In Rwanda, MicroFinance Institutions (MFIs) lacked expertise in agri-finance, and did not have sufficient capital for lending. Also smallholder farmers had limited collateral, and financial skills were low. As a consequence, (MFIs) could not provide appropriate agricultural loans and farmers ended up defaulting on inappropriate loans. In addition, Producer Organizations (POs) were weak and lacked adequate management skills and good agricultural practices (GAPs). Therefore, POs had little access to big buyers, lacked market information, did not have good negotiating skills and could not supply the right quantity and quality due to low productivity. POs therefore faced low sales, low prices, and did not have a strong position in the market. Their members were side-selling their crops. Moreover, agricultural value chains lacked coordination between supply and demand. There was a limited availability of extension services, farm equipment, drying and irrigation technologies, and skills training for farmers. Thus, smallholder farmers could not always access good quality inputs like fertilizer and seeds. They had limited knowledge on irrigation, post-harvest management or use of equipment. As a result, smallholder farmers had low yields, little motivation to produce high quality crops and faced high post-harvest losses. They had low resilience, low income and poor food security.

Program description

STARS Rwanda set out to impact 49,000 farmers and worked with seven micro-finance institutions (MFIs) including Duterimbere IMF, Umutanguha Finance Plc, Inkunga Finance Plc, Clecam Ejo Heza Plc, Amasezerano Finance Plc, Goshen Finance Plc and RIM Ltd. The role of the MFIs was to develop loans tailored to smallholder farmer groups engaged in the rice and maize as the main value chains. They also offered loans to individual farmers of onion and other vegetables. The resulting agri-loan products took into account the seasonal cash-flows and production costs of farmers. The program also worked with actors across the value chains among them Eight maize and ten rice cooperatives, service providers and off-takers (processors) to strengthen the value chains through creation of stable markets, improved agricultural practices, access to quality inputs, skills training and farming equipment.
# STARS Program Results

## USD 59,077
Microfinance institutions strengthened

Total amount saved by December 2020.

## USD 11,830,814
Total loan amount disbursed to farmers (December 2020)

## USD 3,656,605
Amount of capital supplied to MFI by refinancing companies (December 2020)

### Agri products status by September 2020

<table>
<thead>
<tr>
<th>Description</th>
<th>Women</th>
<th>Men</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clients accessing Agri-group loan product</td>
<td>66%</td>
<td>34%</td>
<td>66%</td>
</tr>
<tr>
<td>Clients accessing Individual loan product:</td>
<td>48%</td>
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<td>48%</td>
</tr>
<tr>
<td>Clients taking up saving product:</td>
<td>35%</td>
<td>65%</td>
<td>35%</td>
</tr>
<tr>
<td>Clients accessing rice VCD loan product:</td>
<td>55%</td>
<td>45%</td>
<td>55%</td>
</tr>
<tr>
<td>Clients accessing maize VCD loan product:</td>
<td>56%</td>
<td>44%</td>
<td>56%</td>
</tr>
<tr>
<td>Total clients accessing agri-loans:</td>
<td>52%</td>
<td>48%</td>
<td>52%</td>
</tr>
</tbody>
</table>

### BDS providers for training GAP

- **80** BDS providers
- **225** Chemical spraying BDS providers
- **305** Fee-based BDS providers selected and trained

### Farmers accessing market through cooperatives

- **34,356** Farmers
  - **13,560** Female farmers
  - **20,796** Male farmers

### Farmers accessing inputs through cooperatives

- **21,264** Farmers
  - **8,797** Female farmers
  - **12,467** Male farmers

### Farmers trained on GAP and PHH through cooperatives during STARS.

- **14,732** Farmers
  - **5,719** Female farmers
  - **9,013** Male farmers

### Farmers accessed rice seed from seed multipliers

- **43,120** Farmers
  - **20,564** Female farmers
  - **22,626** Male farmers

### Farmers accessed maize seed from seed multipliers

- **20,564** Farmers
  - **10,282** Female farmers
  - **10,282** Male farmers

### STARS partners

- MINAGRI (Ministry of Agriculture)
- RAB (Rwanda Agricultural Board)
- FUCORIRWA (Rice farmers federation)
- FCMR (Maize farmers federation)
- AMIR (Association of MFIs)
- 3 maize processors
- 22 rice processors
- 21 Maize Unions
- 2 equipment suppliers
- 2 ICT partners
- 2 Commercial Banks (KCB, Urwego)
The access to finance pillar of the STARS program was designed to de-risk agriculture, an initiative that was informed by the baseline assessment during which ICCO observed that most MFIs considered agricultural lending risky. This mindset needed to change in order for farmers to access capital that they could invest in quality inputs like fertilizer, pesticides, seeds and extension services.

**Agri-loan products**

STARS initiated several interventions in a bid to make agricultural lending attractive to MFIs, among which was the development of tailor-made agri-credit products and the refining of the existing non performing agri-products. At the onset, STARS worked with five MFIs- Duterimbere, Amasezerano, Inkunga, Clecam Ejo Heza and Umutanguha - to serve smallholder farmers. Two more MFIs, Goshen and RIM came on board later.

"The most important thing we learnt from ICCO was that farming is unlike other businesses. So we created loan products that were crop-specific. If it’s rice we give seven months, if it’s potatoes we give four months and three months for vegetables. The farmer then has the flexibility to pay back their loan when they harvest," said Yves Mfura, the agrifinance lead in Umutanguha MFI.

Another MFI, Duterimbere, worked with STARS to create loan products based on the stage of production of different crops and the needs that farmers faced throughout the production cycle.

"We created a loan product called Hinga that we give farmers to buy inputs. Then within Hinga there is another sub-product called Humura Muhinzi which we give farmers who run short of capital before the crop is ready for harvest. That’s when a farmer can come to us and borrow then repay when they harvest, rather than to prematurely sell off their crop and end up losing more. Then we have a post-harvest loan product for a farmer who has harvested but not yet sold the harvest. They might even have had money for production and inputs but are unable to get the crop into storage as they wait for a buyer. At that time we lend to the farmer this warrantage loan”, Ms Uwamahoro from Duterimbere MFI said.

At the end of 2020, STARS in Rwanda was well on track to reach its target, with 89,865 farmers already benefiting from crop-specific loans. Five agri-finance products were developed and tested with STARS support. These included: agri-group loan, individual agri-loan, VCD rice loan, VCD maize rice loan. The group and individual agri-loan products were adapted to specific crops such as Irish potato, horticulture and banana.
Savings-based loans

STARS also stimulated MFIs to promote savings based on saving groups. The promotion of savings has proved important for both the sustainability of MFIs engaged in agri-lending as well as empowering farmers to approach MFIs for loans. STARS supported MFIs to set up a total of 115 savings groups within three producer organizations, totaling 2,898 farmers (35% women). So far, 164 saving groups have already mobilized USD 59,077 in savings (Report, December 2020). Clecam Ejo Heza, chose to work with saving groups as these reduce risk for individual farmers.

"Farmers opened accounts in groups, as well as personal accounts in which they save money then Clecam lends to them based on their savings and expected harvest," said Philemon Uwayezu, the Kamonyi branch manager for Clecam Ejo Heza MFI.

Risk management

Risk management involves making the right decisions on how to reduce and manage risks based on a tolerable degree.

As Yves Mfura, the agri-finance manager for Umutaguha indicated, the MFI’s non-performing loan ratio went down thanks to the risk management policies that the MFI put in place.

"It used to vary between 6 and 8 but since STARS came, it is between 2 and 4.5. So the ratio of clients who take loans and pay irregularly or delay to pay has gone down. It’s because of the right products we’ve put in place, and a right policy for agriculture. It’s also because we include financial education for farmers and a tool that does accurate loan appraisal”.

Effective risk management limits the associated risk to specific products, services or operations. If implemented correctly, the management of risks can help build credibility on the market and generate new opportunities for growth.

The STARS program supported the MFIs to establish and institutionalize risk management committees that monitor their risk of losing money through non-performing loans.

The committees also assess liquidity and operational risks. If these risks are poorly managed, investors, lenders, borrowers and savers are likely to lose confidence in the institution, the funds may shrink, and the institution may no longer be able to achieve its goals and even go bankrupt.

A-CAT tool

STARS introduced the agri-credit assessment tool (A-CAT) to enable MFIs to better understand the needs and capacities of smallholder farmers and minimise the risks of defaulting/ non-repayment of loans. Using the tool, loan officers are able to better analyze the exact costs associated with crop production and grant loans accordingly.

"MFIs have become champions in client social protection, because the A-CAT tool helps them to do agriculture loan analysis and give farmers loans that they can pay back, which means they (farmers) are protected from over-indebtedness", said Patricie Uwimbabazi, a microfinance consultant with the STARS program.

The MFIs have institutionalized the A-CAT tool and made it part of the loan procedure manual, so that no agri-loan application is approved without due analysis. This way more farmers can access appropriate loans.

"Our target was 65,000 agri-loans but we have overshot that by over 40,000 agri-loans", Maurice Koppes, the STARS program manager said.

Mobilisation of funds

In yet another intervention, STARS linked the MFIs to international credit sources such as Rabobank from the Netherlands where they obtained loans for onward lending. However, in order for agri-lending to be sustainable, MFIs need to mobilize their capital within Rwanda for example by encouraging a saving culture. STARS developed a savings mobilisation model that was customized with the MFIs situation. This assist the MFIs to know how the saving groups work so that they can continue safely lending to them. MFIs are also able to create saving groups within POs that do not have them to assist farmers have access to finance.

Umutanguha Finance has achieved this by offering groups loans to small-scale agri-traders against their savings. One such group, based in Kigali’s Nyabugogo market, started saving together with the common goal of recapitalizing their businesses, and has benefitted from loans for three years running.

“We came together and started to save just Rwf 300 (USD 30 cents) per day per member. Then we approached Umutanguha MFI and opened accounts both as individuals and as a group. The USD 2 we save daily is deposited into a group account and is never withdrawn so it serves as collateral for our loans. So far we have taken out five loans of upto Rwf 4,000,000 (USD 4,100)”, the group leader, Petronile Nyiranzamwomboho said, adding that they always repay their loans within four months.

As the program exits the scene, MFIs have been empowered to develop even more products to enable more smallholder farmers to access agri-loans.
ICCO Cooperation has been touted as the catalyst of cooperation between smallholder farmers and MFIs, rightly so, since the two were initially like oil and water.

The STARS program launched in 2017, facing the herculean task of bringing MFIs and smallholder farmers into a working relationship. It would not be easy, since MFIs viewed smallholder farming as risky business.

**STARS Interventions**

STARS chose to tackle existing challenges from both the demand (farmers) and supply (MFIs) sides. MFIs were capacitated on risk assessment and business planning. Loan officers were trained to better understand agriculture and to identify the opportunities in agribusiness.

The program then linked the MFIs to producer organizations that they could work with. This was done through business to business events in various towns across the country where MFIs have branches.

“We trained MFIs to understand agriculture much better, as a result the loan officers with a finance background now understand the language of the farmer with the agriculture background,” said Victoria Umutesi, the STARS access to finance advisor.

**Working relationship**

Once the dialogue had begun between MFIs and smallholder farmers, the results began to be realized soon after. Loan officers no longer waited for the risk-averse farmers to walk into the MFIs. Instead they visited farms and established a working relationship with farmers.

“Some of the MFIs even brought in an agronomist in-house to help loan officers assess the loans that go to farmers. They also created risk committees. Here we saw the results during the Covid-19 period when the committees were able to assess the risks that came with the lockdown and approached us to help them find solutions,” said Regis Mutsinzi, the M&E advisor for the STARS program.

The interventions STARS put in place have also brought renewed purpose for MFIs, as they are better equipped to serve their target clientele.

“The STARS program helped us to go deep into our mission to promote women in different activities, especially rural women in agriculture”, said Dative Nzasingizimana, the Duterimbere MFI CEO.

And now that MFIs are able to speak the language of farmers, the relationship has shifted to one of mutual trust.

“A lot has changed. First, there is now trust between the MFI and the farmers, such that loan officers can use the loan history of a farmer to give loans. Also, farmers no longer take loans and use the money for other non-productive activities. As a result, our non-performing loans have reduced,” said Clecam Ejo Heza branch manager, Philemon Uwayezu.

The MFIs acknowledge the impact STARS has had on their business, as they have become more resilient and less fallible to shocks, like the recent lockdown caused by the COVID-19 pandemic in 2020. In fact, all five STARS MFIs reported a growing agri-loan portfolio by the end of 2020 when Rwanda’s economy was still reeling from the COVID-19 lockdown.

“Our loan portfolio grew by about 64%. By October we had lent about Rwf2.7 billion, but when we started with STARS we were between 1.1 and 1.3 billion francs. That’s a significant growth. Savings also grew, although not at the same rate as loans,” said Yves Mfura, adding that this was a wake-up call to Umutanguha that working with farmers is no longer an option but a necessity.

Now that MFIs see agricultural lending as an opportunity, access to finance for farmers is no longer a constraint to a sustainable bread basket in Rwanda. What remains is to ensure that lending to farmers’ is done with social responsibility in mind.

**Protecting farmers**

“The aim was win-win so the gains made would continue and to make sure the farmer was in the centre of these businesses”, said Patrick, adding, “With MFIs we introduced social performance management for client protection. It’s not just about getting their interest or financial income, they should pay attention not to harm the client through over-indebtedness”.

ICCO has not been working alone to enhance access to finance for smallholder farmers.

“During the Covid-19 lockdown, we saw a growth in deposits into the new accounts held by farmers. Although the farmers could not access the branches, we noticed a high use of mobile banking, followed by an instant drop when the telecom service providers reinstated charges on deposits. We are now engaging the network of MFIs in Rwanda (AMIR) to advocate for lower mobile banking charges so that the use of mobile-banking by smallholder farmers can grow”, said Yves Mfura, the Umutanguha MFI agri-finance lead.
CORIMARU is a rice cooperative situated in Bugesera, in Rwanda’s Eastern province that exemplifies resilience and growth.

The cooperative is one of the largest in the country, with 2000 members and 712ha under production and a capacity to produce 3000 tons of rice per season.

The cooperative has however been attracting negative publicity in the last few years. It ran into some difficulties arising from governance and misuse of funds that led to removal of the former leadership.

“2013-2017 audits showed serious embezzlement of cooperative funds by the leaders we had then” said the current president, Silas Karasira.

The cooperative was left with no finances to extend loans to the farmers for purchase of inputs and other farm activities, according to a former zone leader, Mukanoheli Jeanette; a situation that caused disgruntlement among CORIMARU members.

Besides mismanagement of resources, gender imbalance was rife.

“Women would put in the hard work in the marshland but their husbands would claim payment for the rice,” Epiphania Mukamana, a zone leader in the cooperative said.

While one would expect the cooperative members to disperse since the leadership would not pay farmers for their produce, the only visible effect was low morale. The farmers kept the cooperative alive but were farming without any commercial view in mind.

“We would harvest little, poor quality rice, leading to poverty among ourselves and our families”, Mukamana, a mother of 11, added.

By the time ICCO cooperation stepped in to support, several NGOs had come and gone, afraid to work with CORIMARU due to their infamous governance issues that put them squarely under the radar of the Government of Rwanda.

“When we started working with CORIMARU, they had an old procedure manual which meant nobody knew what to do, the leadership was non-existent and everyone was doing the best they could not to give up”, said Aurore Agasaro, the ICCO consultant who took up the STARS program intervention in the ailing cooperative.

The ICCO STARS program began supporting the cooperative to put its house in order, with the election of a new governing council led by new president Silas Karasira, a veteran rice farmer and member of the cooperative. A gender committee was also

Down but not out, CORIMARU’s journey of recovery

A farmer weeding at CORIMARU Rice Cooperative. Photo: Wordcore
instituted to address all the conflicts arising from the farmers’ households, while giving women a voice in the affairs of the cooperative.

With the new governing council in place, STARS set out to facilitate the revision of the procedure manual so that members of the cooperative could have a guiding document to begin the journey of recovery. They even held their first-ever general assembly in 2018! Members were grateful for a good harvest with STARS support.

But just as some semblance of normalcy was beginning to return, disaster struck.

“We were hit by floods from the river Nyabarongo that flows adjacent to our marshland, just days before we were due to harvest. I had planted 128 ares and was expecting 12 tons after having harvested 4.5 tons the previous season. I was devastated” Mukamana recalled.

Thankfully, the STARS program had linked the cooperative to a crop insurer who compensated the farmers who had bought insurance cover for their rice. But the worst was yet to come.

“The next season we were hit by a disease that wiped out the entire marshland. That was before COVID-19 came and we were unable to plant because of the nation-wide lockdown. Conflicts escalated because people were hungry”, said Girabashake Emmanuel, a member of the gender committee.

Despite enduring total losses three seasons in a row, the cooperative members did not desert their cooperative.

“We are the only cooperative bringing together farmers from the sectors of Mwogo, Juru and Masaka, they really see the need to stay. However, we did see more women joining us because they witnessed a change in the way we were running things,” President Karasira quipped.

Now that the worst is hopefully behind them, the members of the CORIMARU are breathing a cautious sigh of relief. Through the support of the STARS program, they now have a procedure manual that has helped each member to know their roles and responsibilities, and with which they can hold the new leaders to account.

With a brighter future now within reach, CORIMARU drafted a five-year strategic plan with a view to produce rice for Mayange Rice, a processor that STARS linked them with.

Mid-2020, the farmers planted afresh. Just four months later, lush rice paddies could be seen swaying to the wind, unencumbered by weeds. This is thanks to the efforts of business development service (BDS) providers who were trained by the STARS program. The function of BDS providers is to ensure farmers are following good agricultural practices, like weeding and spraying for diseases and pests in a timely manner. In spite of their financial woes, the cooperative tries to pay the BDS providers so as to motivate them to help farmers recover fully.

The farmers are grateful for fertilizer that the government sent their way to help them recover from the disasters. Although this cooperative has been the hardest hit by failed leadership and climate change, they revel in the changes they have managed to make and are hopeful of a bright future.

“STARS program supported us when we were at our lowest point. Now we can move forward. Once the dykes that are being constructed around the marshland are completed, we will be unrivalled in our production,” President Karasira concluded, grateful for the trust his members have in his leadership. CORIMARU is proof that smallholder farmers can achieve more together in well-organized cooperatives.
The STARS program set out to address the constraints that long excluded smallholder farmers, keeping them poor and rendering their agribusinesses unsustainable. This was achieved through the Market System Development (MSD) approach.

Describing the approach, STARS Program Manager Maurice Koppes said, “We don’t want to give someone a fish. We also don’t want to provide a fishing rod, because when this fishing rod is broken, the person is still not helped. What we want is to create a market in which fishing equipment is provided so that any fisherman can buy a new fishing rod. This way we create a sustainable change”.

At the beginning of the program, STARS realized that farmers lacked sufficient access to extension services, due to few agronomists serving thousands of farmers. This meant that farmers were stuck in the mindset of subsistence farming that resulted in low and poor quality production. The program saw a need to introduce a sustainable way to make extension services available to every farmer.

Fee-based services

STARS therefore trained some 305 farmers to provide business development services (BDS) on a fee basis. These farmers were split into two groups: trainers on good agricultural practices (GAP) and sprayers. Nshimiyimana Emmanuel, a rice farmer from COPRORIKA who was trained as a BDS provider chimed in on the contribution he and his fellow BDS providers have made with regards to enforcing GAP.

“Once we received training, we set up demo plots for farmer field schooling in the zone. We meet there and learn together and then farmers go to put the new ideas to practice. I also visit them on their paddies. I’m proud to have played a part in raising COPRORIKA’s yield from 200 tons to 650 tons on 144 ha within three seasons”.

Yet another group of BDS providers would take up the task of spraying pesticides on behalf of fellow farmers. Prior to this arrangement, farmers would spray these toxic chemicals themselves, without donning protective clothing. They lacked skills on spraying and required spraying equipment, knowledge in chemical storage and proper disposal of used containers. This posed a risk to their health and to the environment. However, with the trained sprayers in place, the incidence of pests and diseases reduced significantly on the farms.

Revocatus Shyaka, the STARS value chain development advisor summarized the rationale of the BDS model as follows; “We trained farmers to improve their production. But producer organizations needed to have someone supplying extension services on a continued basis. We believe that a free service is not sustainable. So we trained BDS providers and the POs agreed to pay them. What STARS did was to ensure that the services they provide are value for money. We are happy to see that the uptake of this model has grown from four POs to 12”.

The BDS model has been so successful that the rice farmers’ federation, FUCORIRWA has adopted it and developed guidelines to scale it up to all rice cooperatives in Rwanda, according to Regis Mutsinzi, the M&E advisor for STARS.

Market information services

According to the program’s baseline assessment, both maize and rice farmers also lacked information pertaining to the markets for their produce. Without reliable market for their crop, farmers were demotivated and would often fall victim to brokers and middlemen who took advantage of their poor negotiating skills, as the president of one maize cooperative explained.

“We would sell to middlemen, who would come and push prices down, saying our maize was substandard. But ICCO STARS Program linked us to big buyers like AIF and Sarura, at a time when we were experiencing high rejection rates due to aflatoxin contamination. Now that we have professionalized our production, our maize is no longer rejected”, said Zainabu Francoise, the president of Kabiyaki maize cooperative.

With the ability to supply the right quantity and quality of produce to buyers, the farmers began to earn income that could uplift their livelihoods and provide food security. Besides linking farmers to off-takers, STARS also brought suppliers of quality inputs as well as microfinance institutions to the table to enable farmers to access finances for the inputs they needed to improve their productivity.

The STARS program’s overall goal was sustainability. To this end, they built win-win relationships between value chain actors that will bring profitability for farmers beyond the lifetime of the program.
Poverty has been the undoing of smallholder farmers in Rwanda, especially women and youth. One woman dared to challenge the status quo and is making headway in her household.

Meet Consolee, a rice farmer in Nyagatare with four teenage children and a grandchild. She has been a member of COPRIMU cooperative in Nyagatare district in Rwanda’s eastern province for eight years. Having joined in 2013, she was one of the pioneer members of the cooperative that by 2020 had 644 members, of whom 138 are women.

Before the cooperative started working with the STARS program in 2017, Consolee used to farm on just 18 ares, barely producing enough to feed her family, let alone selling. Although she worked hard, poverty was entrenched in this single-parent household.

“We were farming without direction. One would be planting, another weeding, and someone else would be applying pesticide, you can imagine the chaos across the marshland,” Consolee starts, recalling that she did have one thing: a thirst for change.

Not surprisingly, Consolee was not the only COPRIMU member for whom farming was not rewarding. The production of the cooperative stood at 280 tons on 140 ha in 2017. This translated to just two tons per hectare, despite the amount of seed they sunk into the marshland during planting.

“We used to plant 8 kg on 12 ares and even complained that it was little,” Consolee laughs.

The cooperative itself had governance issues that were holding them back and demotivating members, as Fortunnee Murangoyire, the manager of the cooperative explained.

“We would transact money without documentation and staff would take leave without filing any forms. Unable to access money when they needed inputs, members did not feel confident in the leadership”.

Making changes

The difference came about after the STARS program selected a few of the cooperative’s members and took them for a field trip.

“ICCO’s STARS program organized a study tour to Ntende cooperative in Gatsibo district that is doing really well. We saw how they planted few seeds and the way they kept their marshland neat, and they shared how they save in small groups. We also learnt about saving towards a specific purpose. When I got back I started training my group,” said Consolee.

After the field trip, the COPRIMU cooperative members began to make changes. With the support of STARS, they revised their outdated procedure manual and streamlined operations.

“ICCO trained us, the staff, and the governing committee on the rights and responsibilities of each member”, the cooperative manager recounted.

ICCO supported COPRIMU to put in place a gender committee to resolve conflicts and empower its women members like Consolee to participate more actively in the affairs of the cooperative, take charge of their production and understand their right to earn and manage the money they got paid for their rice yield.

“Women started taking leadership roles, vying for positions alongside men in the governance committee”, the manager recounted.
Consolee was not left behind. She had vied for and been elected leader of Kundumuceli group, in charge of almost 140 farmers.

The shift in governance revived the members’ trust for the leadership of the cooperative. Whereas farmers were accustomed to selling off their produce to the highest bidder, they now pooled their harvest together and allowed the cooperative to negotiate off-taker contracts with a processor; Nyagatare rice. STARS program had orchestrated the linkage with the buyer.

Deployment of BDS providers

STARS also trained a group of five farmers as BDS providers and deployed them to work with various groups across the marshland to introduce the use of GAPs, alongside the greatly overwhelmed agronomist.

The only female BDS provider, Dusabe Euphrasie, explained how she and her colleagues started training fellow farmers to change their farming techniques through the farmer field schooling (FFS) approach. First off, the BDS providers dealt with the wastage of seed during planting.

"Each group has a demo plot from which we train and advise farmers. From the training with ICCO, we realized that we had been wasting seed. We now plant 1kg on an area of 12 ares and it’s enough. We have also stopped spraying for ourselves because ICCO helped us understand that those chemicals are harmful to our health and the environment when used incorrectly and should be handled by skill chemical sprayers".

What’s more, the BDS providers initiated a harmonized schedule for planting, weeding, fertilizer and pesticide application as well as harvesting, which has led to increased quantity and quality of yield across the marshland.

"Because of ICCO, our yield has increased from 280 tons to 400 tons on 140 ha", said a jubilant Euphrasie whose own production shot up from 300 kg to 650 kg on 12 ares.

Consolee’s new role as group leader meant that she could transfer the knowledge from the trainings with ICCO and influence the performance of other farmers. The results of the training and coaching became apparent beyond the cooperative, and within two years the number of women members grew from 97 to the current 138.

Crop insurance

STARS program realized that COPRIMU’s marshland did not have a dyke to help control the flow of water. While the cooperative had not previously experienced any issues with drainage, STARS sensitized the farmers to consider buying crop insurance to safeguard their production against flooding. Many resisted, but not Consolee.

"I convinced my group to invest in the insurance although many felt it was a lot of money. We were required to pay Rwf175 (USD 0.17) per are. And then our marshland flooded just after we had applied fertilizer and we watched our rice die. Imagine how happy we were to be paid compensation by the insurance company!" Consolee recounted.

Stepping out of poverty

Consolee was inspired by the rise in production and decided to expand her paddy. From the initial 18 ares, she now farms on 92 ares, of which 36 ares is hers, while she leases the rest. As a result, her production shot up that next season from 450 kg from her small 18 ares plot, to a whopping 5.5 tons of rice.

STARS had also linked the cooperative to the Bank of Kigali and Duterimbere MFI, where Consolee opened a savings account to manage her money.

"I started saving with the vision of building a good house for my family, because we used to live in a tiny mud house and my children needed more space", said Consolee.

In November of 2020, Consolee moved the family to a spacious home with shops for rent at the local town center. She even installed tap water in the new home. Things were looking up for the family.

Before the Covid-19 lockdown, the STARS program took Consolee and other farmers on a field visit to a maize cooperative in Kamonyi.

"This time they trained us to diversify our farming to include other crops beyond just rice", Consolee concluded.

With rental income from her shops, combined with an income of Rwf1,650,000 (1,680USD) per season from her rice, Consolee can hold her head high. Her dream of escaping poverty is within sight.
The STARS program has helped value chain actors resolve several challenges, not the least of which was the seed crisis in the rice value chain. According to Appollonaire Gahiza, the president of the rice farmer federation (FUCORIRWA), the program came at a time when the federation and the government agency in charge had reached a deadlock on rice seed.

STARS conducted an assessment on rice seed production, revealing that seed multiplication was being done in a way that was not sustainable. Rice seed is produced in a three stage process. The first stage is pre-basic seed, which is produced by Rwanda Agriculture Board (RAB). Pre-basic seed is then multiplied to produce basic seed, a process that has hitherto been the task of RAB and a few selected cooperatives. Producers of basic seed produce and sell certified seed to farmer cooperatives who in turn produce rice for consumption.

“We needed to professionalize the seed multiplication business. Our collaboration with STARS began when the Ministry of Agriculture decided to turn over the production of basic and pre-basic seed to farmers. We worked on a seed multiplication plan for three seasons, to know which varieties of seed are suitable to specific regions, whether aromatic, long-grain or short-grain,” said Aimable Icyimpaye, the seed multiplication lead at RAB.

This would mean involving all the actors in the value chain. The STARS program convened a forum in line with its market driven solutions approach, where value chain actors could meet.

“The first challenge was that processors could not sell the rice that farmers sold to them, giving imported rice a foothold in the Rwandan market. Processors were complaining that farmers were mixing up varieties, which made it difficult to compete in the market”, Shyaka explained.

STARS found a way to link RAB to farmers such that RAB could hand over the role of seed multiplication while maintaining a regulatory and research role. "We identified six private basic seed multipliers who were really strong enough to start with. We provided training in good agricultural practices to both the basic seed and certified seed multipliers. We also supported contractual agreements between seed multipliers and rice farmers. And that means that at least every farmer knows where he’ll source seed from in advance," said Revocatus Shyaka, the STARS value chain advisor.

Competing in the market

The first challenge was that processors could not sell the rice that farmers sold to them, giving imported rice a foothold in the Rwandan market.

"So we started the process from the demand side of the consumer. STARS linked farmers to the processors in the planning phase and they signed contracts stipulating the varieties that farmers should produce for the three seasons based on what was in demand in the marketplace. Then the basic seed multipliers were tasked with producing the planned certified varieties for rice farmers to plant. STARS helped link RAB to cooperatives to train them and strengthen the seed multiplication system using the farmer field school (FFS) model!", Aimable added. The FFS model entails the use of demo plots where farmers can learn and emulate GAPS with the support of BDS providers.
“We tackled the way farmers were sowing seed in order to reduce wastage. At the onset, 30kg-80kg of seed per ha was the norm, but in the FFS we trained them to reduce to 10kg per ha, one seed per hole, to reduce competition for soil nutrients,” said Roger Kamali, the STARS consultant who handled seed multiplication.

Three seasons into the collaboration, the results have begun to show, with seed multiplier cooperatives now competing on quantity and quality of seed.

“We are seeing a significant change in the quality and quantity of rice the farmers are producing. To keep the farmers motivated, I reward the first 10 farmers who achieve the production target – 7 ton per ha – with a cow or a bicycle. Last season I paid health insurance for the whole of CODERVAM so as to encourage them to keep up the good work,” said the proprietor of Nyagatare rice millers, Musabira Laurent, adding that his contracts with cooperatives serve as guarantees so that they are able to access bank loans.

**Leverage high yield**

The role of facilitator that the STARS program has played has borne fruits, albeit with a few challenges.

“The quality of seed has been addressed through capacity building on seed production practices, quality control and post-harvest handling. In terms of quantity, the challenge is being resolved as the season goes by. This season, the supply stood at 90% of the seed demand. However, varieties are still an issue, especially the popular long grain varieties. We are researching different varieties that are disease resistant, leverage high yields and will be liked by consumers. It’s a process,” Aimable explained.

The STARS interventions promise to be sustainable beyond the lifetime of the program.

“If RAB stays involved in basic seed multiplication, it will be for a short while. Over time, we will only remain involved in research and pre-basic seed production. In the long run, RAB will continue coordinating with all the stakeholders – seed multipliers, producer organizations, the federation, input suppliers, processors – providing oversight of planning, and linking actors to advance national food security policy objectives,” Aimable concluded.

To further ensure that the gains made in the quality and quantity of rice will be sustained, the Ministry of Agriculture directed that rice millers give cooperatives shares in the mills.

“We made the offer, but the POs were unable to pay for the 40% ownership we allocated them. So the alternative was to help them sustain the quality and quantity by paying the BDS providers and giving advance payouts to the farmers in the form of fertilizer then deducting from the harvest we buy from them,” Laurent from Nyagatare rice miller remarked. The dynamic in the maize value chain is slightly different, as Aimable from RAB explained.

“RAB has fully handed over to private seed multipliers the roles of producing seed from pre-basic to certified maize seed. Maize value chain actors have even gone further to research on new varieties and have registered the varieties they come up with. This is the goal we are aiming for in rice.”

**Maize value chain**

STARS still played a vital role in the maize VC, especially since one of the largest off-takers, Africa Improved Foods was importing maize instead of buying locally.

“The STARS program linked us to the cooperatives and we signed contracts to buy their maize, so that farmers are incentivized to increase production. We send a team of quality technicians to visit farms during the harvest period and offer support in post-harvest handling. The result has been better quality of maize produced by cooperatives, which increases our confidence as a buyer,” said Elisha Rugambwa, a sourcing supervisor at Africa Improved Foods, adding that the company introduced post-harvest infrastructure at cooperative level to curb the occurrence of aflatoxin.

An enabling environment can only exist when the government plays its part. The STARS program played a role in influencing policies in favor of smallholders farmers.

“ We worked with the umbrella institutions like Unions and federations of rice and maize. AMIR as well as MINAGRI working group to raise pertinent issues”, Patrick from ICCO said.

In Rwanda, the crop intensification policy has seen marshlands allocated to cooperatives and producer organizations that produce specific crops with a commercial objective. The rice and maize value chains are beneficiaries of this policy.

“The group dynamic in well-governed cooperatives will ensure that the training spreads and good agricultural practices become the norm over time,” Aimable said in conclusion.

As the STARS program exits, ICCO Cooperation and its partners Mastercard Foundation and ICCO Terrafina can be sure that the changes effected by the program will snowball into greater outcomes, because other farmer cooperatives and MFIs have begun to replicate the program’s impact.

**LIST OF ACRONYMS**

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<td>AIF</td>
<td>Africa Improved Foods</td>
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<tr>
<td>AMIR</td>
<td>Association of Microfinance Institutions</td>
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<td>BDS</td>
<td>Business Development Services</td>
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<td>FFS</td>
<td>Farmer Field School</td>
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<td>FUCORIRWA</td>
<td>Federation of rice farmer cooperatives and unions in Rwanda</td>
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For more information about ICCO's STARS program, click here.
Golden Plaza, 1st Floor, KG 546 St1 Kacyiru, Kigali, Rwanda

Birasa Patrick
+250 788304590
Country Manager

Umutesi A. Victoire
+250 784295761
Access to Finance Advisor

Shyaka R. Francis
+250 785644090
Value chain development Advisor

Mutsinzi J.F. Regis
+250 788438060
MERL Advisor