



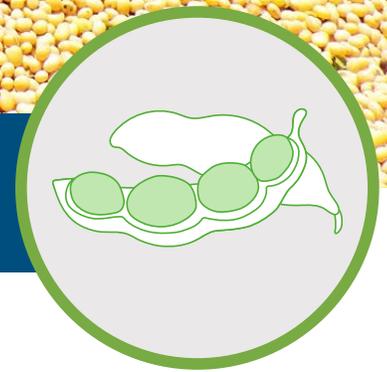
FROM SEED TO FORK:

TRIGGERING SYSTEMIC CHANGES IN MYANMAR'S SOYBEAN SECTOR

USAID'S VALUE CHAINS FOR RURAL DEVELOPMENT

November 2019

This study is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of Winrock International, prepared by the Value Chains for Rural Development (VCRD) team, including Nimish Jhaveri, Timothy May, Anne-Claire Degail, Thet Htun Aung and under contract by Lorene Flaming and Lay Thida, and do not necessarily reflect the views of USAID or the United States Government.





OVERVIEW

USAID/Burma's Value Chains for Rural Development project ("the project") supports soy farmers, processors, and input suppliers to change the way they do business by proving that inclusivity, transparency and commitment to quality leads to increased income generation throughout the value chain. This report highlights value chain developments and learning over a five-year period, from 2015 to 2019.

The project's work in the Myanmar soy value chain is a story of **observation and action, continuous learning and innovation**, leading to **systemic transformations** of the sector (see textbox). It is also the story of the nationwide **revival** of soybean, a key domestic food security crop.

The project catalyzed two major systemic changes: development of a **functional, profitable, open pollinated variety seed supply chain** benefiting smallholders and a shift by domestic soybean buyers to purchasing **high-quality soy following clear quality standards for premium prices**.

The project partnered with key end-market buyers, traders and farmer associations, and facilitated technical assistance, training and capacity development for service providers and community extensionists that had helped train more than 13,000 soy farmers as of the end of September 2019. The project also worked closely with soy processors, linking farmers groups to buyers willing to pay premium prices for higher quality soy, promoting improved management practices and technologies to improve soy quality

SYSTEMIC CHANGE IN THE DOMESTIC SOY MARKET

The project facilitated new connections between the Myanmar Department of Agriculture, Department of Agriculture Research, farmer groups and private sector service providers, who formed an informal public-private partnership to develop a functional, profitable, open pollinated variety (OPV) seed supply chain, benefiting smallholders. There is usually little incentive for large private sector firms to invest in OPV seed production; but this is not the case for smallholders who can switch from seed to grain production if seed markets become saturated.

Major domestic soybean grain buyers, including tofu processors, fermented soy-food processors, and other high-end buyers, **switched from buying mixed-quality soybean grain only from traders, not having defined the quality specifications of the grain they needed, to diversifying their suppliers and paying premium prices for soybean grain complying with clear quality standards**. These high-end buyers now purchase soybean grain directly from farmer groups who comply with specific quality standards that the project helped develop, side-by-side with the farmers and processors. Realizing that Myanmar farmers were able to produce better quality soybean grain, high-end buyers now demand the same quality from other suppliers, who in turn are paying premium prices to farmers who meet the new standard.

and yields, helping improve the soy seed supply chain, supporting growth, upgrades, and business strengthening of soy processing facilities and facilitating access to credit.

Below, are the **Drivers of Success** that led to this transformation in the soy market system:

Promoting the link between **improved seed**, which leads to improved grain and profits. This stimulated development of a private sector, farmer group-led open pollinated variety (OPV) seed supply chain

Introducing and adopting **innovative technologies** now available widely in southern Shan by the private sector, independently of external or donor support

Facilitating soy **market system-wide collaboration** to link seed producers, traders, and farmers from various regions across Myanmar, from Kachin State to the Delta, to provide year-round access to quality seed and grain; this collaboration has taken many forms, with different models adopted as the market system shifted from exclusive to more inclusive, as traditional traders adapted their business model, and as farmers from different regions became incentivized to work together to create economies of scale, and/or to continue working with traders with an enhanced negotiating power

Proving to financial institutions the viability of soy as a profitable agribusiness endeavor; VCRD facilitated **lending from microfinance and commercial banks** to the soy subsector for the first time

Working with end-market buyers (mostly tofu processors) to develop **quality standards with associated price differentiation** that rewarded improved production and post-harvest practices; this innovation triggered spread of a new business model between traders and other actors

Supporting **development of for-profit service providers** to bring efficiency to the soy value chain, including providing certified seed, assisting with aggregation of grain, and providing extension services

BENEFITS OF IMPROVED SOY QUALITY AND PRODUCER-BUYER RELATIONSHIPS

The following benefits increase profits irrespective of market price fluctuations:

For farmers

- Price premiums for higher quality
- More resilient, healthy seed
- Lower sales transaction fees
- Greater market transparency
- Offers a profitable alternative to less resilient crops, such as black gram
- Soy is nitrogen-fixing and improves soil fertility

For tofu processors

- Supply chain management: access to larger quantities of higher quality soybean, enabling higher quality soy products
- No soil, dust, or sand that could damage equipment, enabling processors to invest in better equipment

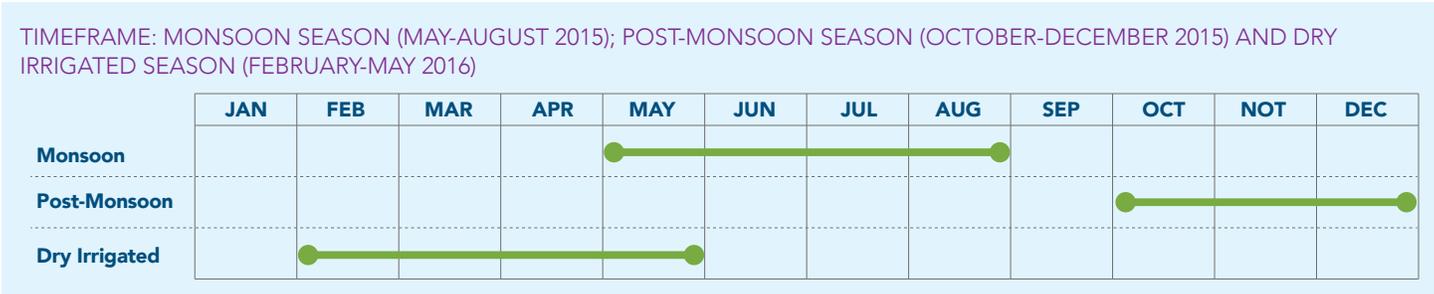
EVOLUTION OF THE SOY SECTOR

Pre-project: soy markets controlled by traders blocking the flow of market information.

Up to 2014, end-buyers of soybean grain in Myanmar didn't know where their soy was sourced because they purchased exclusively from traders who never disclosed the origin of the grain supplied. No one along the soy value chain—including the farmers themselves—even knew it was possible for Myanmar smallholders to produce clean, homogenously colored soybean, at recommended 12 percent moisture content and without mold. No one in the value chain, including end-buyers themselves, knew what the optimal quality requirements were for grain, or how to gauge them systematically. As with many other crops in Myanmar, traders, brokers and middlemen controlled the value chain, thriving on entrenched opacity of the terms of trade.

Prior to VCRD, there were no service providers providing post-harvest services to farmers, there was very limited extension, there were no formal soybean seed sellers and there was no such thing as certified soybean seed.

Project first phase: understanding the soy landscape, learning, training and raising awareness.



In order to define the project's strategy and activities pertaining to the soybean value chain, it was first necessary to define the production system in Shan. Where was soy produced? What were the production seasons? On what type of land was soy produced, in rotation with which crop? What were the production costs, the income, the main production constraints? In the absence of reliable data, it was important at the onset to understand how production systems functioned and were integrated into the larger market system. Only then could the project design appropriate activities to increase productivity, identify relevant extension models and collaborate with farmers to define advantages of collective action. Initially, the project could access only secondary data obtained directly from government sources via the Department of Agriculture (DOA). Through research and experiences interviewing farmers and traders, the project determined that these estimates greatly overestimated monsoon production and entirely ignored two other production seasons, offering a skewed perception of the seasonality of soy availability and production dynamics in the field.

VCRD started by engaging community-based Local Field Assistants (LFAs) in pre-identified large volume production areas in seven townships in southern Shan. These LFAs were young, capable, comfortable with learning and sharing new ideas, and motivated to help their fellow farming community members. They systematically

COLLABORATING, LEARNING AND ADAPTING

The origins of soybean can be traced to South China, in an area just north of Myanmar. This explains why there is a wide genetic diversity of soybean in the country, offering promising opportunities for farmers to adapt to the effects of climate change in Myanmar. During the project's first three seasons, VCRD and farmers learned together about the tremendous genetic diversity of local varieties of soy in Myanmar's various microclimates through outreach to the Department of Agriculture Research (DAR). In a series of meetings with DAR, VCRD and farmers identified several "new" soy varieties (called Yezin 14, Yezin 6 and Yezin 11) well adapted to some of these micro-climates, as well as to market requirements. These varieties had until then, remained at DAR, which lacked the resources to conduct extension, outreach or sharing about the varieties outside the Department.

In 2015, VCRD started organizing stakeholder workshops and facilitating business-to-business exchanges to provide information on these varieties and other information about the soy supply chain to people involved in the sector. These events enabled smallholder farmers to meet directly with end-buyers, including processors, often for the first time. Given the overwhelmingly positive feedback, VCRD continued to facilitate these events with gradually decreasing financial contributions, finally handing the organization and sponsorship collection to a committed and capable private sector firm called Sein Lan Wei (see below for more information).

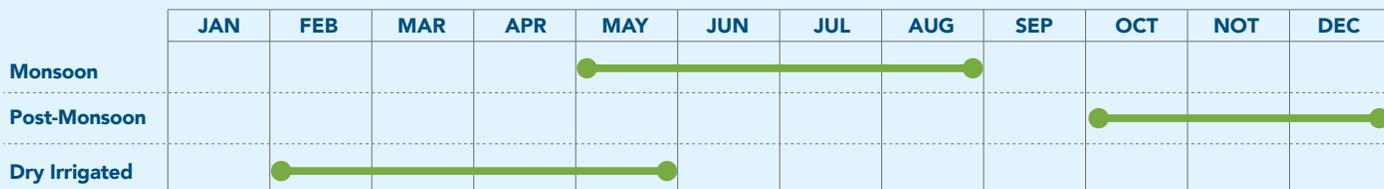
recorded soy production levels and regions by talking directly to farmers, assisted by VCRD training on participatory methodologies and technical production and post-harvest aspects.

During this stage, VCRD staff and LFAs worked in the field with farmers and farmer groups, building trust, and collecting and analyzing data. VCRD's approach relied on partners who knew the communities and the local dynamics, allowing VCRD to discover there were **not one, but three production seasons, in Shan** and that main bottlenecks to improving quality were found in the post-harvest stage. This knowledge helped VCRD facilitate and calibrate support to farmers more precisely.

In parallel to these initial assessments, VCRD focused on testing new agricultural practices and technologies (e.g., timely irrigation, inoculant application, using clean seed, labor-saving hand seeders and seed storage technologies such as improved bags) adapted to the local farming systems to improve yields and reduce post-harvest losses. VCRD provided training-of-trainers to LFAs, conducted soy varietal trials with lead farmers, established demonstration plots with lead farmers and hosted Farmer Field Days. In all, **13,843 soybean farmers received training in these and other improved practices and technologies over the life of the project**—about 70 percent of whom were trained in the first two years. This helped stimulate farmer interest in changing practices, introduced and highlighted the concept of quality, including use of high-germinating, genetically pure seed; and that relatively simple and accessible technology existed in the form of flatbed grain dryers that could help solve post-harvest problems. **This early direct engagement generated demand for new services offered by private sector provider as the project transitioned to a facilitative approach** in the latter half of the project, as committed, service-oriented providers evolving and linking directly to soy farmers and processors.

Project second phase: identifying buyer requirements, setting standards and helping farmers organize and link to end-buyers.

TIMEFRAME: MONSOON SEASON (MAY-AUGUST 2016); POST-MONSOON SEASON (OCTOBER-DECEMBER 2016); DRY IRRIGATED SEASON (FEBRUARY-MAY 2017); MONSOON SEASON (MAY-AUGUST 2017); POST-MONSOON SEASON (OCTOBER-DECEMBER 2017)



The project presented to farmers in key production areas in southern Shan the case for organizing, aggregating grain and using flatbed dryers so they could begin to purchase and sell collectively to new/direct end-buyers instead of relying entirely on traders.

As part of this process, VCRD partnered with three large-scale farmers who agreed to trial flatbed dryers for soybean grain and provide drying services to surrounding farmers. End-buyers from Yangon were invited to observe performance of the dryers at demonstration events in Shan. These events created new opportunities for buyers who had never before met soy farmers to glimpse the possibilities for improving grain quality. These buyers also began to learn (for the first time) about post-harvest constraints faced by farmers.

INDUSTRY GRAIN QUALITY STANDARDS



Standard Grain Quality (Acceptable)



Poor Grain Quality (Unacceptable)



Proper Bags for Shipment of Soya Beans



Double Layer Plastic; One Layer Polyethylene Bag

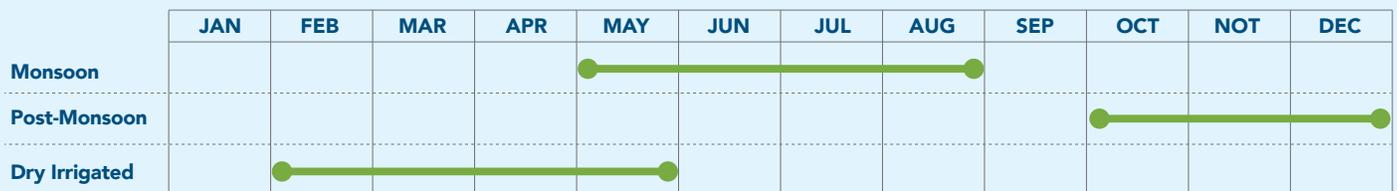
- No foreign matter including dust, stones, plant residues;
- Must have been harvested within the past three months;
- Moisture content between 12-16 percent;
- Must not have been soaked and dried prior to delivery;
- Shows no sign of insect damage;
- No residue of chemicals used for storage;
- Must be homogenous in color (no purple staining, mold or shrivelled seed).

Over the months, as more meetings transpired in Yangon and in Shan, soy buyers and farmers slowly got to know and understand each other, incentivizing both sets of market actors to co-develop informal (in the absence of government-issued or approved guidance) grain quality standards. These informal/industry-level standards later spread throughout Myanmar's soy sector, though as of the end of FY2019, they had yet to be formally recognized by government (see text-box).

To provide one example of uptake and spread of standards: the Kyet Thet Soybean Farmers Group, with coaching from VCRD, began complying with these industry-driven quality standards and began successfully selling directly to Myanmar Nice Bean Factory, receiving a 25 percent price premium for lots that met all of the company's quality requirements, for the first time in Myanmar's soy value chain. Encouraged by these results, Nice representatives began communicating the same requirements to all of its suppliers, (traders), who, in turn, also began paying farmers premiums (of around 10-15 percent more than usual) for better quality soy. Partly as a result of this new, more competitive landscape, other major tofu processors such as State Star Company have also adopted strict quality-based requirements and have begun requiring traders in their supply chains to prioritize sourcing grain from farmer groups able to hit quality requirements. Farmer groups who received training and coaching from VCRD and/or LFAs, such as the Moe Myint Kyel Soybean Farmer Group in Kachin, groups in Naypyitaw and Pindaya specialty food processors are all now paying premium prices for quality soybean grain, purchased from farmers with assistance of Sein Lan Wei, a new firm that provides collection and other services.

Project Third Phase: nationwide expansion, involvement of DOA, strengthening the capacity of new service providers, and organizing quality seed production and distribution networks.

TIMEFRAME: DRY IRRIGATED SEASON (FEBRUARY-MAY 2018); MONSOON SEASON (MAY-AUGUST 2018); POST-MONSOON SEASON (IN SHAN AND IN LOW-LYING AREAS OF MYANMAR IN OCTOBER-DECEMBER 2018)



Tensions and political wrangling across the border led to China closing the Muse border gate or banning any maize imports from Myanmar in 2018 and in 2019. Maize prices crumbled, leading farmers to question their over-reliance on this crop during the monsoon season in uplands areas. Moreover, in 2019, the first-ever widespread Fall Army Worm outbreak in Myanmar destroyed maize crops across the country, sowing more doubt about the wisdom of relying so heavily on maize. In parallel, farmers in low-lying areas of the Myanmar saw incomes dwindle when India shut its doors abruptly to imports of Myanmar pulses.

In despair, thousands of farmers began turning to their networks and querying DOA to seek guidance on alternative, income generating crops **that could provide both a stable domestic market and reduce risks** associated with border-trade. At this point, the heavy fieldwork, demonstrations, trials and trust building performed in the first and second phases of VCRD's project began to bear fruit, as the humble soybean evolved into a serious alternative cash crop for many smallholder farmers who until then had considered soy a "poor man's" crop.

Congruently, demand for quality soy seed began rising rapidly. Recognizing a market opportunity, a group of former LFAs who had partnered with VCRD over the first few seasons on extension, training and market activities decid-

ed to develop and launch a new kind of company called Sein Lan Wei, which has since become an established and reputable extension service provider to both farmer groups and high-end soybean buyers. Taunggyi Green Garden, another private sector service provider aiming to provide similar services in soy and other crops, also started around the same time. Sein Lan Wei drew on its network of former LFAs and farmers spread across southern and parts of northern Shan, spanning different ethnic groups including Pa'O, Shan, Danu, Larhu and Taung Yo, and embedded with local communities to spread information about soy quality and market potential. As these private firms took off, VCRD took a step back and began coaching and advising these new service providers on how to develop potentially profitable services, identify costs, develop business plans, and identify, approach and retain customers.

During this time, many farmers who approached DAR in need of new sources of certified soybean seed were informed there simply was not enough available. The DAR had not foreseen or planned for a sudden dramatic spike in interest in producing soy. However, in recognition of the changing landscape, DAR expressed new interest in collaborating with seed producer groups coached previously by VCRD, and who were in need of continued advice and support. In all, 173 farmers had formed into 13 Seed

Grower Associations (SGAs) in five different Shan townships (in Hsihseng, Lawksawk, Mong Nai, Naung Chio, Inndaw). However, these groups, at the time, lacked formal recognition required by the government in order to legally provide seed. With light-touch facilitation by VCRD, these SGAs were linked to the Shan State DOA, which helped begin the process of official government recognition required to certify the seed. DOA not only provided technical support to the SGAs, it also assisted two of the groups (in Hsihseng and Lawksawk) to become registered as official, township-level seed producer cooperatives, enabling the 42 SGA members from the groups to receive a combined total of **\$19,000** in cooperative loans (or around \$490/hectare over 36 months at 2 percent interest per month). These are the first known loans provided to soybean seed groups in Myanmar.

As demand for seed increased, so did demand for grain, from specialty food processors and tofu processors.

Beginning in 2018, VCRD completed its shift off farm to partner informally with newly formed service providers like Sein Lan Wei, Taunggyi Green Garden, U Sai San Shwe, and

What are the incentives for a farmer to join a Seed Grower Association (SGA)?

- If quality standards are met, seed prices can reach double that of the grain price.
- Once a farmer understands the requirements to produce an OPV crop, he/she has capacity to become a seed producer for other OPV crops.
- Being part of an SGA is a way to access finance through Cooperatives Department loans.
- By joining an SGA and specializing in seed production, a farmer gets rid of dependency ties with exploitive brokers.

What are the incentives for DOA to support SGAs?

- Out of habit, and not knowing where to seek guidance, many farmers have requested that DOA sell them quality soybean seed. DOA is neither equipped nor does it have the resources to produce large quantities of seed. Professional seed producer groups are therefore beginning to fill the gap.
- DOA's mandate is to provide regulations and guidance on seed production. By supporting SGAs, it is filling its role at minimal cost and responding indirectly to farmer needs.
- By working closely with SGAs, DOA could build a database of the availability and performance of different soybean varieties throughout the country.

EVOLUTION AND LEARNING: LESSONS OF A NATIONAL-LEVEL SOY FARMER ORGANIZATION

In 2018, India shut out all black gram imports to maintain high prices on its domestic market following a bumper crop. Myanmar farmers from low-lying areas who relied heavily on gram sales to India saw incomes eroded. The same year, China closed the Muse border gate for political reasons, and maize prices dropped precipitously. Farmers across Myanmar began looking for alternatives.

Up to that point, VCRD had coordinated with private and public partners to organize a series of five stakeholder workshops over the first few project years, and its work with soybean farmers was well known beyond the Shan mountains. In November 2017, soy farmers from different parts of the country met at one of these functions and decided to collaborate to promote soy from Kachin to the Delta, and from Karen to Patheingyi and Nyaung-U. One option would have been to organize as an association, but leaders of this group instead opted to try to develop a nationwide member-based company that represented soy farmers, with the goal of selling grain on behalf of their members in a transparent way.

Though VCRD had coached the group to consider “starting small” in order to prove their business concept, the group of 36 decided to launch a large project immediately (MSFPC), and commenced buying and selling seed on credit. During the post-monsoon season 2018, MSFPC, (at the time a public company only in name), had collected the names of farmers across the country who collectively represented demand for 150 Metric Tons (MT) of quality seed. Around two thirds of these farmers expected to receive seed on credit from MSFPC, much as they had previously from other buyers of black gram and maize. Additionally, they expected to receive other inputs on credit. Despite their enthusiasm and drive, leaders of MSFPC had neither anticipated nor planned for such a scenario.

Ultimately, out of a total of 117 MT of seed produced in Shan, the company succeeded in selling only 52 MT as seed to 704 farmers in Bago Division, Nyaung-U Region, Karen State, northern Shan, Irrawaddy region and Sagaing region during the post-monsoon season. That left 65 MT of seed to be sold at a loss, to high end tofu processors. In the meantime, MSFPC had contracted \$35,000 in debt as a result of its agreements with seed producers from Shan. They had difficulty agreeing how to honor this obligation. The founding members decided to dissolve their company after failing to reach agreement on the matter.

After the company disbanded, some of its leaders representing a group of 30 farmers in West Bago, called “Aung Services for Farmers” emerged. This group was determined to produce high-quality grain for the high-end domestic market while providing extension, inputs and other services for its members. The company purchased 85 MT of chemical fertilizer at \$355/MT instead of the usual \$374/MT and sold it to members at a discounted \$364/MT. Farmers thus saved \$10/MT and were able to buy fertilizer on credit at zero interest for two months. The Aung Services group later bought 2.2 MT of paddy seed at 72 percent of the market price, on behalf of its members. The company has since planted about 40 hectares of soy during the 2019 monsoon season as a pilot. Though much smaller in scope than the original MSFPC, Aung Services has already proven its ability to provide services to members including bulk input purchases. Though MSFPC never developed as envisioned, the national-level initiative drew valuable attention from high-level Ministry of Commerce and DOA officials who requested not only to participate in—but to begin sponsoring—the next four in a series of continuing soy stakeholder meetings in various parts of the country. During these events, the important role played by organized farmer groups became evident, with tofu and soy snack food processors joining edible oilseed sector representatives to develop new plans for expanded production aimed at improved regional food security and nutrition.

later, seed grower groups (SGAs) incentivized to position themselves between farmers and end-users of both seed and grain. Their hedge: transparency on market prices, quality and premium payments. Why did this work? Farmers realized they were receiving better prices by working directly with service providers instead of with traditional traders, while end-buyers were getting better soybean through these service providers than through their traditional suppliers.

During this period, lead farmers, community influencers and local leaders from different regions across Myanmar began to meet, plan and share information more, now viewing soy cultivation as a new opportunity to support their communities. Their ethnic diversity and geographical spread were strengths, because they could produce soybean throughout the year, over the three seasons, with one region after the other supplying grain to high-end buyers, while seed producers could sell seed to grain producers in other regions. Leaders of a few different regional groups decided to become organized to lobby the Government of Myanmar at a national level with the goal of gaining influence by synchronizing production across various zones, and increasing farm incomes. Although this ambitious venture (initially called the Myanmar Soybean Farmers' Public Co., or MSFPC) ultimately fell short of its own aspirations (see textbox) it still played an important part in the soybean sector's transformation because it alerted government to "the business case" for improved soybean production, quality control, the need to balance supply and demand for quality seed, and the power and potential of improved farmer organizational capacity.



Figure 1: Farmer groups engaged in high-end grain production, Shan State, as a result of introduction of improved practices, technologies and market linkages fostered by VCRD.

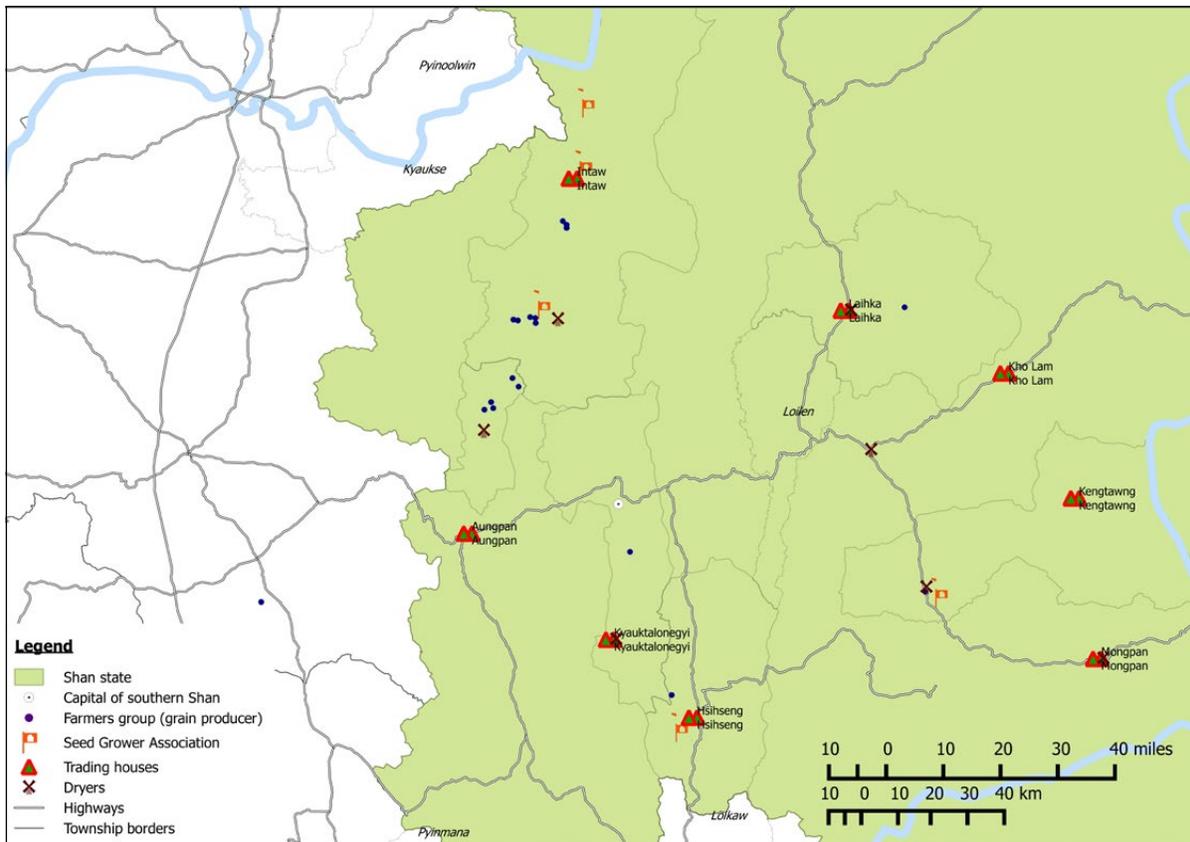
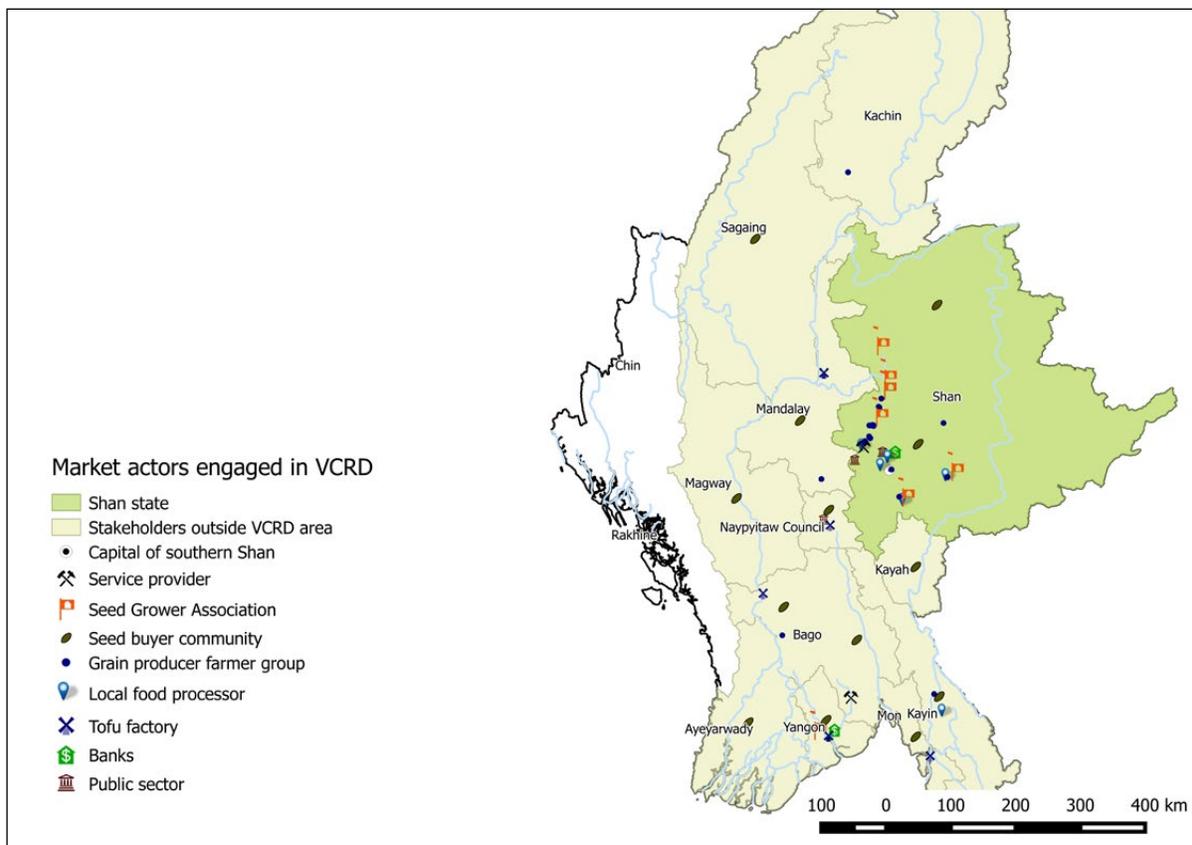


Figure 2: Market actors engaged by VCRD in the soybean sector.



EVIDENCE OF MARKET SYSTEMS TRANSFORMATION: BEFORE AND AFTER VCRD

The following table describes value chain developments (2015-2019) in greater detail, focusing on market actors who have received project assistance. The table compares the current landscape with prevailing market conditions in 2014, prior to project implementation.

Market Features	Baseline (prior to 2014)	Current (2019)
Access to inputs – seed supply chain	<ul style="list-style-type: none"> Farmers either used their own grain as seed or bought grain from traders as seed. The genetic base was unknown, often mixed and the germination rate was poor. The DAR had tested and approved six new varieties, adapted to different eco-systems, but farmers had no access to these varieties as there was no mechanism to assess the demand, or to produce and distribute seed. 	<p>Two models for producing quality soy seed have emerged, both of which are validated by DOA and DAR:</p> <p>Private Sector Led: Farmers produce and sell genetically pure quality grain to a private firm, a local lead farmer who has liquidity, machinery etc. This lead firm in turn sorts the grain, dries it if needed, and tests its germination rate after which it packs and sells the seed. For example:</p> <ul style="list-style-type: none"> <i>U Sai San Shwe in Monpone centralized close to 50 MT Yezin 11 seed from individual seed producers and sold the seed on credit to the erstwhile MSFPC for distribution in low-lying areas of the country.</i> <i>Sein Lan Wei has so far sourced 32.4 MT seed from 41 farmers in 14 villages and one farmer group.</i> <i>Jaguco Myanmar, a private company, managed its own seed production and distribution activity in 2017. They purchased 5 MT of seed from 14 VCRD-trained seed producers in eight townships, as well as from DAR, then redistributed it to 12 seed producers, 47 grain producers, and three farmers groups on a contract basis.</i> <p>Farmer Group Led: 173 farmers got organized in 13 Seed Grower Associations in five townships, all of which are now committed to multiplying 4.5 MT of seed, including four different varieties (Yezin 14, Yezin 15, Yezin 11 and Yezin 6) aiming to produce 75 MT of quality seed.</p> <p>DOA is committed to implementing a procedure to certify this seed.</p>
Access to inputs – technology	<ul style="list-style-type: none"> Farmers had limited knowledge of technologies that could reduce their labor costs, improve yields or limit their post-harvest losses. When the technologies were available there was no mechanism or incentive in place to identify demand and distribute these technologies. Only chemical input suppliers were providing information to farmers; but that information is skewed by the incentives for commercial agents, including bonuses based on volume of chemicals sold rather than on the quality of advice provided. 	<ul style="list-style-type: none"> Pioneer Agrobiz is now importing hand seeders and selling them through a network of retailers. So far, 165 hand seeders in southern Shan valued at \$25,000 have been sold since 2016. Pioneer Agrobiz also sells airtight bags through its southern Shan retail network, and since its first three flatbed dryers were demonstrated with the project in 2016, Pioneer has sold an additional eight dryers in southern Shan and elsewhere valued at around \$42,000. Private sector agriculture entrepreneurs invested \$16,400 in new grain drying technology in Southern Shan in September 2016 after attending soybean dryer demonstrations facilitated by the USAID-funded Value Chains for Rural Development aimed at helping producers and processors improve the quality of harvested grain. The dryers were purchased by a grain trader (Namsang), rice miller (Heho) and a commodity transporter (Pindaya) after connecting to a lead firm introduced to them by the Value Chains project, and are capable of drying soybean, rice and maize. The three new dryers can handle a combined 18 MT of grain per day. DAR now produces and sells rhizobium through private retailers in southern Shan. So far, 6,465 packs of inoculant have been sold by DAR worth over \$2,000 since 2015. Jaguco Myanmar has expanded its Effective Micro-organism (EM) retail network and has sold 160 bottles of EM since the company started collaborating with the project. EM is diluted and used to produce compost and spray on crops to strengthen them. More companies selling these inputs have crowded in lately including Zero Fly bags, Shwe Myay Thee Bio-fertilizer, Sein Lan Wai and Golden Ground Organics.

Market Features	Baseline (prior to 2014)	Current (2019)
Price premiums	<ul style="list-style-type: none"> Prices were negotiated with traders, not posted publicly. Farmers were unable to determine if they were better off selling locally or incurring transport costs and selling in Aungban. Farmers incurred losses due to cheating and lack of transparency when traders weighed soy and assessed soy quality. Traders deducted 3.3 percent for bag weight (1 viss/bag) plus 6-10 percent for lower-quality soy, as determined by moisture level, purple-colored grain, and/or badly shaped grain (amounting to about 2-3 viss/bag). Farmers received a 20 percent payment at time of sale and waited 2-8 weeks for the balance. 	<p>Farmers now gain the following benefits by selling high-quality soy directly to end-buyers:</p> <ul style="list-style-type: none"> Myanmar Nice Bean Factory pays farmers a 25 percent price premium for meeting quality requirements. Increased transparency: Digital scales now provide accurate weights. Quality criteria and prices are posted. Payment terms: Once the farmer groups and buyers have confirmed the quality and price, the group organizes transport and delivers within three days. Upon receipt, the buyer sends payment to the group's bank account within 24 hours. The group then pays each farmer based on volume. Traders have started paying farmers 10-15 percent more for meeting quality criteria (initially established by Nice).
Farmer groups and associations	<ul style="list-style-type: none"> Soybean farmers grew and sold their grain independently. There was very little connection between soy farmers beyond their own village(s). 	<ul style="list-style-type: none"> 19 soybean farmers groups in seven different townships in southern Shan and one township in Kachin State are now selling quality soybean grain directly to end-buyers, including tofu and other soy processors, in five different states. Another 13 farmer groups in five townships are producing and selling seed as mentioned above.
Access to extension services and information	<ul style="list-style-type: none"> Public and private extension services rarely worked together and public extension services from DOA were focused on paddy growers. Farmers received limited, skewed or biased market information from traders, and received only limited agronomic knowledge or training mostly from influential figures in their own villages. 	<p>A unique public-private partnership is now in place.</p> <p>Public extension is now available for seed producers</p> <ul style="list-style-type: none"> DOA has set up an extension mechanism for seed producer groups, whereby DOA provides extension support to seed producers, and support for legal registration (as seed cooperatives) which has begun enabling some soybean seed groups to access loans. So far out of 13 soybean SGAs, two have registered officially as cooperatives, receiving a total of \$19,000 in government loans to these groups. <p>Private extension and market information for seed and grain producers is now shared</p> <ul style="list-style-type: none"> The DOA collaborates with Sein Lan Wei, a private company that checks the quality and buys seed from the SGAs. Sein Lan Wei processes the seed and sells it on to grain producers in Shan, Karen etc. Sein Lan Wei identifies the location and nature of the market (what varieties are in demand and where and at what time of the year) and transfers this information to the seed producer groups. Sein Lan Wei is also being paid by a tofu processor, Nice Tofu, to provide quality standards trainings to soybean farmers in order to ensure a consistent quality of supply. So far Sein Lan Wei has trained 1,150 farmers paid for by Nice Tofu. <p>Community-based extension is available and spreading</p> <ul style="list-style-type: none"> Lead farmers from certain SGAs and grain producer groups manage demonstration plots and organize Farmer Field Days to share information on improved technologies and management practices.

Market Features	Baseline (prior to 2014)	Current (2019)
Linkages to buyers	<ul style="list-style-type: none"> Producers and end users of the commodity have no relationship, (know nothing about each other.) Traders thrive on the opacity of information between producers and end users. 	<ul style="list-style-type: none"> Sein Lan Wei is now able to organize autonomously soybean stakeholder workshops with the public sector, funded through sponsorships, which bring together participants from the whole sector. Sein Lan Wei organized four workshops in Nga Thaung Chaung, Hinthada, Naung Hkio (northern Shan) and Taunggyi, attended by 1,356 farmers, with a total sponsorship of \$12,150, 22 percent of which was funded by the Ministry of Commerce. Positive business relationships now exist between end-users of soybean, smallholder farmers and service providers. These relationships are based on trust, price transparency and quality standards. So far, Sein Lan Wei has sourced 32.4 MT quality soybean grain at a 5-10 percent premiums from over 60 individual farmers and one farmer group in 19 villages, and has sold the grain on to more than 40 specialty soybean food processors in Heho, Nyaung Shwe, Mong Nai, Aye Thar Yar, Pindaya and Hsihseng in southern Shan, Lashio in Northern Shan, Karen State and Patheingyi. Smallholder farmers are now aware of and have access to all segments of the domestic soybean market from high-end tofu processors to local niche and soy snack markets to oil millers. So far 22 soy grain producer groups have sold directly 546 MT quality grain to more than 80 tofu processors and traditional food processors, including approximately \$5,600 worth of grain to Thein Yadanar Oil Miller.
Access to credit	<ul style="list-style-type: none"> Farmers had very little access to credit beyond local money lenders who charged high interest rates. Some farmers would receive advance payments for their soy grain from traders while the soybean crop was still growing. This was a way for traders to secure their supply at minimum prices, while producers would receive badly needed cash at a time when they had no income from their farms. 	<ul style="list-style-type: none"> In 2017 Jaguco Co, an input supplier, provided a \$4,500 interest-free, working capital loan to Kyet Thet Farmers Group to produce high quality soy grain. The group's chairman advanced payments to 32 farmers to procure 10 MT grain. Jaguco would be paid back after the group sells quality grain to Nike, a Yangon-based tofu processor that has committed to purchasing the group's production. In 2018 Ayeyarwady Farmers Development Bank ("A bank") provided a \$10,900 working capital loan to Kyet Thet Farmers Group, supported by a pre-sale contract. In late 2017 Pioneer Agrobiz, as part of a leasing agreement for a flatbed dryer to an innovative village broker from Lawsawk, provided a 2 million Myanmar Kyat loan to store the grain in airtight bags. The loanee waited until the price rose, sold the grain on and then repaid the loan. He reimbursed Pioneer as planned and Pioneer later trialed the use of a large "cocoon-style" storage bag with the broker. In 2019, 42 members of the Kham La Yaung and Sein Yadanar SGAs received a combined \$18,900 loan from the DOA's Cooperatives Department, to produce seed (including soy, maize and paddy). The loan is at an interest rate of 2 percent/month to be reimbursed every six months over the next 36 months. Proximity Design Finance has provided about 250 million MMK (about \$164,286 USD) in crop financing to around 1,000 soybean farmers in three townships (Pindaya, Lawksawk and Inndaw) since 2017.
Standards, grades, and buyer specifications	<ul style="list-style-type: none"> Measurable, transparent soy quality standards did not exist. Traders generally deducted, at their discretion, 6-10 percent of mass because of high moisture, heterogeneous coloring of grain and/or shriveled grain. Moisture-meters were not known or used. 	<ul style="list-style-type: none"> Farmers and end processors now define, together, measurable, reachable grain and seed standards, which are now widely adopted throughout the soy sector in Myanmar including by brokers and traders. Farmers now receive 10-25% premiums for soybean grain meeting these standards over the price of soybean grain that doesn't. Moisture-meters are now widely used by farmers, traders and end processors. This equipment is now available for sale by retailers in Shan. Traders sourcing from southern Shan report that soy quality has noticeably improved since 2017 from their traditional suppliers. 900 to 1,000 MT of soy grain meeting such standards is estimated to have been purchased at premiums by tofu processors and specialty food processors from an estimated 7,500 farmers. State Star Co. reports that 100 percent of the soy grain sourced by the company complies with soybean standards. Lots which do not comply are immediately sent back to the suppliers. Tofu processors now source grain directly from soy farmer groups. Since 2017, 12 grain producing groups have sold around 650 MT to three different tofu processors and multiple traditional food processors for a total value of around \$340,000 including 25 percent premiums.

Market Features	Baseline (prior to 2014)	Current (2019)
Processing	<ul style="list-style-type: none"> Soy is a staple food in Myanmar and Shan State has a rich tradition of micro-and small enterprises producing a wide variety of soy products and snacks. Larger-scale processing facilities produced tofu and oil; however, they were reluctant to upgrade equipment and risked expensive repairs and downtime from damage caused by rampant impurities commonly found amongst purchased grain. 	<p>Processors have invested in the following upgrades with project support in the form of Innovative Grants and/or technical advice:</p> <ul style="list-style-type: none"> Myanmar Nice Bean Factory, a VCRD Innovative Grantee, leveraged its grant and invested \$190,000 in two new factories. This company now has a total of three facilities, one for wet products sold on the more traditional wholesale market, one for products aimed at the high-end domestic retail market (such as CityMart and Ocean supermarkets) and the high end hospitality sector, and a third for factory-dried and packed products. Nice went from a cottage industry firm producing about 4 MT of tofu per day for the middle-range market, to now producing close to 10 MT of tofu and other soy foods daily. In addition, the company is now in compliance with Hazard Analysis and Critical Control Points (HACCP) requirements, has reduced its energy consumptions and waste by up to 20 percent by following improved manufacturing practices. State Star Tofu Co., Ltd (with Swastika and David Star brands of tofu) In 2017, State Star attended HACCP awareness trainings and GMP trainings organized by Control Union, and was later introduced to soybean farmers working with VCRD. In 2018, MSFPC sold 60 MT of high-quality grain to State Star, which convinced the company that sourcing directly from farmer groups was the only way of amassing consistently high quality grain. Seeing the potential supply of high-quality grain and rising demand for high-quality soy foods in Myanmar, State Star invested a total estimated around \$670,000 in a new soy-food processing facility in Mawlamyine, where it is now producing four new soy-based products. Long-term committed private sector partner Jaguco Myanmar International and VCRD have collaborated to test and distribute soy seed across in the country. Under VCRD, Jaguco has provided access to finance for farmer groups, provided sustainable inputs and labor-saving equipment. In supporting emerging soybean farmers groups, Jaguco provided a \$4,000 loan at no interest for one group to enable it to affect premium grain sales. After Jaguco's outreach to smallholder soy farmers across the country with VCRD support, Jaguco later decided to invest \$420,000 in land procurement and development for a new oil mill with an imported InstaPro grain extruder (purchased from the US) to fulfill the demand of edible food grade soy flour for local textured soy protein food processors. In 2019, Jaguco purchased a second Insta-Pro extruder from the U.S. for a second facility it plans to open soon, investing an additional \$167,000

CHALLENGES, LEARNING, AND DRIVERS OF SUCCESS

Women's engagement in the soy value chain.

Women are important economic actors every step in the soybean value chain, from production, trading, to processing and selling. While VCRD did not explicitly target support to women soy producers or processors in its value chain and market system activities, women's feedback, guidance and perspective was solicited consistently throughout interventions and activities. In rural areas, women often handle the household and financial management duties, as well as child-care responsibilities, while men engage more directly externally, attending trainings, meetings and marketing events, for example. Older women from ethnic groups in rural areas often don't understand Burmese very well and some cannot read and write. In order to reach as many women as possible in all areas, VCRD intentionally hired dynamic, women LFAs, from different ethnic backgrounds who could bridge the language and gender gap by reaching out to all women, including in remote rural areas, while serving as role models for the younger, female generation of future Myanmar farmers.

Other gender lessons learned over the course of implementation include that while decisions are usually made jointly in the household, certain activities are assigned by gender. In soy, land preparation, harrowing and plowing is performed by men, for example, while sowing, weeding and threshing is usually the women's job. As seeders were introduced early on in the project, women remarked that this technology saved time and made the crop more homogenous. Moreover, the fact the soybean was now sown in lines made weeding easier and less time consuming.



As women are the ones managing the household finances, they are used to dealing with money matters and have developed methodologies to become organized into savings groups. VCRD identified these women's groups, including some well-organized and active "Self-Reliance Groups" (SRGs) belonging to the nationwide May Doe Kabar Myanmar Rural Women's Network, as key partners. These groups possessed their own savings for funding, as well as organizational capacity skills and the drive to innovate and experiment while measuring risks. VCRD engaged and learned from women in these groups in locations in northern Shan and elsewhere, to promote their model in other areas. In 2019, Sein Lan Wei introduced the women's SRG formation concept to specialty soy food processors from Pindaya, who embraced and adopted it, understanding quickly that together, as women, they possessed more power to market their products, comply with government food safety regulations and apply for proper processing licenses.

Development of a smallholder OPV seed supply chain contributed to resilience by making indigenous/genetic diversity available to farmers.

VCRD developed seed production, processing and certification guidelines and trained lead farmers. Initially, systematic quality control of seed was difficult because testing moisture and germination testing was a new concept. Because few soy farmers understood (initially) the added value of working with pure seed, no incentive existed for anyone to explore or enter this market. Through demonstration plots run by lead farmers identified by LFAs who knew their communities well, VCRD and community partners helped prove to farmers the value of using quality seed. This applied field research, conducted in different agro-ecosystems, during different seasons, enabled VCRD and lead farmers to identify local varieties and "new" varieties developed by DAR, that were best adapted to different geographies, seasons and farming systems. Over time, a critical mass of farmers began seeking quality seed. Seeing value, they were ready to pay a fair

price for quality, high-germinating seed. With pure seed marketable at double the price of grain, farmers became incentivized to produce seed, and service providers were incentivized to enter and charge fees for quality control services. Sein Lan Wei, formed by former VCRD community extensionists who had been promoting quality seed and observing, firsthand, the steady rise in demand for it, soon grasped the potential for expanded soybean seed sales across the country. Farmers also began to understand the quality requirements shared transparently by Sein Lan Wei. Farmer groups, in turn, were incentivized by the good prices paid for good seed. In this way, a new soybean seed supply chain began to evolve and is now sustained through collaboration between seed producer groups, Sein Lan Wei, DOA and the DAR. Space exists for additional actors to enter the market.

Adoption of improved inputs and technologies paved the way for suppliers to expand their retail networks.

The project tested and promoted new technologies aimed at reducing the labor costs or mitigating the risks of growing soybean. In some cases, such as with flatbed dryers, the project directly introduced technology, by purchasing three dryers and partnering with host farmers to demonstrate them as a free service, facilitating a potential side-enterprise (drying) for farmers in exchange for their agreement to maintain data on costs and benefits. Proving the concept of the efficacy of this technology helped convince farmers that achieving required moisture levels (12-16 percent) sought by tofu processors was a reachable benchmark. Dropping moisture content also enabled farmers to begin storing grain longer, until prices increased.

VCRD introduced the following technologies to improve efficiencies in the soy value chain:

- Hand seeders to enable a uniform emergence of the crop and reduce the labor costs involved in sowing the crop.
- Rhizobium inoculant for enhancing soy's natural nitrogen-fixing properties, which improves soil fertility and yields
- Airtight polyethylene bags replacing the use of pesticides during storage and allow farmers to store soy for longer periods of time, which enables them to sell when prices are higher and/or have greater flexibility about when they sow.
- Rotation of soy and maize during the rainy season to spread risks and limit pest infestation in the medium term, especially in light of the heavy infestation of Fall Army Worm in 2019.
- Flat-bed dryers that reduce post-harvest losses caused by high moisture levels during the monsoon season

- Moisture meters in southern Shan to evaluate moisture content. While this type of equipment was used to a limited extent for paddy in the Delta, it had never been used to anyone's knowledge for soybean.

The project identified key retailers and linked the manufacturers and technology importers with a retail network in Shan and with Sein Lan Wei.

Aggregation via farmer groups led to economies of scale in certain areas and for specific products.

In early 2017, VCRD introduced the concept of farmers working cooperatively to share costs (e.g., leasing a dryer together or buying hand seeders together), committing to quality standards, and aggregating soybean grain to sell directly to high-end buyers. The project availed organizational strengthening advice and training, including on practical issues such as accounting and basic principles of good governance, while helping to link highly-motivated groups with formal and informal finance opportunities.

As a result, the soybean market system in Myanmar gradually adapted to the shift in terms of trade. Farmers felt empowered by increased transparency on quality and price premiums. Traders lost the upper hand and began adapting quickly to the new dynamic. While high-end soybean buyers, such as tofu processors, appreciated the new ability to order soybean grain shipments directly from farmer groups, they did not expunge old suppliers with whom they maintained long relationships. Nevertheless, buyers became more discerning and demanding on issues of quality. They knew that Shan farmer now understood and were able to produce high-quality grain and thus demanded the same quality from their old suppliers. As traders adapted, they began proposing premium prices for quality to traditional brokers who passed on the information to farmers with whom they also had longstanding relationships.

As the market system flexed, so did farmer group dynamics. Farmers increasingly recognized incentives for working together to aggregate, meet common quality standards and link directly to markets in new areas such as Kachin and Karen, areas plied by few soybean traders. In regions of southern Shan such as Lawksawk, Kyauktalone Gyi or Pindaya, where many soy traders have linked to high-end markets, grain producing farmers now supply better quality soy and have mostly maintained their old supply chains. The strongest incentives to work as groups, however, comes from the value of the product itself. It is therefore no surprise that seed producer groups are functioning best and expanding.





Making the business case for soy leads to access to finance.

Early after the project's onset, VCRD identified access to finance as a key bottleneck for soy farmers and other value chain actors. The project began developing links and opened lines of communication with various financing organizations, only to realize that no financial products were explicitly available to smallholder producers, most of whom lacked any form of collateral, yet all of whom required access to capital to meet the needs of their family farms and agri-businesses. Microfinance institutions at the time provided only small loans ranging from \$200-300/annum, while commercial banks simply did not trust farmers enough or see a good business case for entering into multiple small transactions with them.

Informal financing through private sector input providers (who saw an advantage in offering fair, inclusive access to credit), provided the first loans of VCRD's tenure. Then came a breakthrough with the Ayeyarwady Farmers Development Bank ("A bank"), which forged a groundbreaking agreement to finance a single (well organized) soybean

farmer group for a season, thus bringing formal financing into the soy value chain for the first time. To accomplish this, VCRD first described the evolving sector to A bank representatives, describing the new, direct links between farmers, processors and improved seed supply. Second, the project introduced lead farmers and processors to the bank to describe the opportunity and need for finance. Third, A bank staff visited potential borrowers in the field to see firsthand the opportunity and gauge credit worthiness. In the end, two factors finally convinced A bank to provide the loan after multiple visits to soy farmers and eight months of financial due diligence: VCRD had developed a close working relationship with the farmer group, building its capacity in governance and supporting it with advice on quality control measures. Finally, the farmer group had already signed a purchasing contract with a serious buyer, Jaguco Myanmar, who planned to transfer part of the payment directly to A bank as a reimbursement of the loan. While formal soybean farmer group financing has yet to scale widely, it is encouraging that the DOA's Cooperative Department has stepped in to begin financing seed producer groups.

Defining quality standards linked to price premiums has stimulated market segment differentiation.

Until VCRD started working with them, farmers and tofu processors had never met. Farmers didn't know where their grain ended up or what it was used for after selling to local traders. Tofu processors, in turn, rarely thought about their suppliers, the smallholder soy farmers. VCRD first brought farmer groups and tofu processors together at Field Days in the soybean fields of Shan, then in Yangon and other cities during a series of important stakeholder and business-to-business (B2B) workshops. The more they interacted, the better they understood each other and their constraints in business. One farmer group presented to Myanmar Nice Bean Factory a lot of dried, clean soybean grain, homogenous in color, which they produced and processed after learning practices and technology introduced by community trainers working with VCRD. Representatives of Nice realized that this quality of grain was exactly what they needed in order to elevate their brand. Not only had the processor never before expressed its quality needs, but they had never believed it possible to source the type of grain they needed from within Myanmar.

Gradually, tofu processors began to understand that there were few incentives for farmers to dry their own grain because they were paid the same price for heavy, wet grain as they were for well dried grain. On the other hand, farmers realized that tofu processors' equipment could be badly damaged by soybean containing stones and debris, and they also observed how moldy grain badly affected the final processed product, resulting in bad business for all. These realizations led one farmer group and one tofu processor to begin to define smart standards and agree on what "quality" meant for different stakeholders.

Facilitating a consistent supply base of higher quality grain triggered investment in expanded processing capacity.

After developing an understanding that processors consumed most of the high-quality soy grain in Myanmar, the project identified dynamic tofu processors and helped buy down their risks in investing in new improved machinery by providing in-kind Innovative Grants. The project also introduced these processors to specialists who presented new products such as soybean sprouts, dried tofu, bean curd, egg tofu, tofu skin and dried tofu with soy sauce, as well as information on how to make these products. Beyond the two tofu processors who received VCRD Innovative Grants, the project also worked closely with others including specialty soy food processors who appreciated the improvements in quality and varieties of soybean grain coming onto the market.

In addition to the investments noted above in the Market Systems Development table, VCRD provided a small in-kind Innovative Grant that helped Mandalay T-Brand Tofu upgrade its current tofu processing plant with a new production line to produce quality tofu skin. The grant enabled the company to purchase a tofu skin extruder, slicer and industrial mixer to facilitate production. As a result, T-Brand has continued to increase its production to an estimated 100 viss/day, and is now supplying retail and wholesale markets around Mandalay. T-Brand has continued to expand and, in consultation with Control Union and the Myanmar Food and Drug Administration, is building a new, HACCP-compliant factory, with ground-breaking expected to begin in mid-2019.





SPOTLIGHT ON SEIN LAN WAI: “FRESH AND GREEN” SERVICE PROVIDER BLAZING NEW MARKET CONNECTIONS

For years, development projects in numerous countries have sought to stimulate the development of local, sustainable business development services to support smallholder farmers and small-medium agribusinesses. VCRD found a way to do it by addressing a binding constraint in the soy sector: Addressing the inconsistent undersupply of improved seed available to smallholder farmers.

Founded in 2018 by LFAs trained by VCRD, Sein Lan Wai has rapidly expanded, and is now trading soybean volume worth more than \$130,000 in grain and seed, combined. This small, youthful startup firm provides extension services, market information, market linkages, quality control and improved inputs and technology to smallholder farmers. Their two guiding principles are quality and transparency.

Market linkages with processors. Shortly after forming in 2018, Sein Lan Wei entered into a contractual agreement with Myanmar Nice Bean Factory, which agreed to pay the firm \$900/month to provide professional extension services to mostly women soybean grain producers. The deal benefits the processing firm because it requires a consistent source of high-quality grain for its tofu-making operations. Through this arrangement, Sein Lan Wei has trained 1,150 farmers from 28 villages from Inn-daw, Mai Pon, Taunggyi, Law-sawk, and Kalaw in southern Shan and Hlaing Bwe township in Karen state on quality control and market information topics.

So far, Sein Lan Wei has sourced 32.4 MT quality soybean grain at 5-10 percent premiums from more than 60 individual farmers and one farmer group in 19 villages, and has sold grain to processors including T-Brand, State Star, and 40 specialty soybean food processors in Heho, Nyaung Shwe, Mong Nai, Aye Thar Yar, Pindaya and Hsihseng in southern Shan, Lashio in northern Shan, as well as Karen State and Patheingyi.

Strategic alliances. Sein Lan Wei has forged strategic private-public partnerships with DOA, DAR and the Ministry of Commerce. As part of Myanmar's new agriculture strategy, and under pressure of farmers, both DOA and DAR have shifted from over-focusing on and prioritizing paddy to include other crops important for food security, nutrition and livelihoods, such as soybean. Yet because DAR does not produce enough seed to meet national demand, DOA began providing extension services to help organized soybean seed producer groups increase their output and link to customers. DOA and SLW thus struck a mutually beneficial partnership to provide complementary services to soy farmers. The DOA has strong incentives to expand its work with SLW, because the extension firm is able to adeptly answer market questions from farmers that DOA is not used to handling. DOA, in the meantime, has learned that provision of agronomic **extension without good market information and a clear path to a market is useless.** Moreover, Sein Lan Wai has developed its capacity to facilitate large-scale quality seed production, to identify seed demand from different regions, and match demand with offers in terms of varieties. In parallel, SLW's market information sharing has come to the attention of Ministry of Commerce, which has requested Sein Lan Wei repeatedly to help it organize market awareness raising workshops for soy farmers. This has resulted in soybean stakeholder workshops being co-organized by Sein Lan Wei and the government agencies.

With engagement of other private sector actors as well as DOA and MOC, Sein Lan Wai will continue organizing events to share market information, cultivate new business connections and expand its influence within the market system.

Scaling up. Sein Lan Wei has scaled up its work in the following ways:

- Through a Canadian donor-funded contract with Myanmar Nice Bean Factory, the tofu processor must pursue and open new, direct market linkages with women farmers. The more women who learn about quality standards for soy, the greater their participation in this value chain and the more inclusive the market system becomes. To support Nice to honor its contractual arrangement, Sein Lan Wei has helped form five all-women farmer groups in Hsihseng Township, who have since been trained on all aspects of quality and market information, based on VCRD's accepted model.
- Beyond this contractual incentive, Sein Lan Wei is aware that women are the engines behind soybean production and transformation. Following a series of cottage industry tofu trainings delivered by Sein Lan Wei delivered in Karen, a group of women farmers from there later proposed that Sein Lan Wai open a new branch of its business in Karen, specifically to help women farmers in the region.
- Because many traditional food businesses are run by women, Sein Lan Wai, by selling high quality grain to these food processors and helping them meet quality standards to access new markets, is empowering women processor-entrepreneurs. Sein Lan Wai organized traditional food processor workshop in September 2019 with the objective of extending the validity of their business branding, food safety standards and certification. In all, a dozen traditional food processors joined the workshop, all of them producing food products for sale in Yangon, Naypyitaw, Mandalay and Taunggyi, with no branding. The objective of the workshop was to help brand traditional soy foods and to extend market recognition using their own name(s) and brand(s).

Additional crops. Based on needs of farmers, Sein Lan Wai has begun to buy and sell maize, ginger, groundnut and sesame, always differentiating themselves from other traders by remaining transparent and committed to quality. End-buyers now recognize the consistently high quality of the soybean and other products Sein Lan Wai is selling. This young organization is in many ways symbolic of the resurgence and growth in Myanmar's soybean market system.

Sein Lan Wei's diverse customer base

- Public authorities (DOA, DAR, Ministry of Commerce-Consumer Affairs and Myan-Trade)
- Soybean end buyers (Myanmar Nice Bean Factory; State Star Co., Mandalay T-Brand Tofu and up to 40 traditional food processors)
- Farmer groups in, Yangon, Ayeyarwaddy, Pegu, Karen, Kachin, Mon and Shan
- Donors and local, Community-Based Organizations including Mennonite Economic Development Associates, World Vision, Metta, Tai Youth Network

