



IMAI Farming Cooperative

Preserving vegetables to build self-reliance among South African farmers

2011 SEED Winner

SEED CASE STUDIES: INSIGHTS INTO ENTREPRENEURIAL SOLUTIONS FOR SUSTAINABLE DEVELOPMENT



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CONTENT

1. Partnering for local solutions	4
2. Building an inclusive eco-enterprise	8
3. Reaching impact	10
4. Charting green and inclusive growth	12

SEED Case Studies Series

Demonstrating Sustainable Development on the Ground Through Locally-driven Eco-entrepreneurship

Social and environmental entrepreneurship, also known as green and inclusive entrepreneurship or eco-entrepreneurship, could play a critical role in achieving a global Green Economy. By embracing the added values of social improvement and wise resource management eco-enterprises that have won a SEED Award are living proof that entrepreneurial partnerships between various stakeholders can create innovative and novel solutions for delivering sustainable development at the grassroots and be economically sustainable.

Over the last ten years, SEED has awarded nearly **180 SEED Awards** to eco-enterprises in 37 countries. While the value of eco-entrepreneurship in delivering sustainable development is increasingly recognised and harnessed in the development sphere, there is still very little data available on the triple bottom line impact of these enterprises and their contribution to sustainable development.

The SEED Case Studies are designed to help fill that gap by generating insights for policy and decision-makers on the role of green and inclusive enterprises in achieving sustainable development, and on enabling factors that can help them overcome barriers and reach scale and replicate.

AT A GLANCE

IMAI reduces food waste and creates income opportunities by producing and marketing vegetable atchar pickle made from surplus horticultural produce

The cooperative empowers women farmers by organising training in organic farming and hygienic kitchen facilities, so improving standards

PRODUCTS & SERVICES



Organic horticultural products



Atchar pickle made from mangoes and vegetables



Training in organic farming and in hygienic processes

KEY FACTS

- Location: Polokwane, South Africa
- Founded: 2010
- Active: Limpopo Province
- Workers: 21
- Annual turnover: USD 19,900



TRIPLE BOTTOM-LINE IMPACTS

**Social impacts**

- Stabilises and increases household income of organic vegetable farmers
- Empowers farmers by providing training and opportunities to improve their agricultural practices and business skills
- Supports formation of rural cooperatives by offering training on governance and set-up of cooperatives

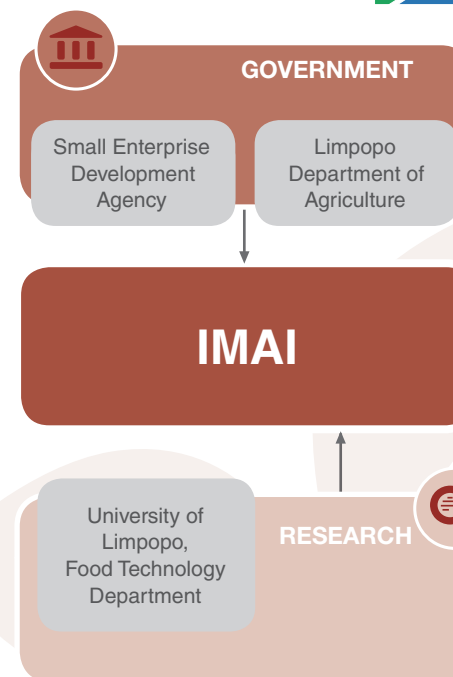
**Environmental impacts**

- Spreads organic farming practices among emerging farmers
- Avoids loss and waste of perishable horticultural produce
- » Collects rainwater for irrigation to reduce pressure on groundwater resources

**Economic impacts**

- Encourages value-added production among vulnerable rural farming communities
- » Connects rural communities to markets and improves their self-reliance

IMAI PARTNERSHIP



1. Partnering for local solutions

1.1 Local challenges

Challenges of emerging farmers in post-apartheid Limpopo

Limpopo is the northernmost province of South Africa, bordering on Botswana, Zimbabwe and Mozambique. Worldly known for the famous Kruger National Park, a rich biodiverse habitat featuring the “Big Five” in wildlife, this large province is home to about 5.6 million people with approximately 90% of the population living in rural areasⁱ. Next to tourism, agriculture and mining are the region’s main economic activitiesⁱⁱ and about 14% of Limpopo is arable farmlandⁱⁱⁱ for livestock and the production of fruits and vegetables, cereals and tea.^{iv} However, it still carries the legacy of the apartheid period: for instance white farmers practice large-scale farming, occupying 70% of Limpopo’s prime agricultural land.^v During the apartheid, black farmers were not allowed to participate in the commercial farming industry^{vi} but were only able to farm for subsistence. For this reason, black farmers are considered ‘emerging farmers’ as they are just recently entering the mainstream agricultural economy. As emerging farmers in post-apartheid Limpopo, they face a unique set of challenges such as a legacy of unsustainable land management practices, atchy delivery of government services, and a general lack of technical farming knowledge. Facing a highly competitive market environment, emerging farmers have sometimes banded together and formed cooperatives in order to compete at a commercial level. However, financial challenges that those emerging farmers face put them at risk of poverty, which is a significant problem in Limpopo. The average income in rural areas

lies at just USD 307 per month and a substantial group of the population lives on less than USD 2 per day. The primary source of income for the vast majority of rural households is from social grants provided by the state and remittances from migrated relatives, rather than a formal salary or farming income.^{vii}



Widespread waste of agricultural produce

Globally, it is estimated that about one-third of food produced for human consumption is lost or wasted. In developing countries, food losses are mainly connected to a lack of finances and skills for harvesting and post-harvest handling, including the challenge of storage and cooling in difficult climatic conditions, and inadequate technical infrastructure. “Given that many smallholder farmers in developing countries struggle with food insecurity, a reduction in food losses can have an immediate and significant impact on their livelihoods”.¹ While fresh fruit and vegetables can achieve good market prices

¹ <http://thinkprogress.org/climate/2011/05/23/208148/un-food-agency-world-loses-one-third-of-total-global-food-production>

in comparison to grains for example, they are particularly sensitive to transportation and storage and they are expensive to produce. In South Africa, as much as 61% of fruit and vegetables are lost before they reach the consumer: 10% lost in farming, another 9% in post-harvest handling and storage, 15% in processing, and a significant 25% during distribution.^{viii}

1.2 Creating innovative local solutions

The IMAI Farming Cooperative supports a small group of founding members and a larger number of surrounding community farmers in growing organic vegetables more successfully, in processing horticultural products into pickles, and in accessing markets for these products. By adding value to the agricultural process, the enterprise addresses challenges around the seasonality of vegetable cultivation which often results in an oversupply of sensitive produce with a short shelf-life at harvest times, and it offers farmers an additional way of accessing the local grocery markets.

The cooperative is located in the Kalkfontein area about 10 km outside the city of Polokwane,

in the Limpopo Province of South Africa. It links together the owners of three farming plots, where its members and farm workers grow vegetables. On the one side, the three farms are responsible for their own farming and marketing of vegetables, while in parallel the cooperative members work on a secondary value chain where products are processed from the vegetable surplus from these farms and neighbouring female farmers. IMAI has introduced 3 new hygienic kitchens for the processing of the vegetables. After a thorough selection of the vegetables unsuitable for the market due to their shape and quality, IMAI members process the non-marketable vegetables into different varieties of popular local pickles called atchar. IMAI then packages the pickles into attractive labelled pots and sells them to local grocery stores.

Training of local farmers is an important element of the value chain. As the cooperative is responsible for the product development and marketing of the pickles, its members receive training in hygiene and food processing as well in basic marketing skills. IMAI also takes active steps to inspire others to form cooperatives or become entrepreneurs, and it offers training in cooperative governance as well as small enterprise development.



Fast facts

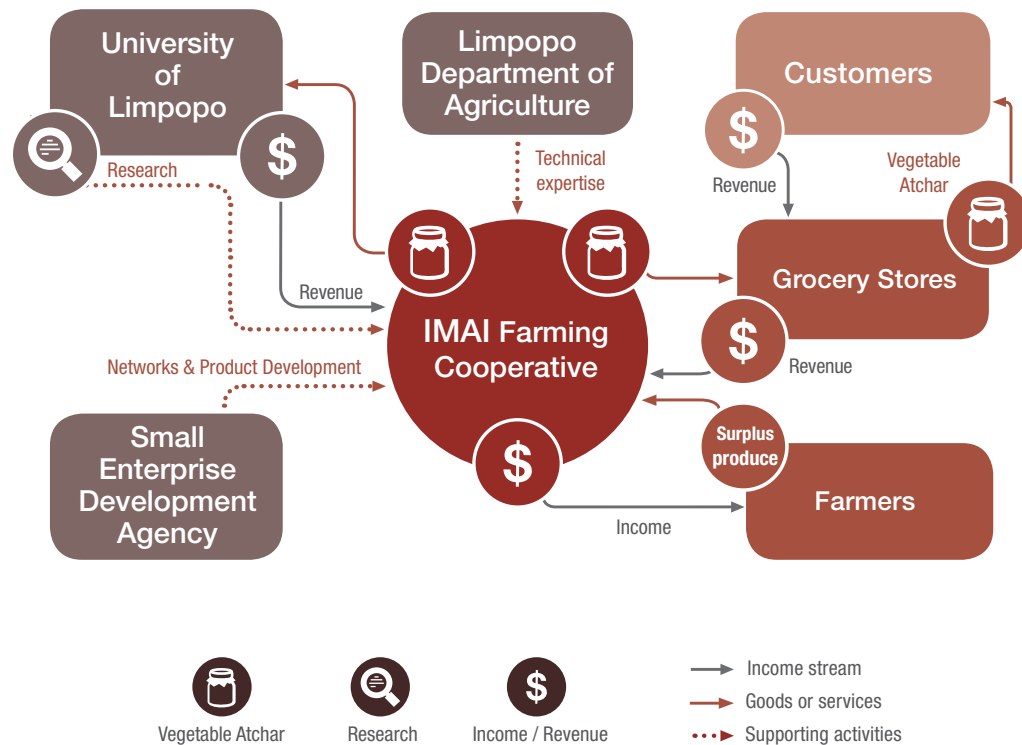


9 million tonnes of food is wasted in South Africa every year

The relative cost of waste from fruits and vegetables is higher than any other agricultural product

61% of fruit and vegetables in South Africa are lost and wasted before they reach the consumer

75% of rural Limpopo households report social grants as their main income source



National Government

The Small Enterprise Development Agency (SEDA) is a government agency which promotes and assists small business development in South Africa. It supports IMAI with skills, resources and networks. In particular, it provides guidance in regard to product development and product packaging. In turn, SEDA benefits from the partnership as IMAI assists with governance training for other cooperatives.



Provincial Government

The Limpopo Department of Agriculture is a government agency which provides development support through its extension officers. They offer technical skills and expertise to the cooperative, mainly related to irrigation infrastructure. For the agency, the cooperation with IMAI is a contribution to its delivery of rural development goals. A formal Memorandum of Understanding forms the basis of the cooperation with this partner.



Research

The University of Limpopo's Food Technology Department is an academic institution that assists IMAI with testing the product to determine its nutritional value and consistency. They also train the cooperative in food processing, help to market the product and sometimes buy the product in bulk from IMAI for promotional purposes. The Department has also provided networking opportunities with potential international partners.

1.3 The Power of Partnerships

Partnering with supporting institutions

IMAI is a cooperative formed by farmers whose key challenges lie in the inadequate infrastructure for agricultural cultivation such as irrigation, and the lack of agronomic, technical and business skills. Great value lies therefore in partnering with government and academic institutions that can provide these missing skills and support business and infrastructure development.

Partnership management: Overcoming challenges

While the partnerships of IMAI are only partly formalised, they appear to be well-aligned in terms of common goals and the skills and expertise needed. Nonetheless, despite the valuable input from its partners over time, IMAI has found that working with government institutions is not without its challenges: the implementation of planned activities, for example, was often delayed. Also, the targets for the government field agents are reportedly more focused towards activities such as site visits to the farmers, rather than towards the actual impacts and success of interventions. Having learnt from past experience, IMAI aims to align the interventions and goals of its partners in a more effective way, avoiding overlapping, managing expectations, and clarifying the role of each partner.



IMAI's academic partner has proven to be a reliable source of support ranging from technical training and guidance regarding product development to active marketing support. However, the cooperative is still busy developing a product that will be competitive enough to allow a larger expansion, and is in need of partners with more direct market links and more effective marketing support.

2. Building an inclusive eco-enterprise

In 2005, local female farmers came together to support each other in the production of vegetables and to improve their skills in farming and in marketing. In 2010, they formalised their cooperation and registered it as a cooperative. To add value and preserve the harvest surplus, they decided to start processing the excess vegetables and market atchar or pickle. In 2011, IMAI was awarded a SEED Award, and the financial support they received enabled them to purchase stainless steel kitchen equipment to create more professional and hygienic facilities. In 2012, the cooperative consolidated operations, signed their first contracts for the supply of atchar, and started installing rainwater tanks on their farms to set up an irrigation system. Unfortunately the irrigation system was then struck by lightning which caused serious damage and stalled progress for the next two years as the atchar could only be made from vegetables sourced in the neighbourhood. With the SEED Accelerator² support they received in 2014, the enterprise is currently restoring the irrigation system and setting up a larger production facility to enable a diversification of the product range.

2.1 Financial development




At the outset, the cooperative was financed primarily by the cooperative members who produce the atchar. The model was then supported by a start-up grant of USD 5,000 under the SEED Catalyser support in 2011, and by a scale-up grant of USD 20,000 in the pilot phase of the SEED Accelerator in 2014. The latter served to cover investments and running costs of USD 17,700. Since, the cooperative has been able to produce only 60 litres of atchar per month using mainly vegetable sourced from neighbouring farmers rather than from the cooperative itself due to their irrigation problem, it is not yet financially sustainable. It will however re-launch its operations later in 2015 in a more competitive manner once irrigation is fully restored and the new production facility is operational.

² Advanced SEED support for selected SEED Alumni, focusing on financial capacity building and including a financial contribution of up to USD 40,000.

2.2 Employment situation

The cooperative consists of 6 full-time members and 9 part-time workers who are based at the three farming plots. In addition, 6 temporary workers are contracted when needed. The cooperative was started by women only, but men were later also accepted as members and they now comprise over 40% of the membership. The average annual income of the full-time members amounts to USD 2,190. Due to the nature of the cooperative system, in which each member is a partner in the operation, none of the 'workers' are under an employment contract. The cooperative provides health and safety training to each member according to set guidelines, and plans to expand training in drip irrigation, organic planting, pesticides management, and customer relations.

Fast Employment Facts

Members and workers	Avg. Salary per Year	Female Workforce
		
21	\$ 2,190	52%
Cooperative members	Regular workers	Temporary workers
6	9	6

2.3 Business Development

While recovering from the serious damage to their irrigation system, the cooperative has revisited its business model with support from its partners and from the SEED consultation. Basic atchar production has low entry barriers, but marketing outlets such as larger grocery store chains pose high expectations as regards product quality and standardisation. For this reason, the enterprise is setting up an improved production facility to enable it to refine quality and diversify its products: in addition to atchar made from seasonal vegetables, IMAI is developing an improved variety of vegetable atchar and a

new mango atchar, under the guidance of SEDA and the University partnerships. As vegetables and mangoes will be processed in a different season, it will ensure year-round production. This diversification is estimated to generate revenues of USD 57,000 in the first year, with a projected 30% increase every year. Another type

of value-added products that will be included consists of sliced, diced and packaged assorted vegetables and mixed vegetable salad. IMAI is currently finalising an agreement with a local bulk grocery chain, which is expected to provide a reliable market and ensure a constant demand for IMAI's products.



3. Reaching impact

IMAI Farming Cooperative was created by a group of farmers to leverage the potential of sharing resources and acquiring the skills necessary to succeed in organic horticulture and entering the market for value-added agricultural products. Activities are mainly focussed on social impact dimensions such as increasing household income for farmers and providing training in farming and food processing and preservation.



3.1 Beneficiaries

Benefits are mainly created at the start of the agricultural value chain for the farmers and their families who gain skills and generate additional household income, making them more resilient. This includes the members of the cooperative as well as farm workers and neighbouring farmers who supply vegetables. Farmers in other communities benefit from training in cooperative administration and governance, and local youth and women will also benefit in the future as IMAI has started to train them in organic farming practices and in setting up small businesses.



3.2 Social impacts

Social impacts are centred around generating income, empowering women and providing training for the community. The members of the cooperative as well as workers receive training in organic farming and techniques of food preservation that are applied in the production of atchar. IMAI also sources vegetables from surrounding farmers, thus creating additional income for them and avoiding the loss and waste of excess agricultural produce that cannot be sold at harvest time, and can only be stored for a limited period. The farmers benefit additionally from learning how to preserve fruit and vegetables because they are able to use some of the preserves for their own household consumption, so avoiding having to purchase processed food at stores for a high price. To bring further benefits to the community, product discounts are available for orphaned and vulnerable children and child-headed households. IMAI is also seeing community members come together to work, and to share skills and products; the enterprise therefore is becoming a place for community activity and dialogue.

“Now people know how to do their own canned fruits, make their own jams – and don’t need to rely on buying from chain stores.” *Young female farmer*

3.3 Economic impacts

Due to the small size of the cooperative so far, economic impacts from the enterprise are relatively small; nonetheless, they are tangible. The business model is simple and replicable; it makes the farming community more self-reliant by diversifying their revenue streams from agricultural produce and by encouraging them to work together to gain better access to markets. As a result, higher share of value creation is taking place which benefits more rural small-scale producers. Not only do members, employees and suppliers of the cooperative have an additional source of income, but the cooperative also serves as a centre for commerce and learning which strengthens the economy as a whole. IMAI also spreads its knowledge, has trained 20 other cooperatives so far, and has provided business start-up guidance to young members of the community.

“IMAI has ignited the entrepreneurial spirit in me.” *Young entrepreneur*

3.4 Environmental impacts

Preserving fruit and vegetables through pickling is an important contribution to avoid the loss and waste of perishable fresh produce in storage and transport, especially in a region where cooling is difficult and costly. For each tonne of vegetables that is lost, not only labour and money, but also many litres of irrigation water are wasted. Conscious of the detrimental effects of unsustainable farming practices on ecosystems and soils, IMAI fosters organic farming practices on its plots and aims to spread these practices through its training efforts. The cooperative has built a rainwater harvesting dam for irrigation so as to reduce groundwater depletion, and is planning two more dams for the coming year. To further reduce its environmental footprint, IMAI is looking for technical support to install solar panels on its farming sites to generate the electricity for its processing equipment on site.

3.5 Policy impact

While IMAI has not directly worked to influence policy, two of its longstanding partners are government agencies which support the cooperative. Asking IMAI to provide cooperative training to other farming communities, the Limpopo Department of Agriculture is actively supporting the replication of their approach.



4. Charting green and inclusive growth

IMPACT

Organic farming and value-added products

IMAI farming cooperative bundles and spreads vital knowledge about organic farming and food processing to its members and surrounding farmers. By expanding farmers' activities along the value chain into value-added products such as vegetable pickles (atchar) and packaged vegetables, local household incomes are becoming less dependent on seasonal harvest revenues. Additionally, the preservation of the vegetables through pickles extends the shelf life of perishable horticultural produce and reduces the significant loss and waste of valuable agricultural food products.

CHALLENGES

Infrastructure and marketing skills

The enterprise supports emerging farmers to face recurrent challenges from lack of skills, infrastructure and market access. However, the development of IMAI demonstrates the vulnerability of such ventures: when irrigation systems of the cooperative's farming plots were destroyed by lightning in 2012, production almost came to a halt; full farming capacity has still not been reached. Therefore, and in the face of stiff competition, financial self-sustainability has not yet been achieved as planned. Working towards relaunching the products for a wider market, the team is struggling with weak marketing skills and dependence on external partners' support in product development.

SUCCESS FACTORS

Partnerships and business development support

Starting from a situation with significant lack of business skills and farming expertise, the enterprise has been able to secure the right local partnerships. In addition, injection of financial support and capacity building from external supporters, such as SEED, also contributed to overcoming challenges. Another significant factor was IMAI's strong network with neighbouring farmers who supplied vegetables.

FUTURE NEEDS

Improved marketing and solid infrastructure

IMAI cooperative has developed a promising model to improve rural self-reliance, by bringing together aspiring commercial farmers and by building capacity in organic farming and processing skills. Throughout its development, the enterprise has faced serious infrastructure challenges and it will now need to stabilise its water supply and increase the team's skills. With expanded production facilities, it is about to adjust product quality and scale up production to access broader retail markets. To achieve successful product positioning and marketing, the cooperative members need additional training and are looking to establish new partnerships that can bring direct market linkages.



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About SEED

SEED strengthens the capacity of small grassroots enterprises in developing countries to enhance their social, environmental, and economic benefits, builds bridges between entrepreneurs and policy makers and stimulates exchange and partnership building.

SEED was founded by the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP) and IUCN (International Union for Conservation of Nature) at the 2002 World Summit on Sustainable Development in Johannesburg and is hosted by Adelphi Research gGmbH, based in Berlin, Germany.

Adelphi Research (AR) is a leading think-and-do tank for policy analysis and strategy consulting. The institution offers creative solutions and services regarding global environment and development challenges for policy, business, and civil society communities.

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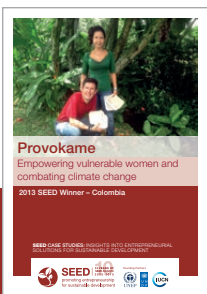
Helen Marquard – Helen Marquard has been Executive Director of SEED since 2007. Prior to that she was a senior official in the UK government, responsible for various aspects of environment and sustainable development policy at the EU and international level. Helen holds a PhD from Manchester University.

Notes

This case study is mainly based on interviews and site visits to the enterprise in late 2014 / early 2015, as well as internal documents such as the enterprise's business plan. Additional resources are listed below.

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