

Research and innovation

The Global Forum on Agricultural Research (GFAR) brings together all those working to strengthen and transform agricultural research for development around the world. As part of this role, GFAR is working with New Agriculturist to showcase and raise awareness of important initiatives and their outcomes, to update and inspire others.



Women, innovation and enterprise

A large proportion of small-scale farmers are women, but gender inequality means that women find it particularly difficult to gain access to markets, especially within the more profitable activities around processing and trading. From training in 'business thinking' for women in Papua New Guinea, and work to build organic enterprises in Peru, to beekeeping and honey processing operations in Botswana and India, GFAR draws attention to a number of examples of how women have diversified their activities by branching out into small and medium enterprises.

Building liklik bisnis in PNG

Finding ways of helping female horticulturalists in Papua New Guinea to develop their business acumen, is the aim of ACIAR-funded research carried out by the University of Canberra.

Developing organic enterprises in Peru - women take the lead

In the provinces of Quispichanchi and Calca, in Peru, the AGROECO project is working with 40 women to help them improve the quality of their vegetable production to meet the standards necessary to supply five of the most demanding gourmet restaurants in Cusco.

Bees become big business

Josephine Selvaraj and Tshepiso Marumo have, from small beginnings, built large-scale beekeeping and honey processing operations in India and Botswana. Inspired and ambitious, they are now sharing the lessons and providing a role model to other women and young people.

Building liklik bisnis in PNG

"Many women in PNG are growing vegetables and sweet potato, but they are marginalized through low literacy and access to markets," says Dr Caroline Lemerle from the Australian Centre for International Agricultural Research (ACIAR). Finding ways of helping female horticulturalists in Papua New Guinea (PNG) to develop their business acumen, therefore, is the aim of ACIAR-funded research carried out by the University of Canberra.

Professor Barbara Pamphilon is investigating ways to build women smallholder's skills in planning and working towards operating profitable businesses, and the most effective means of learning for women smallholders are also being explored. "We've called it 'liklik bisnis thinking', which means 'small business thinking' in PNG pidgin," Pamphilon explains.

Obstacles facing women

Baseline studies, along with information from previous ACIAR-funded work with the fledgling NGO, PNG Women in Agriculture, revealed that a very low level of financial literacy exists amongst PNG's female farmers. "Consequently, they have low banking rates and many are not ready for micro-credit schemes," states Pamphilon.

Women are also being left behind when it comes to training, since most agricultural training in PNG is based on the 'demonstration' method. "While the men go to see the demonstration, the women are left at home, or they can't afford transport, or maybe it's not safe for them to go, or they don't speak the language," Pamphilon explains.

Through the baseline surveys, women detailed a wide range of incentives to build their business skills. Education for their children was a universal aim, others wanted to be able to read and to learn skills to enable them to build their income, while some wanted to improve their housing, or to buy gardening equipment or other commercial items.

Building local skills



Women have received agricultural and marketing advice from the Fresh Produce Development Agency
©Paul Jones

To trial different activities, three areas have been chosen to carry out the research. One is in the remote region of the Baiyer Valley, which has very poor infrastructure and market linkages, and no banking facilities. In contrast, East New Britain is well-serviced and women farmers are more organised, but banking rates are low. The final location is in Central Province, where the women are physically close to Port Moresby but have struggled to successfully access the market.

The project team has begun by building the skills of selected local people. After providing capacity building training - on how people learn and how to design interactive workshops - the 'community learning facilitators' use their new skills to plan a workshop for women smallholders in their community. "Our local training teams have been very creative and have designed some of the best role-plays I've

seen," says Pamphilon."

PNG's National Agricultural Research Institute and the Fresh Produce Development Agency also contribute to the workshops. These local experts are able to provide relevant agricultural advice on potential new markets for produce as well as pre- and post-harvest handling of crops, for example.

"We can grow the vegetables to supply the market but we have no proper services, such as transport and cooling facilities, in our district to convince people to increase production," explains Veronica Briggs, a farmer from the Central Province, who has also received assistance from a related ACIAR project led by the Tasmanian Institute of Agricultural Research. After receiving training in basic financial literacy, crop management, and post-harvest and marketing techniques, she was also helped to build links to transport and markets in Port Moresby, and given the opportunity to open accounts with micro-banking services. Briggs says that the training enhanced her knowledge and she would now go back and train other men and women in her community.



Young women from Vunapalading, participating in a community workshop
©Katja Mikhailovich

Family teams

The University of Canberra's research is also focusing on family groups. Local training teams are running village workshops called 'working as a family team for family goals'. "The women are more likely to improve their business acumen with the support of their families, through everyone having a better idea of what needs to be done," Pamphilon explains. "Women involved in the workshops have found that these workshops provide a constructive and non-threatening way of re-evaluating both men's and women's roles." According to one woman from the Baiyer Valley, "We take it for granted that adults don't learn and don't change. Now we understand that people can learn for the family good."

Women involved in the project have been keen to find ways that their children can be increasingly involved in the business side of farming. The project has taken this on board and activities are being trialled to engage the interest of young people who have finished school. "One of our ideas is to train young women to become the financial managers of their family's activities. They would have the necessary training in literacy and numeracy to keep records and monitor profit and loss," Pamphilon reveals. "Or young women might have new ideas to help grow their family's businesses. Young people might be better placed to see how value could be added to produce, for example. It is all about 'liklik bisnis thinking'."

** The National Agricultural Research Institute, the Pacific Adventist University, the Fresh Produce Development Agency, and church-based NGOs such as the Baptist Union, are project partners with the University of Canberra*

Written by Mandy Gyles, Australian Centre for International Agricultural Research (ACIAR)



Farmers have received training in basic financial literacy and postharvest and marketing techniques
©UTAS

Developing organic enterprises in Peru - women take the lead

Sustained economic growth, rising consumer awareness of healthy nutrition, a flourishing tourist sector and a gastronomic boom are together providing new opportunities and markets for smallholder farmers in Peru. But women smallholders, in particular, often lack the knowledge, capacity, tools and opportunities to fully maximise the potential of agricultural markets. Family vegetable farms are typically run by women, so in the provinces of Quispichanchi and Calca, the AGROECO project* (Ecological and socio-economic intensification for food security in smallholder agriculture in the Andes) is working with 40 women to help them improve the quality of their vegetable production to meet the standards necessary to supply five of the most demanding gourmet restaurants in Cusco.



Cash crops grown by the women include lettuce, carrots, aromatic herbs and zucchini
©ANPE PERU

Meeting the collective mark

Over the last ten years, Peru's national association of ecological producers (Asociación Nacional de Productores Ecológicos del Perú, ANPE PERU) has been working to develop a guaranteed quality assurance process for organic production, as an alternative to costly organic certification schemes. As a result, farmers have taken part in a Participatory Guarantee System (PGS), spending time to build their capacity on organic farming and then participating in internal and external evaluations. However, once certified, most farmers have continued to sell the bulk of their organic produce at local markets for conventional prices. Hence in 2012, to strengthen market differentiation and enhance market integration, the *Frutos de la tierra* (fruits of the earth) brand was converted from a brand used to promote ANPE PERU's organic fairs into a multi-product collective mark, promoting family agriculture, biodiversity conservation and farmer organisation.



Training has been provided to improve vegetable farming
©AGROECO

The AGROECO project, which is being coordinated by the Universidad Nacional Agraria La Molina (UNALM), has been promoting the use of the mark and working to establish long-term relationships between women smallholders and top restaurants. Training has been provided to improve vegetable farming in communal plastic houses and micro-tunnels. Cash crops that the women grow include lettuce, carrots, kale, onions, aromatic herbs, chard, amaranth leaves and zucchini.

However, negotiations with restaurants to obtain a higher price for their vegetables and establish strategic alliances between farmers and cooks were slower than expected. The women secured a number of sales with two restaurants but these were relatively infrequent. After a re-evaluation - involving some restaurants - the women's groups agreed that the vegetables should be sold under the *Frutos de la tierra* mark. The idea is to tap into 'corporate social responsibility' motives of restaurants and hotels, strengthen links between the groups and better position their produce in the minds of the restaurants' owners and guests.

Challenges and opportunities

By promoting organic vegetable production, highlighting the value of native and highly nutritious varieties, and supplying hotels and restaurants, the project aims to contribute to the improvement of the household diet and to create extra income for the women. However, the women have also learnt some valuable lessons: "A key lesson for the women has been that there are opportunities to establish long-term relationships with restaurants, but that establishing prices that allow for building a sustainable relationship, and which value the *Frutos de la tierra* principles, requires a gradual process of building trust and consistency from both sides," ANPE's executive director Moisés Quispe explains.

Some women, for example, became frustrated when the additional effort they had undergone to plan a continuous supply, manage post-harvest quality, and ensure deliveries were timely seemingly was not appreciated by potential buyers. After one restaurant selected only a few products that a group of women had been working on for months, one of the women, Teresa Farfán, said, "There is no business here for us. If it's like this I'd rather take our produce to the conventional market." But after visiting another restaurant, Farfán was delighted to see that all of their produce was accepted: "We really should make sure not to lose this connection. Here at least we see willingness to buy from us smallholder farmers."



The women's marketing habits have had to undergo a major shift
©AGROECO

With restaurants buying relatively small amounts of vegetables up to three times a week, and considering that they buy on credit, the women's marketing habits have also had to undergo a major shift. The project has helped the women generate combined orders to reach volumes to ensure continuous supply, and to work with simple production and sales activity records. The women have also received administrative support from the regional farmers' association through its recently opened organic shop, to which the women also sell produce.

Looking to the future, AGROECO will continue to strengthen the women's groups by consolidating their organic farming techniques and basic administrative tools, and increasing and stabilising the supply of organic cash crops. The project will also continue to promote the *Frutos de la tierra* mark in restaurants and local marketplaces. "Eventually we want to transfer capacities and responsibilities to key members of the regional farmers' association to manage the collective mark, keep deliveries going, and connect with other initiatives, like the Ministry of Foreign Trade and Tourism's *Al turista lo nuestro* (give the tourist what is ours) programme," general coordinator Roberto Ugás reveals. "We particularly want to encourage young leaders."

* AGROECO is funded by the Canadian International Food Security Research Fund, which is implemented by the International Development Research Centre (IDRC) and Canada's Department of Foreign Affairs, Trade and Development

Written by: Hannes Van den Eeckhout (AGROECO), ´ngel Luján (AGROECO), Moisés Quispe (ANPE PERU) and Roberto Ugás (UNALM and AGROECO)

Links

- ANPE PERU (<http://www.anpeperu.org>)
- AGROECO (<http://www.agroeco.leisa-al.org>)

Bees become big business



Selvaraj started her bee keeping business in 2006
©R. S.
Swamiappan/Krishi Vigyan Kendra

Josephine Selvaraj has a motto - 'start small and think big'. When she started her bee keeping business in 2006, she had ten beehives on her father's farm in Tamil Nadu, southern India, and earned around US\$50 per month from honey sales. But through careful market research and innovation she has become a highly successful entrepreneur, now producing up to half a tonne of honey each month, worth over US\$1,600.

Tshepiso Marumo's beekeeping career also had humble beginnings. Currently studying a marketing degree, the 26 year old from southern Botswana started with just three bee colonies in her backyard. Her company now employs 12 young people and supplies products to supermarkets, alternative health clinics and other retailers around the country. Beekeeping was not, however, her first choice of career.

"When I was growing up, I wanted to be a mining engineer,' Marumo says. "One day when I was house-cleaning at home I found an article about bees. I was inspired by these creatures and their science, but threw the article away after some time." Some years later, however, she remembered the article while browsing on the internet, and started to research bees in more depth. "I was impressed by what I saw, and decided I would do beekeeping as an alternative source of income for my family. I went to the Ministry of Agriculture for more information, and fortunately they offered me a course. I also registered for business training courses."

Selvaraj's journey with bees also began with training, when she attended a three-day course on beekeeping organised by Krishi Vigyan Kendra (a government-funded agricultural science centre), in Madurai. She learned about selection and maintenance of beehives, rearing of honey bee colonies, and extraction of honey, which gave her the confidence to begin her operation with ten hives. Over the next six months she increased her skills through further vocational training at Tamil Nadu Agricultural University, Coimbatore, thereby increasing production of both honey and money. In time, she was able to expand to 200 beehives on a 0.8 hectare site, marketing under the brand name 'Vibis Honey' and earning extra income by selling bee-keeping equipment.

Thinking big

To be competitive, however, Selvaraj knew that Vibis Honey needed an edge over its rivals. She decided to investigate production of single flower honeys, and carried out a survey throughout southern India to assess the plants and flowering seasons for each region. In order to produce organic honey, she also searched for areas where crops were grown without use of chemicals. Having collected information on the medicinal properties of honey, she began producing a number of medicinally valued products: thulasi honey for colds, jamoon honey for diabetics, and others such as neem, ginger, garlic and fig honeys. Employing 40 staff in its ISO certified processing honey unit, Vibis now exports honey to Sri Lanka and Singapore, and makes a wide range of value added products, including beeswax, bee venom, royal jelly and propolis.



Zone 4 Life produces lip balm and candles, as well as many honey products
©Tshepiso Marumo

Like Selvaraj, Marumo also had impressive ambitions for her business, but needed great determination to achieve them. Her aim was to build a leading company in conservation of bee species and production of honey, while also creating employment for young people and women and contributing to poverty alleviation. Getting funds to achieve her dream was the first challenge. "I had an idea, but no funds or land," she recalls. She began by saving money from her student allowance, took short term jobs with an insurance company and a bank, and - after 37 applications - secured a job at the Botswana Telecom Company. Within two years she resigned, with enough capital to begin work on her beekeeping project.

In 2011, she created the company Zone 4 Life, producing honey products, lip balm and candles and buying honey from small-scale beekeepers. In the same year, the company secured three commercial beekeeping plots and gained expansion funds from the Ministry of Youth, plus a grant and 12 months' mentorship through the 'Kick Start' competition. Since then, Marumo's business has attracted recognition in several national youth expos and was selected to represent Botswana at an Agri Youth Business forum in Senegal.

Sharing the lessons

Beyond her commercial success, Marumo has also been asked to share her experience on youth and gender issues. Winning first prize at a national women's expo, she was invited to participate in gender training and share her success story at a 'women and youth' side event, hosted by FARA and the government of Ghana. She was also invited to participate in a Policy and Youth in Agriculture session, hosted by FANRPAN and the government of Lesotho.



Selvaraj has become a master trainer
©R.S. Swamiappan/Krishi Vigyan Kendra

"It has not been an easy ride," she says. "It has been a rollercoaster that has tested my capability and strength. Only passion has taught me to be patient, disciplined, hard-working and to focus on my beekeeping project. I believe that as young people, we need role models that can motivate others to take agriculture as a career and a business."

Selvaraj would agree. She has now become a master trainer, and trained over 50,000 people in Tamil Nadu. Three hundred of these have become entrepreneurs, each employing a further three to five people. She has also helped to establish apiaries in 32 farms in Tamil Nadu and Kerala, and is currently developing Honey Park - a visitor centre with flower gardens, beekeeping equipment and honey products, to raise awareness of the potential of beekeeping and inspire more successful entrepreneurs.

With contributions from: S Kamalsundari, C Chelviramessh, G. Srinivasan, C. Ravindran, NS Venkataraman and T Marumo