

Highland agriculture in the hands of women

Women in the Andean highlands of Cochabamba, Bolivia, play a leading role in re-establishing peasant ways of farming, while building innovative connections with urban people. In doing so, they are creating agricultural systems that not only nourish the community and its natural resources but that also support vulnerable populations in the city and secure access to safe and healthy food during the current pandemic.

By Lidia Paz Hidalgo



Rural communities in Bolivia are threatened by the introduction of chemical fertilizers, certified seeds, monocropping and climate change, which are leading to the degradation of their natural resources. To reverse this trend, communities in the municipality of Cocapata engage in the struggle for food sovereignty. They have embraced agroecology as a means of reaffirming their peasant way of life as well as actively resisting the capitalist system, which seeks to trap small-scale producers in vicious cycles of dependency whilst channeling profits to multinational corporations.

Peasant families in these communities once managed a high diversity of native potatoes, which have now disappeared because consumer markets favour one particular type. This trend has been facilitated and reinforced by the government which, since the 1980s, has imposed laws and regulations that require seeds to be certified and penalise the sale of unregistered, indigenous seeds.

Recovering potato diversity The potato is commonly reproduced through its tuber (although the tuber is often mistakenly referred to as ‘potato seed’), which produces identical plants and thereby does not contribute to biodiversity. However, potatoes can also be produced by using the seeds from the small fruits that appear after the plant’s blooming period. Plants raised from seeds give rise to tubers that are genetically diverse. In this way, plant traits from long-lost varieties can be recovered. From 2017 to 2019, the Centre for Communication and Andean Development (CENDA) and communities in Cocapata engaged in a process of experimentation to recover these varieties in order to foster biodiversity and develop strains with enhanced climate change resistance. This was not easy. In the beginning the potatoes were very small, but through trial and error they were able to obtain potatoes large enough for consumption.

It is not only size that matters in potato cultivation. Now, with a base of over 100 different varieties, they can select and cross varieties in accordance with their own needs and values such as taste, health and resistance against diseases and frost. It also means that they can produce and save their own seeds for production, removing the need to buy tubers and in turn giving them greater autonomy. As put by one of the peasants: “We had gone into loss when buying certified tubers, we have even become indebted to the companies that sell them. That is why now I am producing mak’unku seed myself. With that we are moving forwards”.

In the hands of women Peasant women in Cocapata play a leading role in scaling up

and out the practice of breeding and managing diverse potato varieties, both within and outside the region. A major instrument through which they do so are potato fairs, where the women display and exchange over 160 varieties. While the exchange of seeds is an ancient practice in Bolivia, it has become less common over the years. Due to economic globalisation, local markets have become a site for the purchase and sale of commodities.

Through the seed fairs, practices of exchange based on solidarity are re-valourised. Here peasants and other community members become exposed to and exchange potato varieties with diverse colours, tastes, textures and medicinal qualities. Peasants that hold the most exchanges and those that have the largest diversity of potatoes receive prizes. Many are won by women.

Despite successes in breeding diverse potato varieties and spreading them through fairs, some challenges remain. One major challenge lies in the nature of demand from commercial markets. Most potatoes are sold to regional markets in the nearby city of Quillacollo or through intermediaries who reach the communities via trucks. In these markets there is a strong preference for the waycha variety. The potatoes have to be of a certain size and end up in the cities where they are mostly processed into fast food. This narrow demand for one variety hinders communities from engaging in more diverse cultivation, which in turn exposes them to the inherent risks associated with cultivating only one variety: vulnerability to changes in climate, diseases, pests and shocks in market prices.

The adversities of markets and the pandemic Aside from potato selection, women also play a leading role experimenting with new vegetables. Many women have concerns over the vegetables available in the market, which are produced by large farms in the valley using a lot of pesticides, and are expensive in some periods of the year. By producing vegetables that are less common in the region, women have been able to reduce their dependence on the market and can nourish their families with fresh, healthy and diverse foods. By using parts of the farm with different altitudes and microclimates, as well as establishing small greenhouses, they are able to cultivate a diverse range of varieties with different requirements in terms of water, soil, temperature and shade.

The varieties women experimented with include lettuce, carrot, onion, cabbage, radish, parsley, celery, chard, beet, turnip, broad bean and peas. They learned how to grow these ‘new’ crops by exchanging their experiences with other women in the community, but also internationally. Victoria Quispe, one of the peasant leaders in the community, brought knowl-

AGROECOLOGY AND FEMINISM > RECIPROCITY

edge home from a visit to Guatemala: “Before I didn’t even know how to produce my own vegetables. I’ve learned from my travels. It didn’t work the first time because I sowed too early. Now it works and I don’t need to buy from the supermarket in Quillacollo”. Women also experiment with agroecological practices, such as soil improvement through the use of sheep, lama and alpaca manure, and pest and disease management using plant extracts, ash, minerals and insect traps.

The vegetable gardens do not only play a role in nourishing peasants in their day to day life, they are also crucial in times of crisis. During the current COVID 19 pandemic, transportation between cities and the countryside has become severely restricted. Now that families have their own produce, they don’t need to travel to stores in the city. In addition, during the pandemic many families that had migrated to the cities temporarily moved back to the countryside, where they knew they would have access to food produced by the community. The pandemic also motivated many families that did not previously have a garden to establish one.

Reciprocity between countryside and city While potatoes and vegetables are important to nourish rural households and communities, they also play a role in securing food for vulnerable populations in the city. Over the past decades many people from rural communities migrated to cities, seeking improved employment, education and livelihood opportunities for themselves and their children.

Once in the cities, rural people and especially women, find themselves in a vulnerable position. They have few people to fall back on, occupy risky jobs and face food insecurity. Most migrant families settle on the outskirts of middle-sized cities such as Vinto and Quillacollo and make a living as informal vendors of sodas, vegetables or ice cream. Some continue to maintain a garden in their rural home communities. Santiago Bautista is one of them: “I’m happy to produce my own cabbages, carrots, and onions to share with my family. I’m happy to have my own little greenhouse.” Besides vegetables, potatoes also go to the cities to be processed into chuñita or tunta, a method traditionally used by the Quechua and Aymara to dehydrate the potatoes so that they can be kept for years.

The countryside also supports vulnerable people in the city through a network of reciprocal relations. Many women who cultivate vegetables in the countryside share their produce with their extended family in the cities. Families who live in the countryside but do not grow vegetables obtain them from other community members as a gift, through exchange with other

products, or by buying them for very low prices and then passing them on to relatives in the city.

Restoring ancestral knowledge

With the establishment of more diverse ways of farming, communities in Cocapata also came to revalue ancestral knowledge and management practices. Until about 5 or 10 years ago, peasants managed their fields using a strict rotation cycle. After one or two cycles of potato cultivation, the land was left to rest for a period of 10 to 15 years. However, due to pressure to fulfill market demand, farmers no longer abide by these principles. Potatoes are now cultivated for up to 3 consecutive years. This has created problems with disease, which remain dormant in the soil for many years. More intense potato cultivation is also depleting soil fertility and leading producers to use chemical fertilizers that further degrade and contaminate the soil.

Farmers in the countryside support vulnerable people in the city.

To reduce the pressure on the land, farmers are introducing varieties or species that are better adapted to the current climate. These are intercropped, planted in different periods of the season or cultivated at different altitudes. Legumes such as tarwi, which fix nutrients in the soil, are also incorporated in the rotation cycles. These new practices are supported by ancestral knowledge. By observing certain indicators, such as the flowering of cactus, the howling of foxes, the coloration of particular algae, the patterning of clouds and the humidity under stones, climatic predictions are made to decide the timing and location of specific crop plantings. Farmers constantly observe and adapt these indicators in response to the impacts of climate change. Thus, by recovering ancestral knowledge and combining it with new agroecological practices, rural communities are able to deal with the challenges of globalisation and climate change, while nourishing themselves and urban populations.

Lidia Paz Hidalgo works with peasant women in Bolivia and is an agricultural technician at CENDA. Contact: agrolpaz@yahoo.es