

Farmers and their Markets in southern Brazil

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The three states of Paraná, Santa Catarina and Rio Grande do Sul comprise the most southern of Brazil's regions, and produce a per capita economic output considerably greater than the national average. Most of this economic success is based on an agrarian structure that maintains small family farms on many parts of the land. The region is also home to traditional gauchos, cattle ranches and their sweeping South American prairies. Migrants first arrived on the coast of Santa Catarina in about 1700 from the Azores, and established what is now the capital city of Florianópolis, a settlement of pastel and stucco buildings sprawling by the vivid blue Atlantic and now dissected by modern highways. Small farms still dominate the land, with just under a half of Santa Catarina's properties being less than ten hectares in size.

If you travel inland from the narrow subtropical coastal plain, you soon climb into the Sierra Geral range that rises sharply up to rolling hills of up to 1000 metres above sea level. The coastal ecosystem becomes replaced by the planalto's long, sweeping valleys that are cool, even cold, in winter, and tropical in summer. One hundred years ago, 85% of the state was under forest; now it is less than a third. But these new farms on the slopes brought their own problems. They lose water rapidly when rain falls, and soil erosion had become a serious statewide and agricultural problem by the early 1990s. It was at this time that the state government's research and extension agency, EPAGRI, began its *microbacias* programme, working in more than 500 catchments to encourage all farmers to adopt conservation tillage methods to cut erosion and conserve water.

It is in one of these long valleys, Ituporanga, that you will find groups of farmers engaged in some ecological and social experiments. At the top end, where forests still crest the hills, is the 17 hectare property of Afonso Klöppel, just ten hectares of which is farmed. Afonso uses agroecological approaches on his farm, and now grows more than fifty crops, including vegetables and herbs (radish, onion, garlic, oregano, parsley, lettuce, squash, ginger, potato, tomato, sugar cane and brassicas), cereals and legumes (maize, oats, peas and various beans), and fruits (apple, orange, grapes). He raises pigs and chickens, and has plans for a fish pond. He remembers that "*this area was so bad, a lot of erosion; the land needed repairing*". His main method of repair is the nitrogen-fixing mucuna bean and croton. Mucuna is widely grown in Brazil as a green manure and cover crop. It's a modern magic bean, fixing up to 150 kg nitrogen per hectare each year and producing huge amounts of leafy material, which is allowed to fall on the soil and become incorporated to improve soil structure. A healthy soil is the basis for a healthy farm.

He smiles, "*after three years, the soil was very well, and there was no problem with insect pests*" (at least this is the case at the time of talking). The soil is now dark and rich in organic matter, in contrast to a neighbour's farm, where he still maintains the old (so-called modern) ways. Afonso does not use herbicides for the zero-tillage, preferring "*just hard work*". We walk down through the farm, admiring the mixtures of crops sweeping around hillside's contours. The wind drives up the valley, chilling our bones, and rolling grey clouds bring new squalls of rain. We look over the fence, and see a different type of farm. This neighbour has reportedly said, "*yours is not a farm; how are you making money?*" He thinks a cocktail of crops on the farm looks a mess. It does seem curious that an idea about what the neighbour thinks is best could stop him from seeing an important truth.

There are a number of farmer associations in the valley with several hundred members. But even with all this organisation and transformation, how can they possibly succeed on such small amounts of land? The trick comes in another sort of connectivity – that to consumers. These farms do not just produce many different crops and animals, they convert them into foods that people want, and try their best to sell direct to consumers. Under the brand name of '*cultivando o futuro*', Afonso has his own on-farm agro-industry, producing molasses, tomato sauce, cheese, honey, pickles, jams and preserved fruits. He sells boxes of produce directly to twenty families, and there are a similar number

on the waiting list. Each box is individually adapted for each consumer. He also sells to supermarkets in Ituporanga and Florianópolis and even into distant Rio de Janeiro. They seem to like the diversity and quality of his produce.

For small farmers to succeed, they have to find ways of converting primary produce into added-value foodstuffs for consumers. And this is where the development of small-scale agro-industry in southern Brazil works so well. Chapecó is the main city of the west of Santa Catarina state, close to the border with Argentina and Paraguay. A city of one million people built on steep hills, it was established at the beginning of the 20th century, yet still feels like a dynamic frontier town. Like most settlements in the region, the economy is dominated by large agro-industrial complexes using pigs and poultry. Around Chapecó is the largest concentration of pigs in Brazil. Most farmers are engaged in contract farming for these companies – they raise the animal produce to order, and get the price offered.

Once again, however, some farmers in new associations using ecological approaches are crossing new frontiers. They seem unlikely to threaten the big operators, but who knows in the long run? The Lovera's farm is about ten hectares in size, mostly pasture, about one hour out of Chapecó and down a dusty red track. They keep about 100 pigs, plus poultry and dairy cattle, and grow vegetables and fruit, all organically. The Loveras also have two pristine buildings for cheese and meat production, both of which fully meet tight hygiene standards (white hats, overshoes and showers before entry). Both are producing high value produce for local and statewide markets. They said the biggest change over six years since conversion has been to their self-esteem – instead of being controlled by the agro-industries, they can choose what to raise and grow, when and how to market, and are fully linked to the internet and the outside world. They produce about 40 kg of cheese per day, and this is vacuum-packed and labeled with their own brand name.

It is instructive to reflect on this alternative development model. An ecological approach to farming, organized small businesses, connections to food consumers, and wider economic development. At first it was not easy, and it required vision to give it momentum. Sergio Pinheiro explains, "*this initial resistance may be explained because individualism is normal for most people. The ability and enthusiasm to work in groups has increased among farmers, and participation and trust have grown too*". This resistance is common elsewhere, as farmers who are not organized often feel that they will lose something by collaborating. This is odd, as such cooperation was of course fundamental to all agricultural and resource management systems throughout early history.