintenance of high production rates difficult. Harvests vary, reaching a maximum of 40 sacks of beans or 200 sacks of corn per hectare. In addition, returns are small as, besides the aforementioned production and storage costs and soil depletion, debts keep these farmers basically "working for the bank"¹⁸.

Mechanisation limits their possibility to consider other alternative economic activities, leading into a vicious cycle. As they cannot independently maintain their technical system in working condition, and since all their production is dependent on the tractor and other machines, this type of farmer is forced to intensify his or her mechanisation by introducing a crop that will offer a higher income, such as soybeans. In this way, economic risk that is associated with greater specialisation is heightened, along with increasing wear and tear of and risk for accidental damage to the machinery, making the farmer prone to additional debt.

¹⁸ It must be noted that small landowners that are well off avoid taking out bank loans as much as possible. Their financial situation becomes occasionally unstable when they do not receive payment for portions of their harvest sold or when they have to assume debts during crisis or bankruptcy of the cooperative with which they are associated.

The mechanised small farmer is representative of a very diffuse situation that is included in national debates. They are shown as "the model farmer" who has accepted modernisation by adopting the general demand for a tractor and an agrochemical technical package. This leads him or her on a path to intensify specialisation and exaggerated expenditures on resources in order to annually reproduce their production levels. In general, this farmer currently demonstrates very high production costs, substantial debt, high agricultural and marketing risks, storage difficulties, inability to financially support their farming methods independently, high risks of farm bankruptcy and a lack of perspective to overcome crisis.

Within their limited possibilities there are found, in some cases, soil conservation practices (direct sowing, contour farming, terraces) and the search for a strategy to diversify economic activity to increase the stability of the farm. However, mechanisation, with its level of debt incurred, limits the possibility to consider other alternatives for change.

Policies such as those which offer free sanitation checks for the sale of animals are appropriate for this type of farmer. A large-scale production of green manure seeds could also be stimulated through a specific project elaborated by the municipal council (since banks do not finance this type of input). Finally, these farmers could be the beneficiaries of a regional insurance managed by the trade union.

II Maté producers

Small maté farmers

These farmers are small landowners of both the poorer and well-off categories that produce beans and corn.

In the case of the poor small landowners, we refer particularly to the farmer who lives in the faxinal, in a production system that revolves around a fragile model of self-sustenance. Despite its low sale price, the availability of 2 to 5 hectares of maté (which has a highly variable

production rate of 200 to 520 kg per hectare, depending on the quality of the grove) provides the farmer with a principal source of monetary income.

In the case of the well-off small producer, maté harvesting functions as one of the traditional alternatives to overcoming specialisation in risky crops (beans), allowing greater economic security for the household.

In a general sense, these farmers are finding the maintenance of native maté groves difficult. In the faxinais, despite pressure to deforest the native pine trees and maté groves in order to replace them with fields, the forest remains because of the animals raised there. Nevertheless, with the deterioration of the faxinais, this productive alternative income source is gradually disappearing.

Traditional maté extractors

These are large landowners who have remained at the edge of modernisation, but who are rapidly disappearing. They attempt to maintain their property almost completely covered by pine trees and maté groves. They produce a few hectares of intercropped corn and beans, and raise cattle. They work with animal traction and hire labourers to cut weeds and prune the maté groves.

Pressure from children and grandchildren for the division of the property and/or the substitution of the productive system (by deforesting and increasing crop and pasture lands) will, in a short time, cause this type of farmer to disappear from the municipality, along with the last great remnants of native maté.

III Soybean producers

Soybean producers represent 3% of the municipality's farmers.

Poor tenant farmers

These farmers have been unsuccessful with modernisation. They are generally poor immigrants from the state of Rio Grande do Sul, south of

Paraná, who have entered the faxinais by buying a 2 to 5 hectare plot of land. As they do not share or respect the rules or culture of the faxinais, they become a damaging part to the system. They join the co-operative and the local public agencies, quickly mechanising themselves by buying tractors, and planting and harvesting machines with bank loans. Many purchased additional lands when credits were favourable. However, when this changed and interest rates rose, increased debt obliged these families to sell off almost all of their property, leaving them with only their original 2 to 5 hectares upon which they maintain a miserable dwelling. They are currently cultivating rented land. As they have great difficulties in paying the rent on time, they are obliged to constantly switch lands, making investments in soil maintenance unfeasible. Their costs increase constantly and make it difficult to take care of their machinery, causing a considerable drop in soybean production. Their debts are long standing and ever increasing.

Their fascination with modernisation persuaded them to take on debt beyond their capacity to repay it. This debt substantially depletes their patrimony, causing them to sell today what they gained yesterday, all the while obliging them to over-work, causing them to eternally "work for the bank". Currently, their diminishing collateral does not cover the value of their debts and they cannot plant for self-sustenance, which ever increases the family's food insecurity. This group lives on the limits of being able to continue as farmers.

Ascending modern soybean producers

The ascending modern producer is also linked to modernisation, but differ from the previously mentioned farmer in that they are characterised by constant improvement and their success in building up their property. Besides starting with a larger amount of capital, these farmers are distinguished in that they became professional farmers and, with a combination of competence and luck, were able to make the right decisions at the right time. They plant large tracts of land and own tractors, combines and cars. Only two or three family members work on the property. These farmers are rare in the municipality. Their success is largely due to their opportunities to begin the purchase of machines

with subsidised rural credits, to diversify their production according to market value, and the purchase of additional plots of land. They have been pioneers in the introduction of minimal tillage planting, rotate their crops and invest heavily in soil conservation. They purchase almost all inputs, but half the soybean planted is from their own seed.

Harvesting is done almost completely mechanically. Some farmers have their own storage facilities and obtain better prices by selling their products during favourable periods, and by selling high volumes of products. Buying in volume also reduces input costs. Crop yield is good in comparison with local levels¹⁹. They are generally free of debt and do not use technical assistance. However they are always interested in obtaining relevant technical and economic information, attend lectures and meetings held by businesses, co-operatives and public agencies from the area, and listen to radio and TV programmes that offer quotations and price trends of agricultural products.

This type of farmer has managed to take advantage of the benefits of technological modernisation, increasing their collateral (often due to the disintegration of the faxinais and the downfall of other farmers such as those previously described) and improving their quality of life. Yet, their intensive use of machines and agricultural chemicals, as well as their agricultural practices directed at achieving the highest profit in the shortest amount of time show medium and long-term environmental weaknesses, which will put the continuation of their system at risk.

IV Tobacco producers

40% of Rebouças' farmers are tobacco producers.

Tobacco cultivation has characteristics that are worth discussing separately, independently of the types of farmers involved.

Tobacco is an extremely labour intensive crop for the farming family, with very bad working conditions. During production, at least 20 (or even 30) steps are required for each plant (including weeding, spraying,

¹⁹ Yields average 125 sacks of corn, 50 sacks of soybeans and 29 sacks of beans per hectare.

pruning, and side dressing) and harvesting (at least 4 times), creating an intensive labour demand during the entire crop cycle. Each operation requires a 7.3 km walk per hectare, or 146 km during the entire crop. After harvest, tobacco leaves are brought to a drying shed, which also requires a huge amount of labour. Stocking and emptying the shed takes approximately half a day each of labour for the family. During the 48 hour drying period, the tobacco must be watched over 24 hours a day. After drying, tobacco is classified leaf by leaf. The entire harvesting, drying and classification process requires the work of the entire family (including children) for about 45 days during the summer. Intensive use of agrotoxics creates continuous health problems for the families. These range from insomnia, nausea and vomiting during the harvest period to, within a few years, the manifestation of serious illnesses that mostly affect the skin and lungs. Cases of death by intoxication are not uncommon, followed by cancer and suicide.

Relationships with the tobacco companies are invariably damaging for the farmers. In general, the farmer must take on all the risks. For example, loss incurred to the tobacco during transportation between the farm and factory is the responsibility of the farmer. When there is more than a 10% difference between predicted and actual production, farmers are punished. A technician from the tobacco company makes a prediction at the time of planting: if the farmer produces more, the surplus is not purchased; if they produce less, they are fined in assumption that the production has been sold to a different company or middleman. In this case, the company charges the farmer for technical assistance given, interest on the loans, transportation costs, etc., amounting to approximately R\$ 375 (US\$ 330) per hectare. Even when the predicted amount of tobacco is produced, the farmer continues to be wronged as the "technical assistance fee" is only reimbursed when the entire harvest has been delivered. In 1997 the most active company of the region withheld R\$ 3,000,000 (US\$ 2,700,000). When the farmers were finally reimbursed, it was without adjustment for inflation.

Another serious problem is classification of the tobacco, which determines the price the producer will receive. Although the farmer is required by the company to classify his or her product, the tobacco

undergoes a reclassification within the factory, without the participation of the producers. Although a public employee is in charge of this reclassification, producers question the sincerity and fairness of the proceedings, and the criteria used.

Prices for the different classifications of tobacco are negotiated annually by the companies and the Federation of Agricultural Workers. These negotiations are not well defined and are aggravated by the fact that the Federation's advisors are incapable of making the farmers' demands heard. It is generally considered that the prices proposed by the Federation are very low due, for example, to the lack of consideration of child labour on the farm, as well as the dangerous and laborious nature of the work.

The final general problem raised by tobacco growers was that insurance is expensive and false. When needed, different bureaucratic difficulties arise, along with limitations that were not clearly defined beforehand.

Small tenant farmers

The small tenant tobacco farmer rents approximately 5 hectares of land, upon which up to 35,000 tobacco plants are cultivated, as well as other crops such as corn and/or beans. Family labour is intensely used. Income is derived mainly from tobacco but must be complemented with beans, working outside the home, and the retirement pension of a family member.

Tobacco cultivation is considered a worse job than in the past due to the drop in price paid for the crop and higher production costs.

Nevertheless, tobacco continues to be planted because its sale is guaranteed and insured, as opposed to the other traditional crops of the region.

There are two specific situations for this type of farmer. The worse of these is the small tenant tobacco farmer who owns neither land nor a drying shed. The other, despite needing to rent land, has at least one drying shed and 2 to 5 hectares of their own to plant corn and beans and raise animals for consumption, thus helping the family's food

security. The farmer's economic situation improves dramatically if the land has some forest from which firewood for the dryer can be gathered. For those who possess neither land nor a drying shed, the amount of tobacco planted on the rented land is less, due to the need to plant crops for consumption. These farmers find it more difficult to rent land. When they succeed, they pay a higher price for rental – generally one third of the production after discounting costs.

Expenses are high, counting land rental costs, inputs, insurance, labour costs, among others, and though guaranteed, remaining income is low. Besides self-exploitation of the families' labour, after a short time working with tobacco, a number of constant health problems (generally poisonings) arise due to the intensive use of agrochemicals and the bad working conditions.

This farmer has no self-financed investment possibilities, making changes in production difficult, thus yoking them to tobacco production. They receive low compensation for their work and suffer the gradual lessening of their already scant income through frozen prices for their crops despite increasing prices of inputs. Natural resources (soil, forest, etc.) are rapidly depleting. The huge labour needs during almost the whole of the year make dedication to other activities unfeasible; when there is extra time, the farmers work on the land of others. There is little production for self-sustenance, thus increasing costs through the need to purchase food, consequently increasing food insecurity. The precarious infrastructure on the properties makes storage of other products impossible. There are no public policies such as credit or technical assistance for this farmer segment.

Medium sized landowners

The medium landowning tobacco farmer receives their main income from tobacco (planting 35-45,000 plants), but diversifies his or her activities with corn and bean crops, the harvest of native maté and animal raising. All these activities take place on their property, which usually ranges from 35 to 85 hectares. Soils are increasingly depleted due to over-use. In general, the whole family works on the farm. Since

tobacco farming requires intensive labour, part of the property (5 to 12 hectares) is rented to landless farmers.

This type of farmer also endures a suffocating situation. When they are indebted through the purchase of equipment, their situation worsens since the machinery represents immobilised capital and, in general, is still being paid off. Nevertheless, because they have a higher volume of production, and larger land reserves than the previous type of farmer, this producer has the possibilities to invest in other productive alternatives, such as winter crops.

Large farmers

The big tobacco grower plants about 100,000 plants in 10 to 12 hectares, achieving a harvest of 14,000 kg when conditions are favourable. He or she has three or four drying sheds and owns property of a size similar to that of the medium sized grower. They also diversify their activities with, for example, 5 hectares of corn and 7 hectares of beans (mechanised and credit supported), besides other small crops. They also possess areas with maté and raise animals for consumption. The whole family works on the property, and additional help is contracted for the bean harvest. They generally have good houses and other buildings. However, their situation is deteriorating due to the drop in profits, uneven relationships with the tobacco companies, health problems suffered by the family, loss of crops due to recent rains and increase in debts to the bank.

The difficulties and opportunities of the medium sized farmers are extended to the big tobacco growers.

V Integrated livestock farmers²⁰

As opposed to the tobacco growers, these integrated farmers do not have a special relevance in the municipality; they represent only 3% of the farmers. Their production conditions and main problems are comparable to similar farmers in other regions of Brazil, even though

²⁰ Translator's note: Integration is a contractual agreement between an industry and its suppliers. Generally the industry supplies inputs and technical assistance and agrees to purchase the farmer's production, which is raised on the farmer's land and with their infrastructure.

their livelihood is somewhat more precarious, especially in relationship to dairy and poultry farming. Technical assistance is offered by Sadia (a large meat packing industry) and EMATER, and governmental programmes financed the constructions necessary for integration.

Dairy farmers

There are only about 30 dairy farmers in the municipality. They provide milk to a co-operative through the owners of the "milk runs". There are small producers (3 to 10 litres per day) and medium sized producers (50 to 150 litres a day), for a total of 1,500 litres produced within the municipality on a daily basis.

Production costs vary according to the technical basis used. Initial costs for purchasing cows and for building the facilities for milking are high. To these are added transportation costs, veterinary services (including medicines sold by the veterinarian) and the difficulties of the co-operatives. The price paid to the farmer is very low, resulting in a liquid profit of only R\$ 0.11 (US\$ 0.10) per litre.

The traditional grazing practices contribute to soil degradation.

Many of these farmers are disassociating themselves from the co-operatives, fearful that their co-operatives will "break" as has happened with others in the region. As such, despite being an institution that is valued for maintaining the farmers' autonomy and receiving the most subsidies in the municipality (the municipal council subsidises the milk runs), chances for maintaining this system are very limited in Rebouças.

One municipal policy that would have great impact would be the installation of a processing and packaging plant for dairy products. The current 1,500 litres produced along with a modest investment of about R\$ 10,000 (US\$ 9,000) for purchasing machines and buildings would be enough to start with. This initiative would decrease transportation costs, as milk is currently being taken to the co-operative of the neighbouring municipality of Irati. Even the poorest farmers could take advantage of this plant by delivering their surpluses. Potential for sales would be very high since people from the municipality prefer fresh milk.

The municipal council itself could be an important client since it currently purchases 500 litres per day for school lunches. In summary, a local processing facility would permit local consumption of the municipality's milk.

Another important aspect to be pointed out is the importance of milk cows in the local agro-ecosystem, be they used as financial reserves or as producers of manure. Hence a policy for stimulating dairy production on a municipal level seems, from various angles, to be a necessary strategy for a more sustainable development for agriculture in Rebouças.

Poultry farmers

This is another farmer that is rare in the municipality. Their primary difficulties are in the high investments required for beginning or increasing their activity. The scale of production is important for higher security for the farmer. This security is nevertheless threatened by the risk of being cut from the system of integration for "not doing what they are told" – that is, to faithfully follow the companies' technical advice – and having to submit to the ever changing conditions of the contracts.

Integrated swine farmers

The integrated swine farmers, much like the poultry farmers, complement their main income source from integration with the agro-industry with annual corn, bean and often soybean crops. There are few integrated swine producers in the municipality; two raise young pigs, and 13 fatten them. Nevertheless, in comparison to the others, swine integration seems to have the most possibilities for growth in the municipality, as Sadia is predicting a tripling of the size of their plant in Ponta Grossa by the year 2003.

The production scale, the necessity to obey the changes in the system and follow (at their own risk) the technical orientations (along with the increased work load) are problems that threaten the security which producers seek in integration.



Public policies in Rebouças and their implications for its agricultural sustainability

In the previous chapter, a set of far-reaching and varied public policy proposal was highlighted according to the types of farmers identified. The proposal, by way of example and limited to the scope of this research, were directed toward the promotion of social, economic, technical and environmental sustainability in farming in the municipality of Rebouças. This chapter will demonstrate the impacts of policies recently implemented. Federal, state and municipal policies were considered as well as the policies of the farmers' organisations and AS-PTA. Besides describing the contents of these policies, their implementation process, especially the participation mechanisms that were involved during their conception, implementation and monitoring are highlighted. First, however, to better understand the process of implementation of public policies in the municipality, the main stakeholders and institutional mechanisms involved are listed and described.

5.1 Stakeholders that influence the shaping and implementation of public policy for agriculture in Rebouças

The public policies that affect agriculture in Rebouças, whether federal, state or local are implemented and/or mediated by one or more of the following stakeholders.

Municipal Secretary of Agriculture and Environment: responsible for shaping and implementing the municipal council's public policies. It uses resources from the municipal council's budget²¹ and from

²¹ According to the Organic Law of the municipality of Rebouças, 3% of the total municipal income tax must be applied to agricultural incentives.

different state programmes (such as the Paraná 12 Month Programme²²) and federal government (like the PRONAF-Institutional);

Commercial banks: contracts for agricultural credits for farmers are negotiated through the Banco do Brasil and Banestado. They have enormous power for directing the application of credit resources assigned to the municipality;

EMATER-PR: significantly influences the cropping methods used, especially through its favouring of technological packages for modernisation. Many of the farmer training programmes linked to governmental programmes (such as PRONAF) and implementation of institutional structures directed at local development (such as the Municipal Development Council) are executed by them. Its influence on farmers is due to its importance in the state government's institutional structure for agriculture. And by the fact that it mediates access to many governmental programmes, EMATER exercises considerable influence on the behaviour of other stakeholders. These include the commercial banks, the Municipal Secretary of Agriculture, leaders of the farmers and their community associations, the co-operatives and the industrial enterprises (those which supply inputs as well as those which offer integration);

STR: between 1986 and 1991, the emphasis of STR's work was on the struggle for recognition of farmers' citizenship and the defence of their rights (social welfare, etc.). From 1991 on, their relationship with its members became closer ("inside the farm gate"), in search of a technological model that was more appropriate to the conditions of the municipality's farmers and the promotion of agro-ecological practices in the communities. As a consequence, in 1996, the main STR leader was elected mayor. There are indications that the STR is currently politically weakened. Notwithstanding, it remains the largest producers' organisation in the municipality. With

22 The Paraná 12 Months Programme is a project financed by the World Bank. It is aimed at combating rural poverty, and management and conservation of natural resources. This programme had not yet been implemented at the time of this research.

approximately 2,200 members, it will certainly maintain its importance in public policy decisions for agriculture;

Industrial enterprises: Although they neither shape nor implement public policies, industrial enterprises nevertheless exert strong influence over them. In the case of the companies that produce inputs, machines and equipment, influence is manifested mainly through technical assistance and by their methods for marketing their products. In the case of the integrating industries, as has already been highlighted, the relationship between the company and farmers is very tight, involving various aspects of the latter's economic activity, such as financing, technical basis, prices received, and sales;

Rural associations: the community associations have in total around 700 members. They promote community service, organise collective work and present the communities' demands to municipal councils and authorities;

AS-PTA: NGO that runs a programme directed towards family farming's sustainable development in the south central region of Paraná. It has had an important role in supporting the STR, the community associations and the municipal government in the shaping and implementation of public policies directed towards the agro-ecological conversion of the agro-ecosystems in Rebouças. It maintains a programme for technical education and participatory experimentation in one of the communities of the municipality, the Faxinal do Marmeleiro.

Besides the stakeholders that are known as distinct entities, two public policy decision-making institutions have recently appeared in Rebouças.

Conselho Municipal de Desenvolvimento Rural (CMDR) – the Municipal Council of Rural Development: Rebouças has some councils that gather representatives of the public and the private sectors, and beneficiaries of the policies. Within them, demands are made, priorities defined, concrete proposals submitted and decisions about public policies taken. The council that is most relevant to this

project is the CMDR. It is composed of 20 members and their respective substitutes, half of which represent the managers of the policies and the other half that represent the users. In the case of Rebouças, this council is not merely a façade for legitimising the municipal council's policies. It has been meeting monthly, listening to demands, examining proposals and offering suggestions for public interventions for the rural reality of the municipality;

Conferencia Municipal de Desenvolvimento Rural – the Municipal Conference on Rural Development: a collegiate organ for discussion, composed of representatives from the community organisations, trade unions, professional and other entities of the municipality, as well as the municipal council. The conference is an assembly of leaders and representatives of the local institutions that are interested in rural issues. They meet every two years by the CMDR's convocation.

5.2 Federal and state public policies for agriculture in Rebouças

As is all too well known, small municipalities in Brazil, especially those in regions that are less favoured economically (such as in southern-central Paraná), have very low budgets. These budgets are almost entirely consumed by fixed costs related to salaries, health and educational services, and general maintenance. In addition, many municipalities are deep in debt, compromising their capacity to invest in public policies that promote development. The greatest financial resources for agrarian and agricultural policies, in these cases, come from state and federal programmes. This applies to the municipality of Rebouças as well.

Many resources have been applied to the municipality's agriculture in recent years through a series of state and federal programmes. The objectives of the main programmes, comparing them with the results reached through their implementation, are now described.

Federal Programmes

Financiamento de Máquinas e equipamentos (FINAME RURAL) – Financing of machines and equipment

This federal government credit line is for financing of up to 80% of machine and equipment purchases. The machines must be new and selected from a list approved by the BNDES²³. The TJLP²⁴ plus 6% interest per year are charged and must be repaid within seven years. Its users are rural producers, without category distinction.

Information from the Brazilian Central Bank indicates that in the state of Paraná it is mostly medium sized farmers that use this credit line. In 1994, 50.8% of the total number of contracts and 60.9% of the total value conceded were to these farmers. This profile continued in 1995.

According to the producers' representatives, this credit line is not compatible with the payment capacity of most farmers, as a large number of farmers in Paraná default on this debt. A loan extension made possible by the federal government since the beginning of 1996 rescued some of them.

In the municipality of Rebouças, the implementation of FINAME suffered enormous influence from machinery and equipment retailers. Banks made access to this credit extremely easy, even for farmers that did not have any possibilities to repay it. The retailers themselves prepared the credit projects for interested farmers, which, in turn, were recommended by the local EMATER staff. Many of the farmers intended to purchase more modest and/or second hand equipment but were convinced otherwise by "technical assistance". The result of these loans could be no other than the enormous default observed, followed by economic downfall and environmental degradation of the farm. As seen in the previous section, the purchase of machines and equipment using this credit line has decisively compromised the sustainability of the agro-ecosystems of the farmers in the municipality.

²³ BNDES: Banco Nacional de Desenvolvimento Econômico e Social (National Bank for Economic and Social Development).

²⁴ TJLP: Taxa de Juros de Longo Prazo, the long-term interest rates defined each quarter by the BNDES.

PRONAF

PRONAF is a federal government credit line, implemented in 1997. Its general objective is to create conditions for increased productive capacity, job generation and better income, contributing to the improvement of the quality of life and increasing the family farmers' exercise of their citizens' rights. The following criteria for access were established: possession of no more than four "fiscal modules"²⁵ (in the southern and south-eastern states of Brazil, this comes to between 5 and 30 hectares); 80% of the applicant's income must originate from farming activities; recipients must live on the farm; and may not have more than two permanent employees.

PRONAF's conditions are a maximum reimbursement deadline of eight years, delayed during the first two years, with interest calculated by the TJLP plus 6% per year. Those that pay on time receive a 50% discount on the TJLP. As such, the financial costs and reimbursement schedule are more favourable than conventional agricultural credit lines.

In the municipality of Rebouças, as in almost all municipalities of the southern region of Brazil where tobacco is produced, resources offered by PRONAF were appropriated by the tobacco industries, directly counteracting the strategic objectives of the programme itself. The origins of the resources used by the integrating companies for financing the cropping of tobacco were (and continue to be) in a large part from PRONAF. In 1996, about 94% of all the resources from PRONAF in the southern region of Brazil were applied to tobacco farming through the following fraudulent means that make use of misinformation and the good faith of farmers. The instructors from the tobacco companies prepared the crop projects for the farmers, who in turn signed the projects without knowing the origin of the resources. (In fact, many farmers tried to get credit through PRONAF but did not succeed because they had already received one unknowingly, as a "company credit".) The STR supplied the farmers with the necessary "carta de aptidão" (a document that proves that the farmers fit the required

²⁵ Translator's note: "Fiscal modules" are indicators for the minimal size of land needed to support one family. They are defined by INCRA – Instituto Nacional de Colonização e Reforma Agrária, (National Institute for Colonization and Agrarian Reform).

description to access the bank credits) without knowing their future destination. The credit resources reached the hands of the farmers in the form of inputs delivered by the tobacco companies, which, in turn, overvalued their costs. When repaying the debt, the companies charged normal market interest rates and not the lower ones from PRONAF. The farmer's debt was converted to the equivalent of first grade tobacco, "BO1 quality". The farmers do not have access to the classification of their product and must suffer unfairness in this procedure.

This process of "officialised fraud" was with the collusion of the banks, as the tobacco enterprises underwrote the farmer's debts, providing greater assurance to the credit operations.

Once this distortion of public policy was denounced, a series of reactions by the farmers' movements began. The STRs stopped providing the "cartas de aptidão". The National Confederation of Agriculture, together with the Central Bank thereafter successfully negotiated to allow employers' trade unions and EMATER to issue the "cartas de aptidão". The tobacco enterprises, in turn, pressured the farmers to change their attitude about the political mobilisation surrounding this problem, threatening that future tobacco prices would not be raised.

Until now, the farmers in the municipality have been unsuccessful in obtaining credit from PRONAF. When they present isolated requests, they rarely achieve this credit since the banks either claim lack of resources, poor quality of the projects presented, or the farmer's inability to reimburse the debt.

Another special credit line of the programme often used in the municipality was the PRONAFinho²⁶, for cropping costs, and only for farmers with annual gross incomes of up to R\$ 8,000 (US\$ 7,100). Resources for the PRONAFinho came from the FAT, the Fundo de Amparo do Trabalhador – the Worker's Support Fund.

²⁶ PRONAFinho – the "little PRONAF" has a credit limit of R\$ 500 to R\$ 1,500 (US\$ 450 to 1,340), of which R\$ 200 (US\$ 180) are a grant. Interest rates are fixed at 5,75% per year.

The implementation of the PRONAFinbo in different municipalities of the south central region of Paraná has shown the same distortion previously described for the normal PRONAF. It functions as a mechanism to transfer public resources to agro-industrial enterprises, eventually in opposition to the interests of the farmers themselves. To obtain the resources from this type of credit, following approval of their application, the farmer must obtain a bill for the purchase of inputs in commercial shops – in general strangely indicated by the bank staff – and present it to the bank. This procedure prevents the farmers' direct access to the financial resources. These are directly deposited in the bank accounts of the shops and the farmers receive the inputs that were purchased. Through an agreement with the FAT, the bank receives an administration fee of R\$ 16.50 (US\$ 14.70) per month for every project. In a six month project, therefore, the bank receives R\$ 99 (US\$ 88).

The technical projects are "prepared" by the extensionists of the local EMATER office based on a software programme that allows the input of only two variables: the size of the area and the crops to be financed (corn or beans). An agreement between FAT and EMATER-PR reimburses the local EMATER offices for every project prepared. The inputs financed are the improved seeds, fertilisers, soil amendments and agrottoxics. These regulations do not offer any possibility for the farmer to apply the resources according to his or her specific needs. Additionally, it does not respect the norm that allows for the application of up to 20% of the value lent for expenditures related to family maintenance.

In the municipality of Rebouças, because of intense political mobilisation by local organisations, farmers were not obliged to submit to the indecency of having to show purchase receipts from the shops in order to access the financing. However, they were still subjected to a no less indecent requirement to follow standard projects elaborated by the local EMATER. Another mobilisation of the farmers against this type of technical imposition began. A result of these demonstrations is the expectation that agro-ecological practices may be adopted for the 1999-2000 crop.

The PRONAF-Institutional is the third PRONAF model applied in the municipality. Its objective is to "finance the establishment, enlargement, modernisation, increased efficiency and relocation of infrastructure necessary to strengthen family farming, in order to improve the farming sector and assure the maintenance of rural development" (Agricultural Ministry, 1996). Its application is done on the basis of a Municipal Plan for Rural Development, which is defined at the local level by the Municipal Rural Development Council. Its implementation in Rebouças is described later, in item 5.3.

State programmes

Projeto Integrado de Apoio ao Pequeno Produtor Rural (PRO-RURAL) – Integrated Project for Support to the Small Farmer

Executed between 1981 and 1987, PRO-RURAL's main objective was to overcome the factors that determine the low yield, poverty and backwardness of certain rural regions in the state of Paraná.

The target group or beneficiary of PRO-RURAL should be rural farmers with farm sizes of up to 50 hectares. These would receive special credit conditions to change production methods, increasing yields in small farms. However, this strategy failed due to a lack of autonomy on the part of the state government to make macroeconomic decisions. Despite the fact that the credit was part of PRO-RURAL, access was limited by rules established at the federal level. At the time, the interest rates were not compatible with the reimbursement capacity of the target group. This hindered the realisation of the objectives of the productive sub-projects oriented to technical assistance, rural extension and farming advancement.

Farming Research has had successes in generating appropriate technologies through the implementation of demonstration units. However, the incorporation of these technologies was limited due to the precarious financial condition of the majority of the farmers located in the project area. So much so, that the innovative technologies only showed good results in field projects done by IAPAR, Paraná's farming research institute.

In general terms, the majority of investments made by way of PRO-RURAL have contributed to the expansion of the state agricultural support infrastructure. PRO-RURAL made it possible for the entities organised under the Secretary of Agriculture to purchase equipment, machines and implements, offices and mainly vehicles: in other terms, conditions to operate. Nevertheless, it did not manage to reach its goal of stimulating the production of basic foods – rice, beans and manioc – in the small farms. It also did not succeed in directly benefiting the target group – small farmers with precarious material conditions for production – and was not even sufficient to reverse the excessive division of farms in the municipalities included in the project.

In the municipality of Rebouças, as in others described above, PRO-RURAL was used basically for building infrastructure such as roads, bridges, storage facilities for the Co-operative, purchasing large grain dryers, etc. Though some of the construction was necessary, the resources used through this programme did not face the problems of the main agro-ecosystems present in the municipality.

Programa de Desenvolvimento Rural do Paraná (PARANÁ-RURAL) – Rural Development Programme of Paraná

This programme was implemented between February 1989 and March 1997. Its basic focus was the increase of the investment capacity of the *small and medium farm by means of rational use of the existing natural resources*, the diversification of farming as way to reduce risks and increase income, as well as improving the quality of life of the rural population.

The main objectives of PARANÁ-RURAL were: the increase of plant cover of the soil; increase of water infiltration; control of water run-off; control of water pollution caused by the use of agrottoxics and the siltation of rivers due to soil erosion.

Of all the resources planned in the programme, approximately 87% would be used by public entities and only 13% would reach the farmer directly. However, by the end of the programme only 10.9% of the resources had reached the farmers.

In Rebouças, the resources which went to the farmers were almost entirely used in the distribution of limestone for incorporation in the soil and, secondarily, to the construction of “murundums” – terraces designed to decrease erosion from rainwater run-off.

From a technical point of view, the application of limestone, when done in an isolated manner, proves to be of extremely limited benefit in resolving the structural problems of the municipality’s agro-ecosystems. The state research enterprise itself recommended the use of limestone in combination with other soil conservation management practices. However, limestone was recommended in high doses – always above four tons per hectare – which even in the short term can cause serious degradation of the soil’s physical, chemical and biological conditions, compromising its productive capacities. It was also strange that the state government at the time purchased immense quantities of limestone for distribution throughout the state without taking into consideration the technical recommendations of its own agencies. Finally, limestone purchases were from one company only – one owned by the brother of the governor at the time. This despite the presence of other suppliers in the state that could have provided the limestone at no cost, for example, Petrobrás (a public oil enterprise) in the municipality of São Mateus do Sul owns a huge mineral reserve where this input is produced. This limestone scandal was dismantled in the following government, and limestone was purchased at different mines, significantly decreasing transportation costs.

The proposal for making terraces proved to be extremely unsuitable for the agro-ecosystem in the municipality. When constructed, they invariably presented counterproductive results. Besides being high cost structures (therefore not viable for the great majority of the farmers of the municipality), these terraces proved environmentally and technically inappropriate for the shallow soils in Rebouças. Their construction also made cropping temporarily infeasible due to the compaction of the soils caused by the heavy machines. The terraces themselves occupy a significant area that can never be cropped.

Programa Panela Cheia – the “Full Pot” programme: credit through product equivalence.

The Panela Cheia programme was implemented by the state government between 1991 and 1994, with the object of making the structuralization of rural establishments and the modernisation of Paraná's farming feasible. This would be achieved through the application of credit resources and of technical assistance, in order to increase the food supply and to create satisfactory conditions for the development of the small farmer.

Through the implementation of this credit system, both for cropping costs and for agricultural investments, the state government tried to improve a situation wherein the destructuralisation and impoverishment of the farmers was becoming more evident, particularly in the economically weakest sectors.

The central idea of this credit system was the compensation (equalisation) of the differences that occurred at that economic moment, between the credit costs – (basically the monetary correction indexed by general economic indices, which are highly sensitive to changes in financial policy) and the value of the agricultural production, whose sale prices present variations based on seasonal and long cycles.

In this context, the goal of the Panela Cheia programme (based on the equivalence of the credit balance with the prices of the products) was to allow the farmer to analyse his or her reimbursement capacity and the risks that he or she could assume, with the interest of improving production and profitability.

The credit limit per farmer was the equivalent of 2,000 sacks of corn (average price supplied by SEAB/DERAL²⁷) for permanent investments, with the possibility of up to an additional 800 sacks for cropping costs.

This form of loan was, in general, well accepted by the farmers and was maintained between 1991 and 1994. Its suspension caused controversy

²⁷ SEAB: Secretaria de Estado da Agricultura e Abastecimento (State Secretary of Agriculture and Welfare). DERAL: Departamento de Economia Rural (Department of Rural Economy).

and a strong debate between the farmers, representatives and the staff that dealt with its conception and implementation, and the representatives of the new government, including as a consequence, the new board of directors of the Banestado Bank.

The interests of the new state executive power prevailed and, as such, the *Panela Cheia* programme was not renewed. The discontinuation of this programme was harmful for the farmers with precarious material production conditions. The actual state of their agro-ecological systems, as previously seen, demands a permanent policy of facilitated credit to urge them towards sustainability. Besides ending the programme, the new government recalculated the pending debts, multiplying them for many farmers.

In Rebouças, the *Panela Cheia* resources were used for the purchase of machines, animal traction equipment, financing of cropping costs, etc. However, as the operational cost was very high, more impoverished small farmers were not able to make use of this programme. For example, for the purchase of a R\$ 600 (US\$ 535) tiller, R\$ 250 (US\$ 220) must be paid through their own resources for the operational costs of the credit system. Various farmers in the municipality purchased sheep upon EMATER's recommendation and had very bad results due to the lack of tradition with this activity. Even now, many farmers of the municipality have problems related to loans from this programme.

5.3 Municipal public policies for agriculture in Rebouças

The analysis of the effects of local public policies on agriculture in Rebouças begins when AS-PTA inaugurated its work in the municipality in 1993, with emphasis on the period after 1997, at the beginning of the present municipal government's administration. In 1993, the following aspects characterised the main stakeholders and the public policies implemented by them:

- i. Domination of the municipal council by politicians who were

traditional in their administration management style and conservative from a political ideological point of view. They revealed little commitment to the specific demands of the poorest family farmers in the municipality (the majority of the rural population). The farming policies implemented by the municipal council favoured the farmers with greater resources, practically excluding the more disadvantaged ones;

- ii Increased strengthening of the STR since the country's redemocratisation in 1985. Confrontational young leaders who were becoming increasingly accepted by the movement directed it. After a period when emphasis was placed on the defence of farmer's rights (welfare, etc.) – the trade union began to question the basis of poverty, including the model for agricultural technology.

AS-PTA began its work in the municipality in 1993, oriented by the following methods and strategies:

- Local development with the municipality as a political unit of reference. For the NGO "the local level is the essential base for planning, generation of proposals which can be spread, social economic and environmental monitoring and of demonstration of viable alternatives" for the promotion of agro-ecology;
- The creation of an agro-ecological consciousness;
- The search for economically, environmentally and culturally sustainable systems. This is a medium and long term objective, but begins with the identification and confrontation of the immediate problems;
- The recognition of the need to intervene in public policies so that sustainable farming systems can be established, attempting in this way, to influence the shaping of municipal and regional development proposals;

- The strengthening of regional and state networks as essential elements for the exchange of experiences and for the increase of social and political awareness of successful proposals;
- The generation and use of participatory methods, both in the stages of appraisal, experimentation, demonstration, formation and dissemination, as well as in the management of decentralised and democratic processes of local and regional development.

To implement its strategy on the local level, AS-PTA invested strongly on three social-political-cultural guidelines:

- Reconstruction and strengthening of farmers' identity, either through the revaluation of their knowledge – their capacity to manage both their own knowledge as well as that acquired – or by the revival of the social fabric and the socio-cultural life of the communities supported by the project;
- Strengthening of association by farmers at the local level, through emphasis on their autonomy and capacity for initiative, trying to create mechanisms that insure the self-sustainability of the organisations and their activities in the short and medium term. In this sense, besides highlighting the importance of the managerial capacity of those associations, AS-PTA's work has attempted to place them within the group of existing institutions in the municipalities. This stimulates partnerships and complements their individual skills so that they can interact among themselves, contributing with technical and organisational support for the reinforcement of others;
- Strengthening of the rural workers trade union movement and consciousness of a sustainable development model based on environmental preservation. AS-PTA's basic work was to sensitise the leaders for the adoption of an agro-ecological model of sustainable development for family farming. It overcomes the mere demand for the "democratisation" of the present model of agro-industrial modernisation based on the Green Revolution that is still important for many leaders, especially those of the trade unions.

The starting point for the experience in Rebouças is AS-PTA's experimental work with farmers' communities through the participatory appraisal of the main problems of the present agro-ecosystems. AS-PTA organised its activities in the municipality based on the following main themes:

- Management of genetic resources, with the aim of searching for and spreading knowledge for the recuperation, improvement and production of native varieties of the traditional crops in the municipality. The activities were developed initially with emphasis on the autonomous production of corn seeds, but expanded to include bean seeds in an effort to revive and improve varieties that were locally well adapted. Work with green manure seeds has already been started, as well as experimentation with organic vegetables, stimulating the creation of organic vegetable gardens;
- Animal management and nutrition, with the intention of improving the nutrition of herds that occupy pasture areas. These are usually over-grazed and degraded, encouraging a vicious cycle of malnutrition and over-exploitation of the soils. AS-PTA's work has stimulated the decentralised introduction of rustic breed reproducers, and improved animal nutrition through supplementing their food with mineral salts as well as through the larger supply of cultivated forage;
- Ecological management of soils based on use of green manure, minimum tillage without the use of herbicides, avoiding the burning of fields for soil preparation, conservation activities like leaving strips of vegetation and the use of rock phosphate and limestone in small doses;
- Revalorisation and management of the home garden based on agro-ecological proposals to improve the families' food security.

In 1997, the main STR leader took the mayor's post with massive electoral support of the rural population. The STR's victory occurred in the following stages:

(1st) there was a confrontational trade unionism searching for an alternative proposal of action; (2nd) a set of successful experiences propelled by AS-PTA in communities of the municipality that indicated the existence of alternative technologies for the dominant model of modernisation: the work with native seeds and other experiences; (3rd) establishment of trials and educational meetings were promoted, to sensitise the trade union leaders on the importance and political and economic meaning of the agro-ecological proposals; (4th) the "crossing" of the two institutions allowed the identification, by the small farmers, of the work with agro-ecology – for example the seed fields promoted by AS-PTA as the "trade union's" seed fields; (5th) this identification opened a proactive attitude for the trade unions and the acceptance of a proposal that associated agro-ecology with concern for the improvement of the families' quality of life; (6th) the proposal became an important part of the Worker's Party electoral platform for the "trade union's candidates"; (7th) these candidates won the municipal election and took over the municipal council of Rebouças.

As a result, the alternative agriculture proposal, with emphasis on the families' quality of life, became a basic point in the Worker's Party proposal. In relationship to the manifesto for agriculture presented by the Worker's Party during the campaign, one reads: "Technical and financial support for the use of natural techniques that improve the soil: organic and green manure, proper use of limestone and rock phosphate, minimum tillage, with consequential decrease in the use of chemical fertilisers and poisons, without loss of productivity and with low production cost"²⁸.

The "trade union's candidates" announced that, in order to reach the alternative agriculture target, it would work together with AS-PTA and the local EMATER. In addition, one of its targets is to support the

²⁸ "Plano de Governo do PT".

struggles and activities of the STR and the Integrated Community Development Association of Rebouças (ADECIR).

Following the elections, AS-PTA insisted in the preparation of an "immediate agenda" (to be implemented by the Municipal Secretary of Agriculture and Environment) that would emphasize the following points:

- Discussions with the local EMATER to evaluate the technical assistance situation and outline a future collaboration for the implementation of a programme for alternative agriculture in the municipality;
- Discussion with the Municipal Rural Development Council to discuss the proposals for reshaping the secretariat and for starting the elaboration of a Municipal Rural Development Plan;
- Discussion with a group of community leaders and the STR of Rebouças to deepen the propositions made by the Secretary and to serve as practical and political support groups for the Secretary's actions in the communities;
- Shaping of a policy aimed at the articulated elaboration of small projects that could give operational substance to the Municipal Rural Development Plan.

Despite their precarious budget, the municipal council of Rebouças had some proposals for the implementation of agricultural policies in the municipality, the following of which stand out:

1. AS-PTA's proposal to use the previously existing Secretary of Agriculture's infrastructure: based on an evaluation done at the end of 1996, AS-PTA, upon the request of and in agreement with the Secretary of Agriculture, presented a proposal that included, among others, the following measures:

- **Launching the project "Família na Terra" ("Family on the Land"):** to be developed together with poor farming families that are in precarious subsistence conditions. The project's actions would include: (1) working an initial area of 120 hectares; (2) the funding of inputs: rock phosphate; dolomitic limestone; black oat, corn, bean, and other seeds; and manioc and sweet potato cuttings; (3) distribution of male and female reproducing pigs and fertilized eggs; (4) production practices oriented by the implementation of sustainability, according to agro-ecological principles; and (5) a process of technical and organisational education for participating families. The project would count on resources from the municipal budget and would search for other sources such as the federal programme "Comunidade Solidária" as well as others. The farmers would be financed through a product-equivalence scheme, preferably reimbursed with products and according to feasible timetables for the families.

- **Creation of a genetic resources project to be implemented by SEAB** based on a contract between the municipality and international cooperation agencies (*to be identified*). *This project would be the amplification of previous seed and municipal nursery projects.* The project's aim would be promotion of a large programme of genetic resources of crops and other items, with the community groups as its main protagonists. It would consider diverse aspects related to the revival, use, conservation and reproduction of these resources and stimulate actions to promote the improvement, exchange, processing, storage, etc of these resources. The project would begin with the technical education of a group of farmers, who would be responsible for the promotion of the project's activities together with the communities.

- **Creation of a soil management and conservation programme:** use of limestone, contour cropping, road conservation, green manure and other aspects. This would be done through an intensive farmers' educational process at the community level, taking into account the differences between the communities. The programme would be financed by the resources allocated in the agreements with SEAB.

- **Creation of a forest management plan:** a complete reshaping of the municipal nursery's goals, in order to promote the production of a greater diversity of species to correspond to forest management needs. These needs would be discovered together with the communities in the municipality. The nursery would be transformed into an active forestry germplasm bank, and would be integrated with other small group nurseries in the communities which would be responsible for the production of a larger amount of saplings of determined species, like maté, Brazilian pine tree, Brazilian cedar, etc.
- **Creation of a farmer's educational programme:** this would represent a basic premise for the promotion of rural development. This programme would be directed by the farmers' participation in all its planning and execution stages. It would produce feedback on different levels, in different ways on the actions of the Secretary of Agriculture and its partners.

2. The municipal council's PRONAF-Institutional: in the beginning of July 1997, the municipal council presented the Ministry of Agriculture with a PRONAF infrastructure project, that had been previously approved by the Municipal Rural Development Council. The project was approved in July 1997, and should transfer around R\$ 150,000 (US\$ 134,000) per year (renewable for four years) – a significant amount for governmental intervention in Rebouças. There were modifications in the original project, and the municipal council's plea that 90% of the resources requested be allocated to cropping costs and not for investment (as is required by the PRONAF-Institutional) was accepted. The criteria for the execution of the municipal council's PRONAF-Institutional were established by the Municipal Rural Development Council. For example, although all the resources obtained by the PRONAF-Institutional were grants, the council decided that while 70% would in fact be given as grants, the farmers would repay the other 30% for the creation of a municipal fund. 500 of the poorest families in the municipality would be included in the programme. These families would be chosen by the community associations, which, together with the Secretary of Agriculture would do follow up. These would include an educational

programme based on the experiences encouraged by AS-PTA that were already occurring within the municipality. Were the project renewed after the first year, the development council would confirm (or not) the rules and would decide if the same 500 families would continue in the programme. Conceived in this way, the municipal council's PRONAF is a powerful instrument to mobilise those excluded from agriculture (including from the bank's PRONAF) and improve the living standards of the smallest producers.

In accordance with its previous proposals and objectives, AS-PTA requested again that the Rebouças Secretary of Agriculture and Environment take responsibility for the shaping and execution of the alternative agriculture operational proposal, as pledged during the electoral campaign. AS-PTA also requested that this be done together with the Municipal Development Council and in agreement with the community leaders and with the STR.

However, this was not the result. The proposal, in general terms, was forgotten. The farmer's representatives demobilised, the alternative institutions such as the Municipal Development Council lost most of its members and AS-PTA was marginalised in its advisory role.

Since its beginning, the municipal council's practice has been to try to link itself directly with the communities through its Secretary of Agriculture, without involving the rural worker's trade unions or the community associations. This practice tends to weaken the farmers' organisation and at the same time risks becoming a populist exercise in governmental intervention. There is an apparent trade off between mobilisation and organisation. This favours the Secretary's practice of "substitutionism", as indicated in the introduction of the municipal council's project financed by PRONAF-Institutional in 1998. In this case, "substitutionism" caused a lost opportunity for disseminating green manure trials, favouring instead the traditional use of limestone, which is more expensive and less efficient in the long run.

Besides that, with the constitutional change in 1997 that allows the reelection of mayors, state governors and the president of the Republic,

the administration of Rebouças started to work with the perspective of the mayor's re-election. This political investment in re-election has apparently given advantage to short term actions (which have greater electoral impact), to the detriment of a longer term policy that attempts to establish a programme for municipal agriculture based on the principles of sustainability.

Considerations on the implementation of public agricultural policies in the municipality of Rebouças

Based on the case study carried out here, one notes that the present processes of shaping and implementing public policies pose great obstacles to the conversion of Brazilian agriculture to one that is based on the principles of sustainability. The public initiatives and the social forces for the implementation of effective participatory social and political dynamics, both at local and at national levels, are restrained by a political system that is only nominally representative. This political system, wherein the interests of a rural elite are associated with a centralising state, suffers the need of true representation. As a result, the interests and demands of the poorer portion of the rural population are left disregarded and the concerns for long term conservation of the environmental conditions that give support to farming are being relegated to secondary importance.

What follows, by way of conclusion, are comments on the impacts of public policies on farming in Rebouças.

6.1 The impacts of federal and state public policies

From the assessment of the impacts of federal and state public policies on farming in Rebouças, a number of conclusions can be formed.

The issue of credits

Apparently, there is an important lack of compatibility between family farming and commercial banks. Among the different farmers interviewed, all of those that were indebted were in a psychological and

economic state of anguish, practically without possibility of returning to their normal productive activities. The farmers that were either managing to maintain a sufficient income for the maintenance of the family's livelihood, or getting a reasonable income, or even being able to purchase some types of machinery – including combines for the beans – were those which were not indebted to the commercial banks. This does not mean to suggest that the family farmers do not have credit needs. They are clearly necessary due to the farmer's lack of capability for self-financing and the numerous specifics of farming activities. What it does mean is that credit should not be channelled through commercial banks. This brings to our attention the need to either recuperate the public character of the state banks (which are the most active in agriculture), or to define other institutional agents capable of directing financial resources to the small and medium family farmers in a more suitable way.

It is probable that this incompatibility is explained by the radically diverse logics of how these two institutions operate. The central question in family farming is the suitable management of their resources: the family, nature, accumulated knowledge, equipment etc. Family farms seek the maintenance or increase of these resources in a high risk economic context, and in the perspective that the family is, as anthropologists and the farmers themselves have already taught us long ago, simultaneously a consumer and producer. Within this logic, the use of investment credit for refurbishing the house, for example, contrary to the banks' judgement, may not be a deviation of credit, but represent a productive application of this fund. It stimulates the farmer's children to stay on the property (keeping them from moving out), part of a strategy for the conservation of the resources available for production. As we know, the logic of the commercial banks is very different, explaining the remarkable statement made by one of the members of the banks interviewed: "The small farmer is very bad for the bank. The big farmers are the good ones; they take out loans without needing them and invest them in the bank, guaranteeing the Proagro²⁹. In this sense,

29 Proagro: Programa de Garantia para a Atividade Agropecuária (an agricultural insurance programme).

the logics of banking, not the “perversity” of the bank managers, impose upon the small farmer a credit policy that becomes extremely bureaucratic and generates important monetary costs for the loan taker, both in terms of the paper work (land ownership certificate, etc.) as with the insurance and the purchase of other bank services that are required³⁰.

Indebtedness has a devastating psychological effect on the great majority of this type of farmer: countless cases of deep depression and even suicides among indebted farmers have been reported. Their cultural, religious and ethical heritage makes their default on the farming loan not an indicator of cleverness or of financial gambling, but of significant failure. As such, the farmer's being in debt cannot be considered as merely a circumstantial economic operation between two agents related to each other through the financial market. Debt heavily affects the family group's balance, its capacity to work and the standard of social wellbeing.

Both researchers as well as farmers emphasise that bank loans continue to impose a technological package combining the use of agrottoxics with farming machinery upon small farmers. Once this “modernisation” has begun, the small farmer tends to completely transform all their production costs into monetary value, increasing them in real terms, and concentrating their production on one or a few crops suitable for the machines. By doing so, they degrade the soil, which will then require additional use of agrottoxics. This increases the production costs even more and damages the health of their families and nature. Resource availability is decreased in both quantity and quality, decisively compromising farmers' management ability. As such, farmers demand the separation of rural credit from the machinery industry interests as well as increased flexibility of the technological package imposed, in such a way that the use of agro-ecological technologies are made possible, reducing costs and losses to health and nature.

³⁰ It was suggested, for example, in one interview, that in some situations a loan of R\$ 6,000 (US\$ 3,350) for the purchase of a tractor obliged the loan-taker to spend around R\$ 1,200 (US\$ 1,070) in machinery insurance.

Finally it must be highlighted that many credit lines for small farmers are opened in preparation for elections, which, especially in governmental banks, often explains the ease by which the loans are obtained, even in situations in which default is easily predictable.

The discontinuity of the policies

The discontinuity of public policies is a rather common characteristic in all levels of government. It decisively hinders the possibility of establishing strategic approaches within the guidelines that direct the shaping of public policies for overcoming the basis of unsustainability in agriculture.

Political succession in government, especially between opposing groups, has been the main cause of this discontinuity. The expectation of continuity greatly influences the shaping of public policies. It makes those in charge particularly sensitive to the adoption of measures that have immediate electoral repercussions. These interventions more often than not slow or counteract the effects of long-term objectives. In general, these policies are not compatible with the ones made by their predecessors, nor with the ones made by their successors, thus explaining the discontinuity.

The suppression of the Panela Cheia Programme may be the most meaningful example of this phenomenon within the study made in Rebouças.

The inappropriateness of the technical proposals stimulated by public policies

The most notable feature of the Green Revolution's technological model is its favour of technologies that depend on external resources. The region studied has resigned itself to integration with the processing industry as its production model. As such, farmers see themselves as bound in dependency to the agro-industries, both to those supplying inputs as well as those purchasing the products. This dependency has meant a transfer of wealth from the agricultural to the agro-industrial sector, causing the former to become increasingly impoverished.

By reaffirming the option for modernisation based on the Green Revolution's technical model, the public policies reinforce this process that transfers wealth and perpetuates technological dependency, thus imposing a cycle of economic, environmental and cultural unsustainability upon family farmers.

Besides the fact that the technical model is ideologically inappropriate (by imposing technical dependency on the farmers), techniques proposed by public policies shaped outside the local context have proven inadequate. Technical proposals that were successful elsewhere did not necessarily encourage a greater sustainability in the local agro-ecosystems. In our study, the construction of terraces for erosion control was a typical example of this.

Local appraisals that identify the physical, economic and cultural features involved in the agro-ecosystem must be performed in order to overcome these types of problems. It is an essential step for the shaping of public policies for sustainable agriculture.

The influence of the policies' intermediary stakeholders

The technical and economic rationality of those that mediate federal and state public policies at the local level has been a significant factor in causing the differences between the contents defined during planning of these policies and their practical implementation.

The banks' economic logic and their influence on the destination of public credit resources have already been mentioned.

The local EMATER, in turn has imposed its technical logic by means of technological packages that hinder possibilities for farmers to access resources for investment in innovative proposals that promote the conversion of their agro-ecosystems. There is a consensus among the farmers and their leaders that EMATER, at least in Rebouças, was one of the accomplices in the process that caused their debt accumulation. This is explained by the staff's uncritical dispersal of technological

packages, as well as by the fact that all loan contracts needed a technical assessment of the project's viability. This assessment was done largely by the staff of this state enterprise. It is not surprising, therefore, that for many farmers EMATER could be closed down without any loss in their productive capacity.

The same happens with the agro-industries (both those that supply the farmers and those being supplied by them) in their influence of the farmers through programmes for training and technical assistance, credit, insurance and marketing, eventually financed with public resources as, for example, when resources from PRONAF were appropriated by the tobacco industries.

Besides the intermediary actors' establishment of the processes and contents of the public policies, it is more than likely that there are illegal mechanisms favouring private interests. Although this aspect has not been investigated in our research, evidence and reports confirm this hypothesis.

The experience in Rebouças has taught us that social mobilisation can significantly minimise these types of deviations, by exercising greater social control over the implementation of the policies. This reinforces the need for a participatory process to ensure the application of resources according to their original definition. There are various examples of this type of control in our research.

6.2 The impacts of municipal public policies

Rebouças's municipal council during 1997-1998 was frustrated by the attempt to immediately bring forward a proposal for alternative rural development that was anchored in the effective participation of the farmers, their leaders and the municipal councils. There are many reasons to explain this frustration. Here we attempt to develop some that we judge most important.

1) Field observations and interviews seem to suggest a classical example

of "substitutionism" of the farmer's representative organisations (especially the trade union) by the municipal executive power once the ex trade-unionists were elected to office. Because of their legitimacy as trade unionists, the mayor and the Secretary of Agriculture and Environment give themselves, as government officials, a legitimate autonomy from their social base, in the sense that their proposals and actions automatically represent and favour the small farmers, even if their organisation or participation is not elicited. Often this is for "simplification of the governmental process". Consequently, interest is diluted and the determination for the creation and consolidation of alternative democratic institutional spaces is reduced.

- 2) The trade union's victory in the election for the municipal council was followed by a weakening of the trade union itself. Due to a lack of leaders, victory within the municipal council tends to empty the trade union, increasing and justifying the tendency for "substitutionism" on the part of the new municipal council. After all, the family farmers of whom they consider themselves legitimate representatives, elected them. At this point, there are a number of possibilities. One is to bet on the organisation of the farmers and the communities and invest time and resources on the creation and training of new leaders. If this direction does not become a priority (because of involvement with other immediate questions, inexperience with the administrative machine, egotism, deterioration of the economic conditions of the municipality, etc.) the assumption, in practice, is that since the municipal council was conquered, the trade union is no longer important. Unsurprisingly, this situation becomes a double-edged sword for the municipal administration. On one hand it "helps" the administrative work because it reduces the time spent on the organisation of communities and increases the autonomy of the executive power, as well as its visibility; on the other hand it overloads the administration, assigning it tasks that it should not take on. The trade union and community association become demobilised, the strengthening of the institutional decision-making groups becomes difficult, and the municipal administration is led into

isolation. Finally, those conditions which made victory possible for "the trade union's candidates" and which are indispensable for their continued power, risk becoming undermined. Some local leaders interviewed have already started to realise the political error of the vision that "when we reached the municipal council, the trade union does not matter anymore", counteracting it with the attitude that "the trade union is the municipal council's root". In our opinion, the existence of an active rural worker's trade union with capacity for organising small farmers is fundamental, not only so that the Council is pressured to work autonomously and with commitment to the sustainable rural development of the municipality, but also for the initiation of other partnerships through which public policies could be administrated in more efficient and effective ways.

- 3) The desire for continuity of power, the relative weakness of the collective institution and the lack of leaders increases the tendency to centre power on one person. Although this usually has a large mobilising potential, it increases the preferences for short-term interventions with big electoral visibility. It also favours the adaptation of populist political practices, which prioritises the mobilisation of communities directly through their leader, to the detriment of its organisation and the development of representative community leaders.
- 4) In the case of a municipal council with few resources, governing largely entails exercising relationships with the state and federal governments. This is not trivial when it is a municipal council that is in opposition to these governments. This usually implies the adoption of a negotiation position with these governments in order to avoid the burden of isolation. Many times the initiatives for changes in the short term are delayed or abandoned during negotiation, and are reaffirmed only as a long-term target. As such, one risks transforming the programme for structural changes into a future utopia which is used to accommodate popular demands, but from which the government, in practice, ends up becoming progressively distanced. On the other hand, governments are composed of networks of

institutions in such a way that access to federal and state government often requires negotiation with institutions that occupy a privileged position between the municipal, state and federal levels. EMATER is one of these institutions. Its position in Rebouças was criticised by almost all stakeholders interviewed (farmers' leaders and the municipal council, for example) which considered EMATER largely responsible for the small farmers' indebtedness. EMATER has a contract with the municipal council which many community leaders do not want renewed. The initial expectation was that the contract would, at least, be restructured upon new bases, which would be more adequate for the establishment of a programme for strengthening and valuing family farming in the municipality. Apparently this did not happen because, according to the Secretary of Agriculture and Environment, financing projects for other initiatives between the municipal council and the state government, (like the Paraná 12 Months and the Road to Education³¹), are done by EMATER, and could be thus harmed. EMATER is also responsible... for many training programmes for farmers and for community leaders (for example, for the municipal councils), reinforcing this argument.

- 5) In adopting a traditional management style that devalues the participatory process, the municipal council of Rebouças greatly limits the possibility of spreading the community level experiences, which favour the collective management of resources and knowledge about technical and political bases of sustainability that are already taking place in the municipality. The main goal of these experiences is the development of the latent strengths of the communities themselves, in such a way as to increase the capacity of its members to make collective decisions, create their own services, and develop and adopt appropriate technologies that make better use of locally available resources. This would decrease their dependency on decisions, services and external resources that are inadequate, expensive and many times less efficient. The central axis of these

31 "Caminho da Educação" (Road to Education) is a programme to improve secondary roads as a way to ease students' access to schools.

types of political actions should be based on a programme for the training of farmers together with a process of massive experimentation of innovative practices that allow the technical problems in the agro-ecosystems to be overcome.

Breaking with the practices that stimulated the establishment of self-managed community processes for step-by-step conversion of the agro-ecosystems based on low or no cost process technologies (which they adopted while they were directors of the STR), leaders of the municipality preferred instead to adopt traditional agricultural policies that supplied subsidised inputs (product technologies). Besides not dealing with the structural causes of the productive systems' problems, thus perpetuating the relationship of dependency with the traditional political powers and to the agro-industrial enterprise, the political, technical, environmental, cultural and economical sustainability ideals of the farmers in Rebouças were undermined.

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