

Making Vegetable Markets Work for Smallholders Myanmar

This case study

has been developed under the initiative of the Seas of Change framework by Monika Sopov (Wageningen Centre for Development Innovation, Wageningen UR) and Roger Reuver (Reuver+Co Communication Design).

From rice bowl to food basket

Purpose

To improve livelihoods through vegetable production and linking smallholder farmers to the mainstream economy of Myanmar

Objectives

1. Improved economic performance of vegetable farming households in Southern Shan and Rakhine States (15,000 smallholder farmers; impact an additional 9,000 farmers indirectly through the effects of crowding in and replication)
2. Demonstrate conflict-appropriate, pro-poor, market-based approaches as a viable economic development approach in Myanmar

Budget

\$4 million

Program duration

June 2014–June 2017

Implementing organizations

- Mercy Corps Europe and SwissContact Consortium
- East–West Seed International

Strategy

Establishing a public–private partnership to achieve market systems development in the seed and horticulture sectors

Financing structure

Co-financing with farmers, Co-financing with companies;

The program leverages East–West Seed’s staffing, logistics, training, and input provision, including the establishment of demonstration gardens. The value of East–West Seed’s contribution to this program is estimated to be at least

Rakhine State
5 townships:
Sittwe, Kyauktaw,
Pauktaw, Ponnagyun,
and Mrauk U

INTRODUCTION

The **Making Vegetable Markets Work for the Poor** (MVMWS) Program is funded by the Livelihoods and Food Security Trust (LIFT), a multi-donor fund established in 2009 to improve the lives and prospects of smallholder farmers and landless people in rural Myanmar. The program focuses on improving the vegetable market chain throughout Myanmar and the income of 15,000 smallholder farmers in the country. By utilizing the Market systems development approach, the program seeks to impact an additional 9,000 farmers indirectly through the effects of crowding in and replication.

The program focuses on two states within the country: Southern **Shan State**, a hilly region with much vegetable cultivation, and **Rakhine State** in the western part of the country, which has traditionally focused on paddy production.

As part of the market systems development approach, Mercy Corps has managed to establish partnerships with a variety of private sector actors, including East–West Seed Myanmar. According to Mercy Corps’ theory of change of, engaging companies and leveraging their strengths when working with smallholders will lead to sustainable systemic change.

This case study explores the collaboration between East–West Seed Myanmar and Mercy Corps, the key challenges the company and the NGO have faced, and lessons learnt from the partnership.

Key milestones

Indicator 1:
Number and percentage of target farmers with a 25% increase in their value of production

Milestone 2016:
7500 smallholders
Cumulative result through June 2016: 401

Indicator 2:
Number and percentage of target farmers using improved inputs or services

Milestone 2016:
10,000 smallholders
Cumulative result through June 2016: 3636

Results

Additional achievements until 2017:

- The program brought improved technology and services to more than 12,000 farmers;
- The Vegetable Acceleration Task Force has been created – a multistakeholder platform to help engage the government in policy and sector reform;
- 16 businesses were involved in the program, and adopted more inclusive business models;
- 20% of farmers increased their income by 50% or more, and it is foreseen that more than 75% of farmers will achieve this by the end of the project.

Key challenges

1. Tough investment climate

Foreign companies investing in Myanmar remain pioneers, and further significant reforms are needed in both economic and political arenas if Myanmar wishes to attract large number of foreign investors

As the World Bank’s “Doing Business” project¹ has indicated (below), it is **extremely challenging** to set up and run a business in the country.

¹ The Doing Business project provides objective measures of business regulations and their enforcement across 190 economies and selected cities at the subnational and regional level. <http://www.doingbusiness.org>

Figure: Ease of doing business in Myanmar

Topics	DB 2017 Rank	DB 2016 Rank	Change in Rank
Overall	170	171	▲ 1
Starting a Business ✓	146	170	▲ 24
Dealing with Construction Permits	66	72	▲ 6
Getting Electricity	149	150	▲ 1
Registering Property	143	145	▲ 2
Getting Credit ✓	175	174	▼ 1
Protecting Minority Investors	179	181	▲ 2
Paying Taxes	119	117	▼ 2
Trading across Borders ✕	159	149	▼ 10
Enforcing Contracts	188	188	-
Resolving Insolvency	164	163	▼ 1

“While CEOs might read in *The Economist* about how growth is at 8.5%, people also need to realize the hurdles that need to be overcome to be able to take part in a growing market like Myanmar are still significant. The country remains one of the hardest in the world to do business in. There are still significant reforms that have to take place in the political and economic institutions that will facilitate easier investment in the country.

Drew Johnson,
Program Director Market Development, Mercy Corps

2. A seed sector in infancy

The seed sector in Myanmar is underdeveloped and very much limits agricultural productivity. The majority of farmers still produce their own seeds or use grain as seed.

The biggest barriers to increasing profits for smallholder farmers are the high rate of poverty, poor cultivation techniques, weak market linkages, a lack of knowledge of the benefits of using improved varieties, and lack of access to quality agroinputs

The Myanmar seed law has been in draft form since 2000, and has undergone numerous revisions; it was recently submitted to the Attorney-General’s office for approval. This seed law grants protection to new plant varieties and encourages research and breeding of new varieties, particularly in the private sector, in line with Myanmar’s obligations under the TRIP agreement. It also sets forth farmers’ rights to save, use, exchange, and share seeds for commercial purposes.

3. A vegetable sector in infancy

Rice-push policy: Government policy has predominately focused on the development of the rice industry with the aim of ensuring food security, although more focus has now been directed to the vegetable industry with the recent support of the Ministry of Agriculture and Irrigation. Farmers were previously required to grow rice on their land; other crops and horticulture were deprioritized in favor of a rice economy that fed the populace. Myanmar became the leading exporter of rice globally. As result, there has been very low investment in other agricultural sectors. In recent years, farmers have been given more flexibility in the crops they are allowed to grow, and a slow shift has been taking place from “a rice bowl to a food basket”; the diet of the Burmese people has begun to reflect this.

Important sources of income for smallholders: Vegetables, which are produced on 400,000 hectares, currently offer an important source of income for an estimated up to 750,000 smallholder farmers (average age range 25–35) in Myanmar. For over 35 percent of these farmers, vegetables are thought to represent their primary source of family income. The total

“After the country opened up, the idea of registering a foreign company in Myanmar came to mind. But it’s one of the most bureaucratic countries in the world. It took us 3.5 years to register the company, and now for our construction permit, it’s been nine months already. In Thailand it will take you only three days to get construction permit.

Kittitouch Pattanakittipong,
Country Manager EWS Myanmar

value of vegetable sales at the farm-gate level is estimated to be USD 1.2 billion.

Limited supply: In addition to institutional and policy constraints, the poor performance of many smallholder farmers can be largely attributed to the exceptionally limited access to both technical knowledge and high-quality seed. Most vegetable farmers in Myanmar depend on their neighbors and input dealers for technical information.

Highly fragmented sector: There are many small players along the chain, resulting in high postharvest loss, low added value, and relatively high prices as each actor along the chain takes its profit.

Lack of processing industry: Vegetables in Myanmar are almost all domestic and fresh. The processing industry is very limited in providing opportunities for investment.

Opportunities

1. Increasing demand for vegetables

Although there are excellent opportunities for exports, the vast majority of vegetable production is presently geared towards domestic markets, which so far have faced little or no competition from imports. It is estimated that approximately 5 million tons of vegetables are produced every year. With postharvest losses in excess of 30%, the availability is probably less than 60 kg per person per year, falling well below the WHO recommendation of 98 kg per person per year. With rising population and increasing wealth, excellent opportunities for increasing productivity and improving qualities are expected in order to meet future market demands.

Current exports presently focus mainly on melons, hot peppers, and onions, the value of which is not thought to exceed 50 million USD. However with close proximity to markets in China, India, Bangladesh, and Thailand, there are immense opportunities to develop a thriving export market.

2. Growing competition in Asia

Though local farmers currently supply most of the country's fresh vegetables, the liberalization of border trade in the ASEAN Economic Community will likely result in smallholder farmers facing increasing competition from abroad, as the demand for quality and quantity grows.

Large-scale commercial operations investing into Myanmar may also create significant competition in local markets. The pressure from competition will likely to have a positive impact on the development of the sector and will result in the production of high-quality products and the development of the vegetable processing industry.

“

We're not afraid of competition. I will say more than 50% of the newly registered seed companies in Thailand have been established by our former staff... I know it's going to happen with Myanmar, too. That's how we slowly transfer to students, to people or to the country. It's not about fresh produce anymore.

*Kittitouch Pattanakittipong,
Country Manager, EWS
Myanmar*

“

The program is not about just one company changing their business; it's about the other players that come in to compete and to attempt to replicate success stories.

*Drew Johnson
Program director Market
Development, Mercy Corps*

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The intention of East-West Seed's Founder, Simon Groot, is not to make money, but to develop and to improve agriculture in undeveloped countries such as Myanmar.

*Country Manager EWS
Myanmar*



Market at Kalaw

Capitalizing on opportunities

With the lead of Mercy Corps and the SwissContact consortium, a public-private partnership has been set up, and the MVMWS Program works with farmers, the private sector, and the government to improve information flows and incentives for cooperation, to create or strengthen market linkages, and to build trust on different levels.

1.

**The business point of view:
East-West Seed**

Seed supply: Since entering the market through local seed distributors in 2005, East-West Seed (EWS) has developed a leading position in Myanmar. Testing varieties, producing and processing seed, training farmers, and improving widespread access to seed across the country are the main activities of EWS in the country.

As of May 2017, the company has commercial seed production, but not yet seed processing operations. The seeds produced in Myanmar are shipped to Thailand for processing and packaging, but that will change as soon as the construction of seed processing facility in Myanmar is underway.

To maintain high standards of quality throughout the process, EWS plans to establish a state-of-the-art seed processing facility to clean, sort, dry, treat, test, and package seeds for the Myanmar and export market. The land for the facility for cleaning, etc., has been acquired; EWS is currently waiting for a construction permit.

Knowledge transfer by EWS

East-West Seed has long identified extension as a precondition for opening and sustaining markets.

In challenging environments, where the majority of potential clients have little or no access to information, company extension activities aim to make risk-averse farmers more receptive to upgrading their production practices. Results have shown that the income of farmers and that of the company are fundamentally linked.

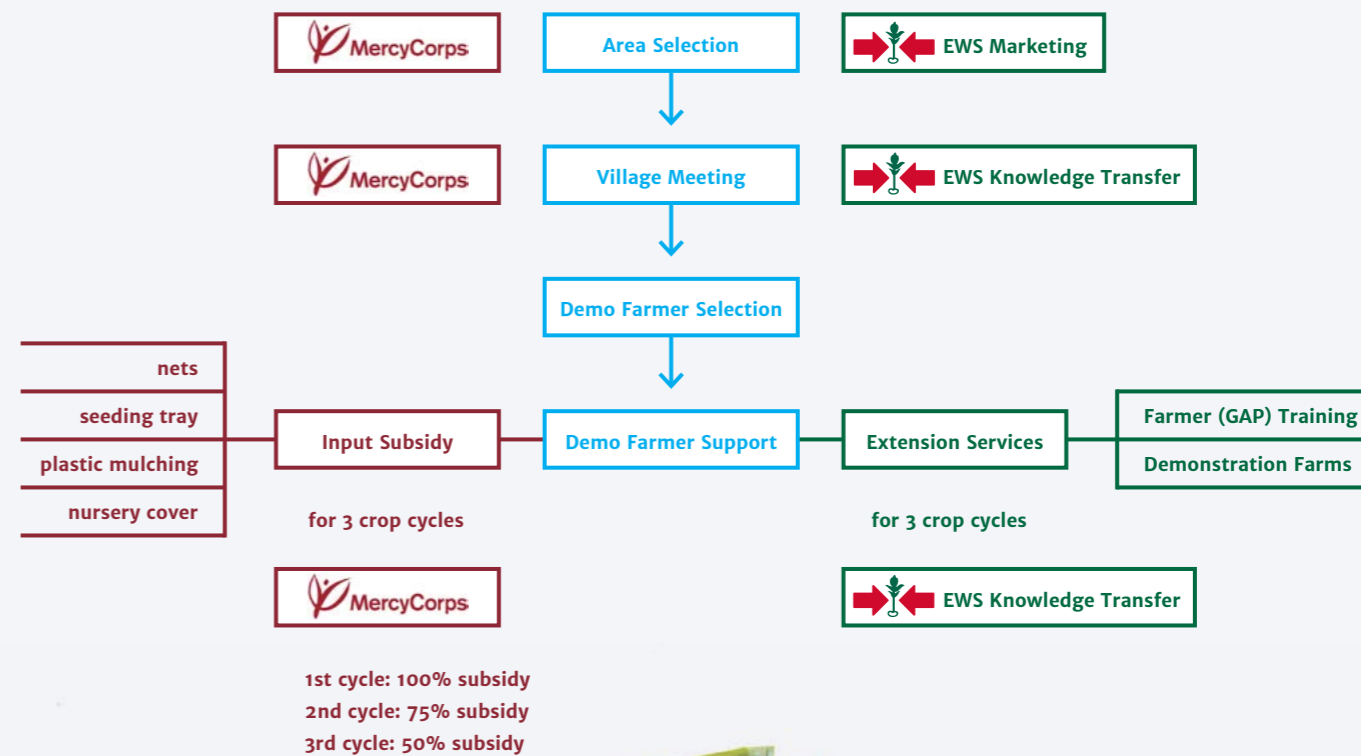
Village-based training: Local staff facilitates training sessions in which groups of farmers are given the opportunity to ask questions, discuss techniques, and learn from the trainers, as well as from each other. The topics are linked to the growth stages of the demonstration fields that are shown to the farmers.

Technical demonstration

Field days: The knowledge transfer teams provide regular support throughout the crop cycle on all aspects of production, from land preparation to harvest. One to three field days are generally implemented for every crop cycle on demonstration farms.

Demonstration farms: Neighboring farmers are invited to observe the results throughout the crop cycle on demonstration farms. This inspires the use of new skills which build on the farmers' traditional practices.

These demonstration farms are open to all farmers to learn and observe and compare with their own farms. The location rotates from farm to farm, giving all available farmers in the area the opportunity to observe any differences and similarities, as well as increase their skills and knowledge.





Mar Lar Soe
East-West Seed
Knowledge Transfer
Team, explains how
East-West Seed and
Mercy Corps collaborate
in implementing the
program

▶ Watch the interview



Key points

Roles in the partnership: The role of Mercy Corps is to organize farmers, to invite them, and to facilitate training in logistics. The Knowledge Transfer staff from East-West Seed provides theoretical and practical training, supported with demonstration farms set up by lead farmers and with regular advice from the East-West Seed Knowledge Transfer Team and lead farmers on other inputs, such as pesticides and fertilizers. EWS Knowledge Transfer Team staff and Mercy Corps staff assess a selected village area together; this is followed by a meeting with farmers organized by Mercy Corps. Mercy Corps introduces the project to farmers and collects nomination of farmers who are interested in trying to improve their technology.

Area selection is based on the marketing potential of the regions and happens collaboration with partners taking account of where Mercy Corps and East-West Seed already have their operations and where they would like to set up new operations

Demonstration farm: EWS provides farm input to selected motivated farmers to allow them to try improved technology for free in the first cropping cycle; these include seedling trays, plastic mulching, screen nets, and covering for nursery houses. In the second cycle, EWS support is at 75%, and in third cropping cycle at 50%. One cropping cycle is not enough to change the behavior of farmers; therefore, EWS offers support through 2-3 cropping cycles in different seasons and with different kinds of crops.



We want to be the anchor to the improved technology for the small scale farmer

Mar Lar Soe

Extension targets: The EWS Knowledge Transfer Team has six staff for Shan state and four staff for Rakhine state. One staff member trains approximately 800 farmers and sets up 32 to 48 demonstration farms each year.

Promotion: EWS introduces improved technology, such as seedling trays, plastic mulching, and trellises; contrary to what farmers tend to believe, the company is not selling this kind of input, but only vegetable seeds. Also, the company promotes the use of certified seeds in general, not only those of EWS.

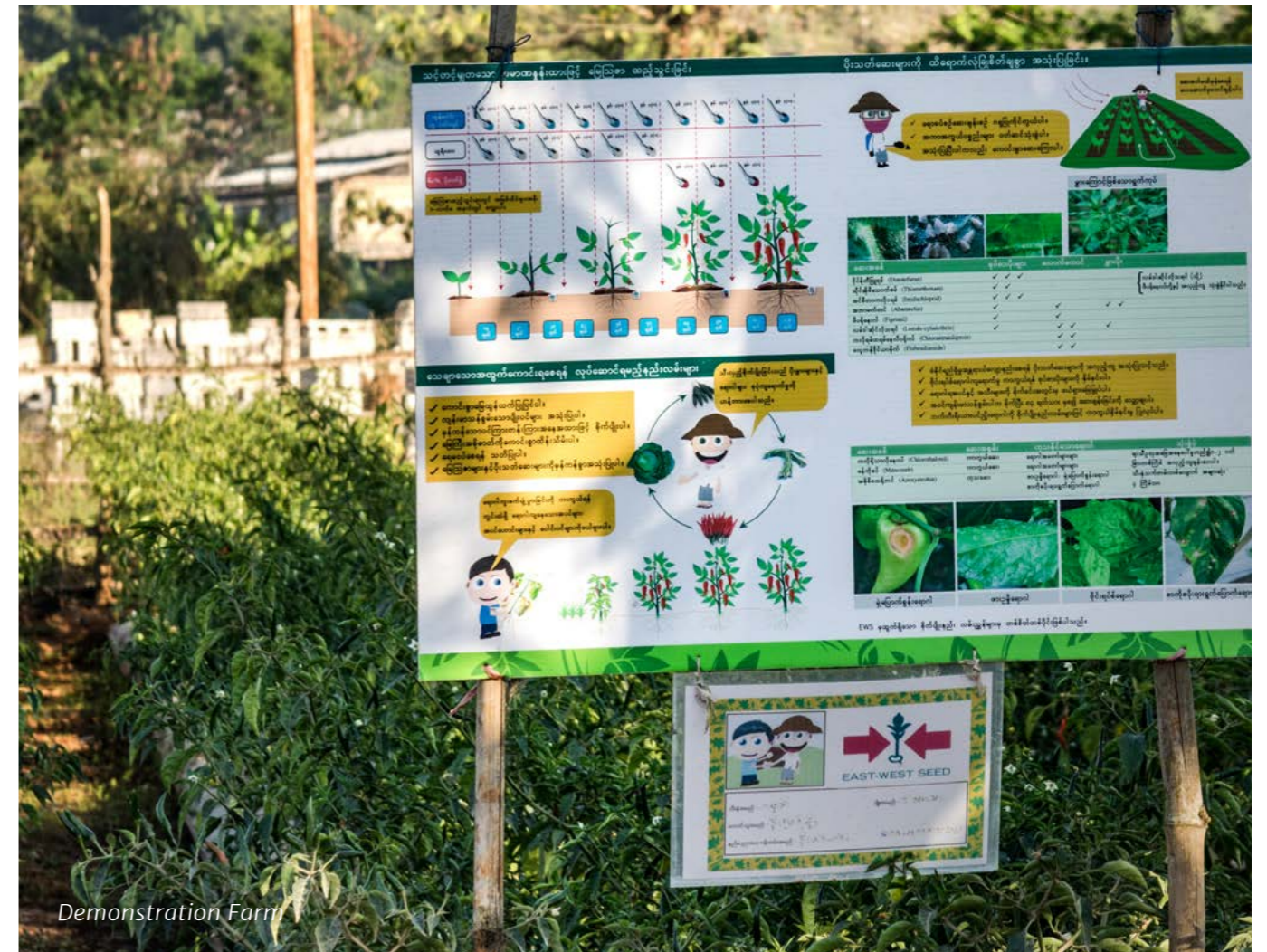
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Demonstration farmer



Plastic Mulching



Demonstration Farm



Kittitouch
Pattanakittipong
*Country Manager for EWS
in Myanmar explains the
company's operations in
the country*

[▶ Watch the interview](#)



EWS Value Packs

Key points

Value pack: People in Myanmar lack purchasing power; they grow vegetables in their backyard and sell what they don't consume at the local market. For this reason, EWS introduced a "value pack": a small pack that would allow farmers to access high quality seeds without a big up-front investment.

Service provision: Having good seed is not enough; farmers also need to develop knowledge and good growing techniques, and EWS can offer both; this operates very much like an after-sales service.

Role of the NGOs: NGOs want to provide support for farmers so that they can have better income and better lives, but often they do not know how to cause that. EWS can support these NGOs in achieving their objectives. 'We have techniques. We have experienced people. We have technical people. And we know the market very well. We know the country very well'.

Market development is based on business potential. EWS first targets large growing areas in Myanmar because farmers there are very open to new knowledge and technology. Also, when selecting an area for intervention, the objectives of donors and partners must be taken into account.

Seed production is more complex than the production of vegetables, as far as knowledge and technology are concerned. The area must also be carefully selected – for example not to be close to areas where farmers are producing for the fresh market. However, Myanmar has a great deal of potential for seed production, and so is very important for EWS in the future.

Long term strategy: East-West Seed sees Myanmar as a strategic country, and as a strategic market and production area. The population of the country is more than 55 million and the average age is around 25 to 35. It is perfect for seed production. India, Bangladesh, and China offer many business opportunities for vegetable export. EWS in Thailand was established 35 years ago when there was no seed industry in that country. There were few seed companies, and now after 35 years, now there are over 400 seed companies. That means that EWS has a key role in establishing the seed industry, and hopes to do the same in Myanmar.

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Farmer training

The population of the country is more than 55 million and the average age is around 25 to 35.

Comparison of net income for one acre of sweet pepper farmed without and with EWS support



Cost without EWS techniques			Cost with EWS techniques		+ voucher	- voucher
Fertilisers	150 kg	120	Fertilisers	325 kg	260	260
Urea	50 kg	25	Urea	200 kg	100	100
Seed (Chinese variety)	100 g	20.00	Seed (EWS)	100 g	30	30
Manure	3 tractors	60	Manure	4 tractors	80	80
Pesticide		50	Pesticide		50	50
Labour	70 days *4\$	280	Labour	20 days *4\$	80	80
Plastic mulch		0	Plastic mulch	10\$/roll	100	350
Total		555			700	950
Returns			Returns			
kg	10,400		kg	20,800		
Price/kg (highest observed)	0.625	6,500	kg	0.625	13,000	13,000
Price/kg (lowest observed)	0.375	3,900	kg	0.375	7,800	7,800
Profit	high market price	5,945	high market price		12,300	12,050
	lower market price	3,345	lower market price		7,100	6,850
Ratio. ROI	high	11	high		18	13
	low	6	low		10	8

Average on the program for all Myanmar (per 1 acre)			
Sweet pepper		Cost (\$/acre)	700 (range 400–1,200)
Potential yield (Kg/acre)			
EWS varieties from	10,400 min	Return (\$/acre)	3,950 (range 2,000–9,000)
(Source Reference Doc EWS KT)	21,200 max	Profit (\$/acre)	3,240 (range 970–8,430)
		Ratio ROI	6 (from 4–8)

Capitalizing on opportunities

INTERVIEW



2. The NGO point of view: Mercy Corps, Myanmar

Mercy Corps has been operating in Myanmar since 2008. With the “Making Vegetable Markets Work for Smallholder Farmers” program, Mercy Corps seized an opportune moment in Myanmar’s development:

It was the right time for development actors to shift to more sustainable approaches to livelihood development by facilitating the integration of rural populations into the mainstream economy.

The government showed new interest in exploring different growth models and an **openness to market-based approaches** that support pro-poor and conflict-sensitive development.



Drew Johnson
Program director
Market Development
Mercy Corps

▶ Watch the interview

Key points

Market systems development approach: the project is a collaboration of different stakeholders to create sustainable input companies and seed companies with the government and civil society.

Objectives: to increase the incomes of 15,000 farmers and to work with the market players to develop more inclusive products and services. Partnering with EWS

Partnering with EWS: EWS is a leader in inclusive business specifically in terms of providing extension services to smallholder farmers. The company is an input provider of seeds that could help farmers to increase their income. Their extension service is not a traditional product-push extension service. Instead, East-West Seed is more committed to providing a holistic extension to key agricultural concepts, such as land preparation, seed preparation, pests, and disease.

Area Selection: East-West Seed, Mercy Corps, and the donors all have their own geographical priorities, in addition to their other priorities. It was necessary to match up those different geographies and see where the overlap lay, before then negotiating in terms of where the project would be implemented.

Results are not even across the years of the program. In the first few years, much of the work was focused on assessing the market system, talking with market players, and negotiating deals about how to work together. In the second half of the program, results have accelerated. Once those deals are in place and there is alignment on what needs to be accomplished, results start happening in the field. As a result, you almost see a hockey-stick-type of pattern in the results, with exponential growth as the program goes along. To date, through our partnership with the private sector, we have brought improved technology

and services to more than 12,000 farmers. This involves the adoption of new practices, the availability of extension services, and the purchase of new technology that helps farmers. A second area concerns the policy environment. The program has formed the Vegetable Sector Acceleration Task Force (VSAT). In this, partners such as Syngenta, the OBA Company, and the Ministry of Agriculture, Irrigation, and Livestock are members and convene to discuss topics such as wholesale market laws and policies, as well as seed-sector laws. The third area is the number of businesses that have adopted more inclusive business models. We’ve been working with over 15 businesses on the program, and these businesses have contributed new technologies and services to the 12,000 farmers who adopted them. In terms of income, we saw at the midline that 20% of farmers had increased their income by 50% or more. Looking at the end line, we hope that more than 75% of farmers will have increased their income by 50% or more.

Exit strategy: In terms of sustainability of the program, it is fundamental that private sector actors or other market actors take on the new practices so that, after the program ends, they will continue selling their product. One area that still needs work concerns extension services. Farmers in Myanmar are presently unwilling to pay for extension services. As a result, companies offering these services – such as OBA, Asiatic, and East-West Seed – are doing so as a market entry tactic to get their name out in the community and to establish relationships with the community; this certainly does benefit the community, but the long-term sustainability and integration into the business model (once the farmers are aware of the companies) needs to be explored further. If there are models for extension that can be delivered more cheaply (for example, by mobile phone) or can be more tied to products and services (for example, to machinery), such tactics may have more success.

Market linkage on the output side of the vegetable value chain is very challenging. Vegetables are a highly fragile, highly perishable crop. It’s critical that they move from the farm gate to the plate quickly. In Myanmar, almost all vegetable consumption at present is domestic, and it is almost all fresh. There are very few processors or exporters working in vegetable markets. One of the greater challenges for the program is how to engage this market system, as it is highly fragmented.

Coshare from the company: Mercy Corps is not in the business of contracting out companies like East-West Seed to do work they are already engaged in; there has to be additionality if a collaboration is set up. However, to define such additionality is very tricky. It is more of an art than a science, because who is to say what the sector will do by itself? Mercy Corps is trying to use smart subsidies: to invest in things that will push the project forward, but will not make the companies reliant on funding in the future. Also, smart subsidies would concern funding, capacity building, or training – softer elements that private sector often values, but might not be willing to invest in.

Need for longer projects: donors and nonprofits should not be afraid of being honest with themselves in recognizing the time it takes to change the market system.

Crowding in is a natural market tendency: this is the idea that if you work successfully with one market player and demonstrate a business model that works for that business, other businesses will come in and mimic it. The project should not be unwilling to pick one or two market players that it considers leading thinkers who are willing to innovate and willing to take risks, and to work with them in refining a more inclusive business model that benefits the company because others will follow. The program is not about just one company changing their business; it’s about the other players that come in to compete and to attempt to replicate success stories.

[View the full interview transcription](#)



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After assessing the village, Mercy Corps holds the first two training modules in the village, and modules three and four in the field at demonstration plot areas. With this approach, 70%–80% of attendees become interested in using the new technology. Only farmers who are willing to become demonstration farmers receive financing from the project to buy nets, seedling trays, mulching, and so on. They receive a voucher on their mobile phones to buy these inputs. The input sellers use the voucher code to recoup the money back from Mercy Corps.

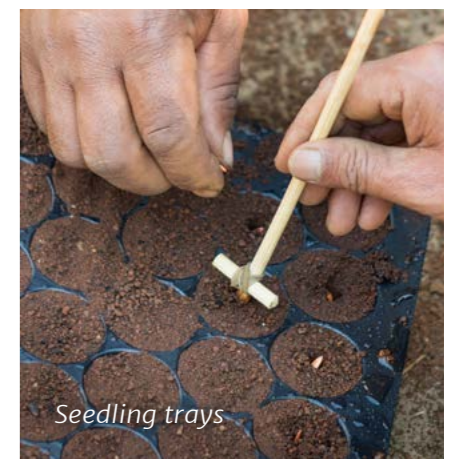
Thi Thi Mon, Business management officer, Mercy Corps, explains how the NGO is working with smallholders.



First Farmer training



Owner of farmer inputs store



Seedling trays



Mercy Corps staff in Kalaw

Lessons learnt

Project duration

It is essential that donors take a critical look at the duration of projects and their objectives in terms of achieving sustainable systemic change. Mercy Corps spent the first year of the project getting key stakeholders to the table, negotiating with them, and agreeing on the common shared agenda. Considering the time needed to set up the very necessary partnerships between chain actors, the production cycle of the different vegetables, the necessity to aggregate farmers, and the need both from companies and farmers to go through several crop cycles to achieve expected performance, the duration of the MVMWS program (3 years) is extremely limited if the program's objective is to be achieved.

It is only from the second year that the program gets close to achieving its yearly targets, and while the results are growing exponentially in terms of the number of farmers applying new technology and buying improved seed, at least an additional 2–3 years would be needed to allow for “crowding in”, solidifying business relationships, and achieving systemic change across the vegetable sector.

Inclusiveness

Through its operations, East–West Seed has proven that inclusiveness can go beyond engaging with smallholders they work with as customers in the Bottom of the Pyramid (BoP) market, but also as producer of seeds (though not yet in Myanmar).

It can also include competition contributing to the development of the seed sector. By introducing a variety of seeds during training (not only those sold by East–West Seed), the company also promotes the products of other business and healthy competition for the benefit of the whole sector.

Market pull

As Mercy Corps explained, EWS was its first business partner in the MVMWS Program, as they were not the average seed company trying to push smallholders to buy their seeds. Instead, they showed farmers that, with improved seeds and technology, they can achieve better yields and higher income. It was the farmers' choice if they wished to buy EWS seed following the training and advice; they could also buy seed from other companies. Also, EWS did not hand out free seed with the aim of locking in new customers.

Extension

Providing smallholders with an extension service they are willing to pay for remains a challenge all over the world. This is less so in the case of high-value crops, where the increased income allows farmers to pay not only for the extension service, but for other services as well, such as scouting and spraying according to GAP requirements, as the example of export vegetable chains in Kenya shows. However, in the case of domestic vegetable chains with low quality and safety requirements in the market, low purchasing power of customers, and weak government extension services, the duty to provide knowledge and new technology falls on the shoulder of the companies in form of embedded or after-sales service. The question remains, however, of who should be paying for this.

Financing

The “cosharing” approach described in this case study is a good example of how to share the burden between public and private sector actors, both for extension services and input supply – like the actions of the EWS Foundation to make company contributions to public goods more transparent and more flexible.



Thank you

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May 2017

 **Seas of Change**
scaling inclusive agri-food markets

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