Agroecology for food sovereignty

Photo: Leonardo van den Berg

In what ways is agroecology a means to food sovereignty? In Brazil, claiming land rights was the first step along one group of farmers' pathway to autonomy. The next was to develop and maintain agroecological practices. To achieve this goal, these farmers never worked alone. Strong self-organisation and long-lasting partnerships enabled them to redesign their farming system and set up alternative markets that value their produce and way of life.

Leonardo van den Berg, Irene Cardoso, Margriet Goris, Izabel Maria Botelho, Heitor Mancini Teixeira

Trees in flower with brilliant red, white and yellow canopies shade a group of farmers picking coffee beans. Four oxen peacefully pull a wagon filled with coffee, potatoes and beans over the hilly slopes. On the veranda of a house, two women scrape the peel from the cassava tubers that they just harvested and toss it aside for the goats to feast on. These sounds softly echo in the green valley, giving a sensation of remote, isolated tranquillity. It seems as if time has stood still and people's lives have gone unchanged for generations. This is far from the truth. This place, in the Zona da Mata in Minas Gerais, Brazil, is marked by a continuous fight against soil degradation, dependencies on external inputs, and exploitation by landlords, multinational traders and chemical manufacturers. It is a struggle for autonomy. By establishing control over land and re-designing food and farming systems farmers are moving towards food sovereignty.

Land sovereignty One of the villages in the Zona da Mata that moved towards food sovereignty is Araponga. In the past, many farmers in Araponga had no land and worked in sharecropping arrangements to produce coffee. They did all the work for only part of the harvest, at the whim of the landlord. They had no say over what to cultivate or how to cultivate the land. From the 1970s onwards, landlords began to implement many of the principles and technologies of the Green Revolution. As a result, sharecroppers were obliged to use agro-toxins, forbidden to grow food crops, and had to weed the land until it was bare.

Things changed in the 1980s when neighbouring families organised themselves in small dynamic groups, each composed of five to 20 families called the Comunidades Eclesiais de Base (CEBs, Basic Ecclesial Communities) These families would meet to pray and sing, and engage in politically-oriented readings of the Bible. The CEBs were linked to the broader Liberation Theology movement that was occurring within the Catholic Church throughout Latin America at that time.

> "So, we were on our own land; we had all the freedom but no harvest"

Farmer showing soil rich in organic matter built up with agroecological farming practices.
Photo: Margriet Goris

During these discussions, sharecrop farmers began to challenge the status quo. They founded the Arapongan Rural Workers Union to protect the rights of sharecroppers and rural workers. At the same time, farmers affirmed that autonomy could not be attained in a sharecropping arrangement, but only as landowners. This marked the beginning of the Arapongan Joint Land Conquest Movement. Mediated by the union, farmers formed groups and pooled their resources to collectively buy land. They set up lending schemes through which group members could borrow money from other members. Between 1989 and 2010 more than 700 hectares were purchased by more than 150 families. This also led to the return of Arapongans who had migrated to the slums of São Paulo and Rio de Janeiro. Drawn by the movement's successes, they came back to Araponga to purchase land and make a living as farmers.

The movement for Alternative Agriculture Nevertheless, while having control over land, the settlers soon found that this did not bring the autonomy they had envisaged. Green Revolution practices had become the default mode of farming in the region. Such practices, including mono-cropping, specialisation in coffee and ploughing, were leading to land degradation and resulting in yield declines. "So, we were on our own land. We had all the freedom but no harvest," says João, one of the farmers in the region. The increasing prices of chemical fertilizers on one hand, and of the food in stores on the other squeezed farmers' income even further. Farmers knew they had to free themselves from the chains of the Green Revolution. But how?

At the time, the Green Revolution started to meet resistance from other sides. Brazil was undergoing a process of re-democratisation. Now that self-organisation was no longer banned, a new generation of civil society organisations was flourishing, including the growing movement for Alternative Agriculture, later coined agroecology.

At the Federal University of Viçosa, located near Araponga, alternative agriculture was also gaining ground. A group of recent graduates approached farmers about working together, and in 1988, the Centre of Alternative Technologies of the Zona da Mata (CTA-ZM) was founded, together with 13 rural worker unions in the region. This moment also marked the birth of new partnership in the Zona da Mata: between the CTA-ZM, the Federal University of Viçosa and numerous peasant organisations, including the Arapongan farmers' union. The alliance proved important in terms of acquiring support, obtaining legitimacy, fostering experimentation and learning, and stimulating innovation.

Farmers began to cultivate a higher diversity of food crops and fruits

Nested markets The joint experimentation and learning, which involved farmers, researchers and NGO staff, resulted in various novel agroecological farming practices. Selective weeding, cover cropping, use of leguminous plants, and intercropping of trees in between coffee amongst other practices effectively reversed processes of land degradation and enabled farmers to cultivate a greater diversity of crops with higher yields. Agroforestry systems were also developed. Many farmers began, for instance, to plant leguminous trees, which tap nitrogen from the air, and trees that host mychorriza which capture tightly bound phosphorus in the soil, in between the coffee plants. These, and other practices, allowed them to reduce, or even completely stop, applying chemical fertilizers.

And there were more experiments. Farmers began to cultivate more and a higher diversity of food crops (e.g. cassava, maize, beans and vegetables) and fruits (e.g. mango, avocado, banana and papaya). Some of these were cultivated as part of an agroforestry system. Soon, food processing started. For example, sugar cane was processed into raw sugar, avocado into soap, milk into cheese and maize and cassava into flour. Farmers' diets gradually improved and they became much less dependent on purchased food. As one farmer said: "In the time of my father's generation we experienced no hunger, but we did not have the variety of food that we have now."

Many of these farmers nowadays produce a surplus of food. Together with CTA and UFV, they created so called 'nested markets'. These are local markets that are governed by farmers' and citizens' own values, where farmers can sell their surplus. A farmer shop was established in the centre of the town of Araponga and an open farmers' market is now organised every week. Market networks where farmers could sell directly to citizens in the larger city of Viçosa were also set up. Urban people value these markets because products are fresh, free from pesticides, and inexpensive. One farmer said, "we did not know that the people in Araponga ate so many bananas." Urban citizens in Araponga used to buy bananas from external markets.

A farmer shop was set up in the centre of Araponga. Photo: Leonardo van den Berg

A way of life Today, the agroecology alliance continues to struggle against corporate control over production and consumption by strengthening and creating nested markets, and by fostering innovation and exchange between farmers, researchers and activists. They work in Araponga and many other municipalities in the Zona da Mata. Together with other movements, united under the National Agroecology Articulation (ANA), they run awareness raising campaigns. They also advocate for public policies that reward farmers who produce environmental or social benefits for society and call for regulations that put limits on agro-industry and their destructive effects on public health, the environment and the farming community.

In Araponga, moving towards food sovereignty was a two-pronged process of gaining control over land and redesigning farming to be independent from dominant markets and technologies. It was through self-organisation, the pooling of resources, forging partnerships with other organisations and (re)connecting with nature that, a seemingly powerless group of sharecroppers took the food and farming system into their own hands. They gained the capacity to re-establish control over, and re-design these systems. Crucial in this process was the establishment of an institutional environment that protected farmers from external interests, that enabled them to experiment and innovate with agroecology and that guarded the peace, nature, and ways of life that flourish in the Arapongan countryside.

Leonardo van den Berg (Leonardo.vandenberg@gmail.com), **Magriet Goris,** and **Heitor Mancini Teixeira** are PhD candidates at the Federal University of Viçosa conducting action research embedded in the agroecology movement. **Irene Cardoso** and **Izabel Maria Botelho** are professors at the same university. Irene is also chair of the Brazilian Agroecology Association and a board member of ILEIA.

A new patch of coffee in an agroforestry system including bananas. Photo: Magriet Goris