



Photo: M. Fernández

Sorting dried kiwi slices.

ECOVIR: a farmers' enterprise

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Commercial farmer cooperatives or community businesses, in particular those that focus on the conversion of raw materials to create products with added value, have traditionally faced many difficulties. These initiatives require good linkages and contacts with external agents, which are often lacking. If they fail, initial investments will be gone, community members will be discredited and the possibility to generate income and break the cycle of poverty will be lost.

Farmer companies that transform agricultural produce into products with export potential need to meet high quality standards, have good negotiation skills, good contacts and develop appropriate marketing strategies. They also have to have good access to information to develop new products with market potential. This is difficult to achieve without long-term or permanent external technical assistance.

ECOVIR S.A., a farmer company in Bolivia specialized in the solar drying of fruits and other products, has been able to overcome many of these difficulties. It is now a leading company in its field, working on principles of social solidarity while at the same time applying a market approach.

The idea for a processing company

San Benito municipality, in Cochabamba District in Bolivia, is located at an altitude of 2600 metres above sea level and has a temperate climate, with an average temperature of 18 °C and annual rainfall of 500 mm. Farmer communities in the region grow a variety of crops including vegetables, maize, potatoes and fruit such as peaches. These small-scale farmers grow organically for their own consumption and for the local market.

With assistance from an Italian NGO the farmers developed a project with the general aim to increase agricultural production

and add value to the produce. Irrigation systems were installed and ENERGETICA, a Bolivian non-profit development institution based in Cochabamba, was approached to develop appropriate installations for the solar drying of products. A local model for a greenhouse-like structure was developed and built, with financial assistance of the Italian government. Farmers also wanted to set up a company around the processing facility that would buy all their produce, process it and sell the value added products. The company would be owned and managed by the farmers themselves. Farmers thought that in this way, they would be able to have a fixed outlet for their organically grown products and receive good and stable prices.

It took several years for this idea to mature and gradually it became clear that reality was more complicated than theory. The farmers realized that qualified and specialized people were needed to market their organic products successfully. The idea arose to look for "strategic partners": technicians that would strengthen the company with knowledge and strategic contacts, overcome problems, and make the project viable. Strategic partners were selected by the farmers and invited to participate in setting up the company. The partners helped the farmers to realize that it was not possible to "force" the company to buy their crops and process them, without knowing in advance if there would be a market for processed maize, tomato or potato. It was decided to concentrate on organic fruit as the prime product for processing.

Getting started

In 1997 the farmer company ECOVIR S.A., or *Empresa Comunal Via Rancho*, was founded with the objective to produce, process and commercialize organic foods. It was structured as a shareholder company and now consists of a total of 167 shares, 14 of which are owned by technicians and the rest by the farmers. The company is in essence a farmer business, but with improved dynamics thanks to the participation of

technicians. These technicians make discussions on economic subjects, processing and marketing easier and richer by combining the farmers knowledge and perceptions with technical and managerial professionalism.

To facilitate product development and marketing, the strategic partners helped to establish active relationships with marketing institutions and external consultants at local, national and international levels. Products for the local and export markets were identified and an organic line of high quality produce was defined. Product diversification was an important driving force, because year-round production is important for a company to be successful. The company started with the drying of fruits but soon the product range was widened to include cereals. At a later stage, the company started producing specialty products, like flours and drinks made from a combination of fruits, cereals and/or vegetables.

Contact was made with local farmer associations that produce fruits such as apples, plantains, kiwi, pineapple and papaya, and cereals including quinoa, sorghum, maize and wheat. Products were only purchased from farmers with organic certification. Through organic and fair trade channels, access was gained to international markets like Germany. Export products included dried plantains and pineapple.

The solar drying process

In 1997 the construction of the solar drying installations was completed. These are greenhouse-like structures with cement floors and a frame of stainless steel covered with sheets of special UV-resistant plastic. Inside the structure the air circulates naturally, but sometimes a ventilator is used to enhance air circulation. The air is heated by the sun and dries the product as it passes over. Then the hot, humid air escapes through ventilation openings in the roof. By regulating these ventilation openings the temperature inside is kept at 60 °C or below. This ensures that the vitamins in the fruits are not destroyed. The product is dried to the point where microorganisms can no longer grow.

Fruit is brought in fresh and within 48 hours it is cleaned, peeled and cut into slices. This is mainly a manual process. The slices may be immersed for few minutes in water with sugar and/or lemon juice added, to improve the taste and maintain a good appearance. Then they are placed on trays and put into the dryer. The time required for drying varies with the season: during winter the drying process is faster than in summer, thanks to the cloudless skies and dry air. The drying time for plantains is five days during winter and seven days in the summer. Apples take two and three days and pineapples three and four days, respectively.

The dried product is put into airtight bags and stored in a dark room with proper humidity and temperature. The customer product is packed in bags of different size and labelled according to requirements.

Promoting national food security

In 1998 the company, assisted by ENERGETICA, developed the *Programa de Complemento Nutricional Infantil*. This school breakfast programme is implemented together with other development cooperation institutes and municipalities. It tackles two classic weaknesses of similar programmes: lack of variation in the food provided; and the problem of distribution, control and accounting of the food products. Through the programme, a range of five different products is provided that combine cereals and dehydrated fruits with *mazamoras* (a type of maize porridge), milk and typical drinks of the area. The programme

also pays due attention to management aspects by offering technical assistance, training and necessary logistic support to the municipalities, involving parents, teachers and authorities.

Good results, interesting benefits

ECOVIR has been growing steadily. Compared to the first year, the production of dehydrated fruits has increased tenfold and the production of granolas has shown a four-fold increase. So far, the "*Programa de Complemento Nutricional Infantil*" has benefited over 20,000 children.

A few years after it started, ECOVIR S.A. managed to break even thanks to the hard and efficient work of its personnel. In March 2000, the Assembly for the first time took decisions on how to use the profits generated by the company. It was decided to reinvest 50% of the profits and use the other half for paying dividends to the shareholders. This situation helped to strengthen the confidence of the partners in the company, who until then had not received any direct benefits. In the year 2003, ECOVIR achieved a turnover that covered loan obligations and left a net profit, which was distributed among the shareholders. Considering the existing levels of poverty in the countryside, these dividends are an important source of additional income for the ECOVIR partners' families.

The company's plant is staffed with 24 people; eight have a permanent contract while the others are employed on a temporary basis. At peak periods, the company employs up to 35 workers. Only shareholders and their family members are eligible to work at the company. There is a considerable participation by women at all levels: they represent around 90% of the total staff of workers and executive personnel. Men and women are paid on an equal basis and the company offers all employees a number of social benefits, which is rather unique in Bolivia.

ECOVIR S.A. also benefits its suppliers. The company covers its demand for raw products through different organizations: Producer Association APAMI (pineapple), ASPROBAN (banana), ANAPQUI (quinoa and sorghum), Grupos de productores del Valle Alto (cereals). For many of these different groups of producers, ECOVIR S.A. is an important outlet for their products. The company buys their products at a pre-established price, which benefits both ECOVIR S.A. and the producers. In total, around 120 farmers supply products to ECOVIR S.A.

Challenges ahead

ECOVIR works within the framework of food security, promoting and stimulating the production and consumption of healthy and natural foods to all sectors of the society. One important challenge is to ensure that the company keeps developing its social focus, while at the same time maintaining acceptable levels of efficiency and profits.

Based on experiences so far, ECOVIR S.A. plans to further increase the variety of products. It is also important to diversify the company and to link the partners to other production activities, for example, ecological agriculture in the greens and vegetables section, intended for own consumption as well as for the local market.

The final goal is to situate ECOVIR S.A. as a management model and leading company in the field of dried food and fruits using natural processes.

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