Kilimo Trust

Transforming Lives Through Agribusiness

AGRA

Growing Africa's Agriculture

IMPACT BOOKLET

Theme:

Fostering national and regional trade in Agricultural products in East Africa

Implementation Period: 1st April 2018 - 31st March 2021

BILL & MELINDA GATES *foundation*

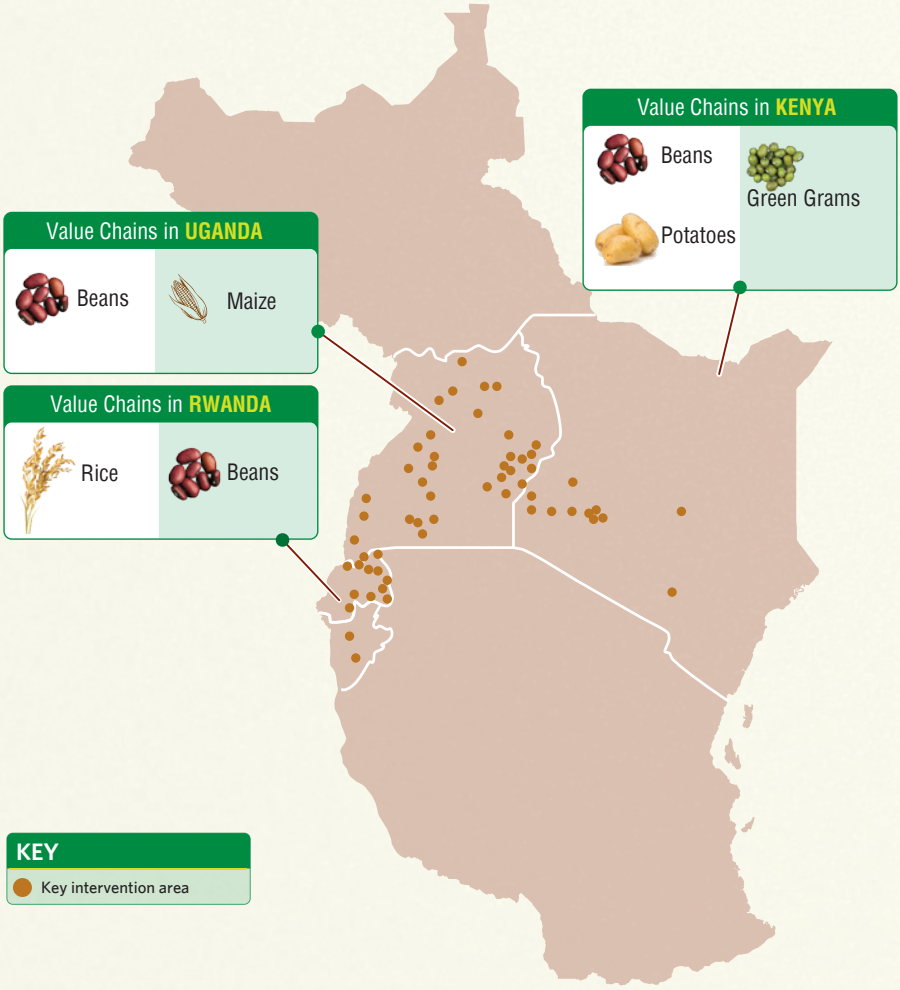
Federal Ministry for Economic Cooperation and Development

The ROCKEFELLER FOUNDATION

UKaid from the British people

USAID FROM THE AMERICAN PEOPLE

Map of Project Operational areas



About **REACTS-II project**

The Regional East African Community Trade in Staples Phase-II (REACTS-II) was a 3 years' regional flagship project (April 2018 – March 2021) that supported small holder farming households and other value chain actors across the three East African Countries (Uganda, Kenya, and Rwanda), to take advantage of structured national, regional, and opportunistic international markets for agricultural products. The project was funded by Alliance for a Green Revolution in Africa - AGRA and implemented by Kilimo Trust. REACTS-II was building on the foundation laid by REACTS-I, a phase which was funded by IFAD that focused on re-tooling IFAD loan projects implementation teams and their service providers with skills and knowledge on market led value chain development.

REACTS-II project was driven by the fact that limited access to guaranteed/reliable markets is one of the priority constraints hindering commercialization of agriculture by small holder farmers and general development of agricultural value chains. Thus, the project set out to address underlying challenges for development of sustainable structured and integrated trading systems that drive effective and efficient smallholder farmers' access to inputs, finance, technologies and markets.

REACTS-II interventions focused on the maize and beans value chains in Uganda; beans, green grams and potato value chains in Kenya; and beans and rice value chains in Rwanda.

In Rwanda, was implemented in Bugesera, Ngoma, Gatsibo, and Nyagatare Districts in Eastern Province, Kamonyi, Muhanga, and Ruhango Districts in Southern Province, Rulindo, Gicumbi, Musanze, and Burera Districts in the Northern Province, and Rusizi District in the Western Province.

In Uganda the project was implemented in Central region (Kyotera, Lwengo, Greater Mubende, Kibaale, Kiboga, Kyakwanzi and Luweero districts), western region (Kigezi region, Ntungamo, Rubirizi, Kamwenge and Kasese), Eastern region (Manafwa, Bududa, Bulambuli and Iganga), North East (Lira, Otuke, Dokolo, and Apac) and North region (Oyam, Kole, Nwoya, Amuru, and Omoro)

In Kenya, the project was implemented in in Kisumu, Siaya and Homabay counites in Nyanza region; Nakuru, Nandi, Uasin Gishu, Elgeyo Marakwet and Trans-Nzoia counties in Rift Valley region; and Tharaka Nithi, Makueni and Meru counties in Eastern Region of Kenya.

Objectives

REACTS-II project goal was to increase incomes by **20%** for **315,795** small holder farming households (**105,265** direct and **210,530** indirect beneficiaries) and **5%** for other value chain actors (SMEs), achieved through the following objectives:

1. Strengthening and expanding access to input and output markets,
2. Improving value chain coordination efficiency.

By pursuing the above project objectives, REACTS-II was contributing to the following transformations:

a) Profitable, structured, and integrated trading systems

b) Strengthened technical capacities of smallholder farmers and other VC actors.

c) Improved and inclusive business linkages

d) Improved value chain coordination and efficiency

Project Approach

REACTS-II was implemented using a facilitative Kilimo Trust Consortium Approach to Value Chain Development (KTCA2VCD). The model is centred around market off-takers and aggregators as anchor partners to provide a market pull and crowding-in of necessary and sufficient partners to develop market systems. To improve efficiency REACTS-II project integrated village agent model into the KTCA2VCD which increased participation of youth and women along different value chains.

5 Engage sufficient Providers of Public Good Services, such as:

- Base market to build EoS
- Reciprocal trade deals to expand reached markets
- Enforcement of Standards
- Foundation seed
- Large infrastructure especially for irrigation and transport
- Conducive agro-business environment
- Multi-sector platforms
- Cooperative / Associations strengthening

4 Rope-in Commercial Suppliers of Inputs & Services e.g.

Village Agents of the Lead Firms/ Off-takers/ Traders to provide services such as:

- Equipment (by sale, leasing or hire)
- Finance (credit, equity, etc.)
- Seed, Fertilizer, chemicals& other inputs
- Business Development Services, ICT & extension services

1 Engage the Primary Pull - a target market that ...

- Supports profitability for SHFs and others in the coffee & food staple VCs, by ...
- Rewarding: *Quality and Food-safety Standards; Economies of scale; and Timeliness of delivery*

6 Crowd-in the late adopters (75,000SHFs), through:

- Business to Business exchange visits
- Use of early adopters as lead farmers
- Dissemination of the economic benefits of the model

3 Crowd-in early adopters (25,000SHFs), that are:

- Business Oriented
- Experienced & Dedicated to Commercial Farming
- Organized (or willing to be)

But with *profitability* and *growth* limited by poor access to competitive markets that reward quality and/or provide reliable supplies of quality inputs

2 Pull-in Lead Firms that ...

- Have Invested or wanting to invest, in: Processing Plant(s); Warehousing and/ or trade, with ...
- Effective linkage to the market
- But with critical obstacles to profitability and growth caused by inadequate supply of good quality raw materials in the correct quantities and at the right time

Summary of project's performance on key indicators

Table1, summarizes overall project performance on the key indicators against set targets in the 3 countries.

KEY INDICATORS	Target	Achieved	% actual against Target
Smallholder farmers reached	105,625	110,662	105%
Public and private Investments leveraged (US$)	3,500,000	4,648,931	133%
Sales value (US$)	40,560,000	63,125,924	156%
Produce sold (MT)	120,000	152,715	127%
Produce directly sold to export markets (MT)	No Target	19,314	-
Farmers selling through structured arrangements	No Target	43,796	-
Number of new jobs created	No Target	120	-
Village Based Agents providing technological services or engaged in trade along focus VCs	500	416	83%
Loans accessed (US$)	1,500,000	1,692,552	113%
Genuine inputs accessed by farmers (certified seeds and fertilizers)	7,235	9,089	125%
Change in yields from baseline (MT/acre) from different cases			
maize	1.4	1.7	21%
Rice	5.1	6	18%
Beans	0.4	0.7	50%
Green grams	0.2	0.5	150%
Individuals who have received trainings	80,000	115,267	144%

REACTS-II KEY ACHIEVEMENTS AND IMPACT

In Uganda

Key achievements in Uganda include:

a) Over 15,000MT of produce (worth US$ 3 million) exported to regional markets, especially Kenya.

b) Improvements in maize and beans quality across the different nodes. For instance, 70% of exported maize between December 2020 and 15th March 2021 passed aflatoxin test.

c) More profitability at SME level (especially cooperative) due to adoption of turnover concept

d) Increased engagement of youth in the target value chains as village-based agents and equipment operators who provide specialized commercial services/ products to smallholder farmers.

e) Increased buy-in and engagement of non-traditional partners such as the Uganda Revenue Authority, Logistics companies, Ministry of East African Affairs, and many others in agricultural trade for improved coordination and efficiency.

From the above achievements, the following impacts were registered:

A NePEU: making it possible for SMEs and Farmer Cooperatives to engage in structured cross-border trade amidst COVID-19 disruptions.

SMEs (including cooperatives) play a critical role in linking farmers to markets. Often, these SMEs lack forward linkages to reliable and sustainable markets. And in countries like Uganda that produce most agricultural commodities in surplus, national markets are not sufficient to drive economies of scales and incentivise farmers to invest in productivity and quality improvement. In a bid to alleviate these challenges, REACTS-II project organized a visit for 20 Ugandan aggregators to expose them to more structured maize market opportunities in Kenya in October 2019. The team comprised members of cooperatives and a few large-scale national grain handlers. While on the trip, consultations with big industry players in Kenya revealed that there was a mismatch in capacities (engagement terms and requirements) between majority of the aggregators on the trip and the Kenyan big buyers. Thus, such business partnerships were not sustainable.

On the flip side, the team realised that there over 10,000 small scale millers (who control over 70% of market share) in Kenya who are equally faced with limited access to adequate and quality volumes of maize in a timely manner, with more favourable engagement terms. That's how the Ugandan aggregators were introduced to Agro-Processors Association of Kenya, a platform that brings together 67 small scale maize millers. After a series of business-to-business meetings and visits to buyer's facilities, the two parties agreed to work together. However, these was subject to addressing some impediments: (loss of money by Kenyan millers to Ugandan brokers through fraudulent deals, (ii) poor quality produce, (iii) high costs of business transactions especially that they must camp in Uganda for days to get required volumes, and (iv) lack of sufficient information to make informed decisions by both parties.

Another outcome of the exposure visit was the need for Ugandan traders and cooperatives to organize to meet the required volumes. This led to the formation of the Network of Producers and Exporters Uganda Ltd (NePEU). NePEU is now a platform for establishing accountability and traceability among members.

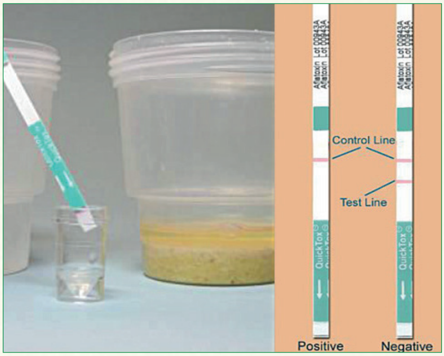
In February 2020, before COVID-19 global lockdown, the project then supported a delegation of 34 traders and millers from Kenya for an exposure visit to Ugandan aggregators on a fact-finding mission and undertake own due diligence. With restricted movements, a WhatsApp group was established as a platform for exchange of business information and in June 2020, actual trade started.

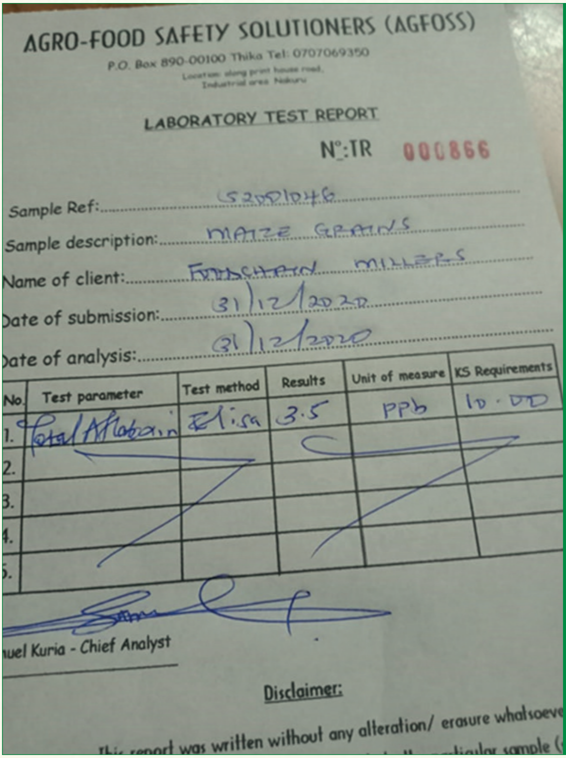
How it works – traders in Uganda post information on available produce-maize and beans- on the common platform and solicit for markets from Kenyan buyers. Interested parties have side negotiations and once an agreement is reached the importer make payment for the consignment (made through APAK or deposit directly to supplier's account (after consulting APAK and NePEU secretariat).

The supplier is given 2-4 days to prepare the consignment upon receipt of payment. Logistics and clearance of cargo at the border is handled by the importer through network of clearing agents known to APAK and NePEU. However, in most cases it's the responsibility of either parties to see the transaction is successfully completed (teamwork). To minimise risks, NePEU has opened bank accounts where all remittances are directed before deciding which supplier to engage.

As a result of this initiative, over 15,000 MT of maize and beans, worth US$ 3.1 million has been imported under structured arrangements by over 25 Kenyan small-scale millers. Ugandan suppliers receive a price mark-up of UGX50-100 per Kg in comparison to prevailing market prices, trust has been cultivated (a reason for pre-financing), incidences of loss of funds to conmen on either side have reduced. Due to established traceability systems, 70% of produce traded through this platform passed aflatoxin test. Most importantly industry self-regulatory mechanisms have been established and willingness of the partners to grow together with long term perspective.

Early successes have prompted APAK to secure a 9,000MT capacity store from NPCB in Nakuru to act as a holding store to reduce transaction time. Furthermore, NePEU and APAK signed a 100,000MT MoU per year to guide their business operations.





AGRO-FOOD SAFETY SOLUTIONERS (AGFOSS)
P.O. Box 890-00100 Thika Tel: 0707069350

LABORATORY TEST REPORT

N°:TR 000866

Sample Ref: S2001046
Sample description: MAIZE GRAINS
Name of client: [illegible] MILLERS
Date of submission: 31/12/2020
Date of analysis: 31/12/2020

No.	Test parameter	Test method	Results	Unit of measure	KS Requirements
1.	Total Aflatoxin	Elisa	3.5	ppb	10.00
2.					
3.					
4.					
5.					

...uel Kuria - Chief Analyst

Disclaimer:
This report was written without any alteration/ erasure whatsoeve...

Certificate of analysis for maize supplied by Twezimbe ACE to APAK in Kenya

B Youth find gainful employment as village agents: *Justine Nayiga's story*


Nayiga inspecting a farmer's crop (left) and working in her input shop (right).

To Justine Nayiga, a 30-year-old lady from Kabatende village in Mubende district, each challenge farmers faced presented a business opportunity, female village agent in.

"I was first introduced to village agent concept by USAID FtF commodity Production and Marketing Activity (CPMA) in 2016. However, by the time the project ended we had not fully conceptualized the concept", narrates Justine. *"I would only aggregate produce for a commodity buyer-Sanyu Investments Ltd for a commission and provide a grain drying services to farmers."*

Through the REACTS-II project, Justine realized her understanding of the village agent model through training and continuous business mentorship. Justine was trained on business skills and entrepreneurship, financial literacy, grading and standards, safe use and handling of agro-chemicals, backward and forward linkages, in addition to networking with other village agents in the different parts of the country. "It's then that I we realized that its more about trust, economies of scale (having a big network of farmers for high sales turnover) and providing more services to farmers", explains Justine. *In addition, the project co-financed (50:50) acquisition of a mobile bean thresher and electric spray pumps, introduced me to different input companies (such as NASECO seeds, Bukoola Chemicals Ltd, Africa one, Nsanja and Hanghozou) that supply genuine inputs. Most importantly however, was the linkage of our off-taker-Sanyu Investments Ltd) to markets in Kenya markets that caused a trickle-down effect of increased demand for the products."*

Today as a village agent, Nayiga has several revenue streams (input shop, production support services, post-harvest handling equipment and produce trading). For instance, she earns a minimum of UGX 10 per kg of maize and UGX 30 per kg of beans aggregated for Sanyu Investments Ltd. Each season, Nayiga aggregates a minimum of 140MT of maize earning her UGX 1.4 million in commission. From the post-harvest handling services provided to farmers, she earns UGX 1 million as profit, and UGX 350,000

from electric spray pumps per season. Furthermore, having been introduced to input promotion events idea by REACTS-II, Nayiga invites agro-chemical companies to sell their inputs to her farmers earning her sales-based commission. With her savings, has established a UGX 20 million input shop.

"I was one of the youths without a job and always called on government to provide me with one. Sometimes we would engage in politics only to earn very little" recalls Nayiga.

Apart from the above achievements, Nayiga now owns a nursery school, and has constructed a house, plus three rental properties. She concludes: *"As a village agent, I don't earn a salary but rather a commission on each transaction made. So, the more farmers I serve through commercial services and free extension or produce aggregated the more money I make."*

C Multi- sectoral approach to supporting agricultural trade

PS MEACA, Mrs. Edith Mwanje (left) interacting with AGRA Country Manager, Dr. John Jagwe (right) during one of the joint monitoring visits.

Although most of the agricultural development projects have registered success based on their planned objectives, their achievement on increasing smallholder farmer incomes would have registered more sustainable impact if special focus was placed on value chain integration that leads to greater access to markets. Across EAC, donors' and government interventions within line ministries/departments are often not well coordinated. As a result, support for food trade is often "orphaned". For instance, Ministries of Agriculture's primary mandate is to enhance production and productivity, while Ministry of Trade concentrate on facilitating trade, always with special focus on non-agricultural commodities or cash crops like coffee or tea but not necessarily food staple crops. Thus, in many instances, support to national and regional food trade falls through the cracks.

Projects/ programs often work in silos with little complementarity and engagement of other key trade facilitating agencies (e.g., Bureau of Standards, Revenue Authorities, police, Foreign Affairs, etc). Even for projects where collaborations across related ministries is clearly spelt out, joint execution in many cases falls short of expectations, driven by several factors but not limited to scramble for budget allocations, lack of shared vision, inadequate partnership management skills and many more.

The Government of Uganda through the new national Development plan (NDP III) calls for programmatic approach to implementation of projects/programs which is a good step in the right direction. This means joint implementation of projects across related sectors. However, for this to work, intense multi-sectoral joint project planning, implementation and monitoring need to be emphasized to break the silos.

To tap into regional markets/trade, on-boarding of different stakeholders for improved planning and coordinated execution of REACTS-II project to create strong synergies and complementarity was needed. The idea of a multi-sectoral REACTS-U steering committee was then born, and consequently the committee was established. The committee is chaired, the PS MEACA (with PS MTIC as alternate chair) and MAAIF as the secretary. Other members of the committee include Uganda National Farmers Federation (UNFFE), The Private Sector of Uganda (PSFU), The Grain Council of Uganda (TGCU), the National Planning Authority (NPA, Office of the Prime Minister (OPM), Ministry of Finance, Planning and Economic Development, Uganda Export Promotion Board and Kilimo Trust. Given the multi-sectoral nature of agricultural trade and MEACA's neutrality, MEACA was best positioned to mobilize all key MDAs including the private sector and civil society to ensure that Uganda benefits in the regional processes as stipulated in its mandate.

Through the multi-sectoral steering committee, 25 multi-sectoral strategic meetings and 5 joint field monitoring trips have been held to guide project implementation; key agencies (such as revenue authority, police and bureau of standards) have been engaged whenever Network of Producers and Exporters of Uganda (NePEU) needs support or are faced with challenges while conducting business, and MEACA streamlined REACTS project activities in institutional work plan and budget. Most importantly, MEACA is championing efforts to scale up of REACTS-II project successes and lessons through government funding.

D Munyengera: Curbing post-harvest losses and creating employment for rural youth through mechanization.

Having lost both parents at an age of 13 years, making it impossible for him to go to school beyond Senior three, Geoffrey Munyengera, was introduced to a local metal fabrication workshop in Namasoga village, Iganga district in 2002. Each day, he tended his garden before he walked 5km daily for 3 months to this workshop so he could learn how to fabricate metallic windows and doors. He slowly acquired fabrication skills with mentorship and practice at the workshop for some time. In 2005, after harvesting and selling his maize, he used the proceeds of UGX 80,000/- as seed capital to set up his own fabrication workshop. A year later, he realized the challenges that farmers were going through in management of their harvest, that is when he started fabricating agricultural post-harvest technologies mainly for maize and groundnuts.

By the time, REACTS-II project came in 2018 to work with Munyengera, his biggest challenge was lack of awareness and therefore demand for his technologies. At that time, he was mainly fabricating self-propelled mobile technologies for beans and maize. Through his company Munyengera Agro-machinery Ltd, REACTS-II supported him through: **(i)** cost sharing arrangement, where farmer organizations would pay 50%, **(ii)** facilitation to attend national exhibitions, **(iii)** organizing training for 54

operators on machine maintenance and repairs, **(iv)** updating of business plan, **(v)** linkages to other partners and (vi) production of a promotional documentary about his works.

As a result of this partnership, 17 mobile shellers, 3 cleaners, 4 mobile bean threshers, all worth US$ 42,972 have been procured from Munyegera Agro-machinery Ltd, mainly by farmer cooperatives and youth agro-preneurs. These are serving at least 7,320 farmers on a seasonal basis, which has significantly improved quality of produce.

Given the subsistence level of most maize farmers, they have limited financing to own technologies, several youth agro-prenuers have invested in such technologies as an income stream to provide services to smallholder farmers at a fee, in addition to employing other youths. For instance, a mobile maize sheller employs 5 youths (i.e., the owner of the technology, and 4 youths as operators of the sheller). On average, the youth agro-prenueur earns US$ 1,891 per season, while each of the operators can earn US$ 205 in commission. This implies that through project support, 120 jobs have created (85 for mobile maize sheller, 20 for mobile beans threshers and 15 for cleaners).

"I am able to make that money because shelling one bags costs UGX 2,500-3,000, of which UGX 500 is paid to youth operators who runs the maize sheller, another UGX500 paid to village agent, who mobilizes and aggregates demand from farmers in need of shelling services, another UGX 500 is for fuel. In one season alone (July to September), I can make a profit of UGX 3,000,000" said Nsemex, a youth entrepreneur.

Also, at the workshop, Munyengera agro-machinery Ltd is currently employing about 25 people, with a potential to employ more.

Cases of impact by numbers at SME level.

a) Zirobwe Agali Awamu Agribusiness Training Associations (ZAABTA)

ZAABTA manager receiving COVID response fertilizer relief

Indicator	Before the project – End of 2017	By February 2021
Farmers served through the cooperative	18,766	23,256
Maize yields (MT/acre)	1.4	2
Profitability per Kg of maize (UGX) for ZAABTA	30	50
Profitability per Kg of maize (UGX) at farmer level	146	326
Produce prices per Kg	500	700
Farmers buying improved inputs on a seasonal basis	7,506	12,093
Number of farmers selling through ZAABTA per season	9,383	13,953
Number oof village agents under ZAABTAA	40	70
Farmers selling through village agents per season	7,506	12,093
Farmers accessing post-harvest services of technologies	9,383	13,953
Weight loss (kg) due to moisture loss & foreign matter procured in every 1MT	112 (buy maize at 18% MC, 6% foreign matter)	46 8 (buy maize at 14% MC, 4% foreign matter)
Farmers selling produce through the cooperative or to SME or VA	7,506	12,093
Volumes (MT) procured by off-taker or VA	6,900	7,800 for Yr. 2020
Farmers receiving financial services	2,893	3,376

b) New Kakinga Millers Enterprises Ltd

Indicator	Before the project – End of 2017	By February 2021
Total volumes (MT) procured by off-taker	5,000	8,915 for Yr. 2020
Processing capacity (MT/day)	40	120
Proportion of produce rejected (%)	30	5
Processing inefficiency loss waste due to machinery (MT per 10 MT of maize processed)	1	negligible
Weight loss (kg) due to moisture loss & foreign matter procured in every 1MT	220 (buy maize at 17% MC & 18% foreign matter)	87 (buy maize at 15% MC & 7% foreign matter)
Storage capacity (MT)	100	10,000 (5,000MT warehouse *and 5,000MT processing plant constructed with support from aBi, Centenary Bank, USAID FtF YLA*)
Electricity tariffs (UGX) per MT processed	70,000	39,260
Number of employees	63	85
Farmers integrated in supply chain	1,500	8,521
Number of farmers accessing improved inputs	820	4,524
Maize yields (MT/acre)	0.7	1.5
Village agents under New Kakinga Millers	40	141
Farmers accessing post-harvest services of technologies	235	7,291

Bigando: Access to regional markets fast-tracking smallholder agricultural commercialization.

Limited access to reliable markets is one of the priority constraints limiting commercialisation of agriculture among smallholder farmers. Without ready markets, smallholder farmers are unable to earn decent incomes from their production, and this limits their investment in agriculture in subsequent seasons. The limited access to markets also affects cooperatives as these may not be in position to aggregate produce from farmers, leading to underutilisation of the available storage facilities.

Limited access to markets by farmers is partly attributed to limited market research and end market engagement by farmers and other value chain actors, resulting in the mismatch between market requirements and what is produced. Other failures include poor quality products due to poor pre and post-harvest handling, limited access to trade finance, limited preparation of farmers to fulfil requirements of identified markets, and poor administration of cooperatives among others.

Bigando Area Cooperative in Kasese district is an example of some of the cooperatives which faced similar challenges but with support from REACTS-project, the cooperative can now access regional market for their grains.

Why Bigando was not getting regional markets?

Although the cooperative is located in a maize production hub of Kasese, with over 600 members, within a season the cooperative could only sell 50 MT of maize by 2018. Farmers were not bulking with the cooperative because they were not willing to wait for 3 months to be paid instead, farmers were selling their produce to middlemen at low prices.

Due to lack of reliable markets, farmers were not willing to invest in production to have more volumes to bulk together and maintaining quality of the harvested grains such as the right moisture content of 13%, low levels of aflatoxin, and low levels of foreign matter like stones and dust.

By the time the project got in touch with the cooperative, it was depending on international food relief organisations as off takers, but these couldn't sustain the trade because they were not frequent buyers, including middlemen who were instead offering low prices for their grains.

The project then linked the cooperative to reliable markets by identifying national maize buyers, in addition to regional buyers such as grain processors that subscribe to the Agro-processors Association of Kenya (APAK). After engaging these buyers, the project realised that Bigando had problems in meeting buyers' requirements. The cooperative was then supported to get the right post harvest handling technologies like cleaners, and moisture meters. The cooperative was also trained on how to maintain EAC grain standards, market-oriented production, financial literacy, cooperative

governance and management, in addition to continuous business coaching. Furthermore, the cooperative was supported with 28MT fertiliser grant to increase maize productivity.

After gaining the required skills and tools that enable them meet market requirements, the cooperative was linked to maize processors and aggregators from Kenya, through the Network of Producers and Exporters Uganda (NePEU) that brings together cooperatives and aggregators interested in tapping into regional markets.

Through the network, buyers first deposit money on NePEU's account, worth agreed produce volumes, usually 28 MT. It is then advanced to the cooperative to mobilise produce within 2-3 days. Once the truck is loaded, the network handles clearance processes.

As a result of the project support, Bigando cooperative exported 1,300 MT of maize directly to Kenyan importers/buyers in 8 months from July 2020 compared to 50 MT sold in the same period the previous year.

"Before the business-to-business engagements initiated by Kilimo Trust, the cooperative had no grain buyers. Bulking was done for between four to five months, in anticipation of a better price, only to sell at even a lower price than the price at the time of aggregating," added Jimmy Baluku, the chairperson of Bigando ACE.

Baluku adds that "because of change of their business operational model, from bulking concept to turnover, the commission earned by the cooperative has increased from UGX 2 million to UGX 37.7 million per season, which has helped the cooperative extend services such as extension to its members." More farmers are now joining the cooperative because they are assured of ready market and that means more maize for us in the next season, adds Baluku.

Trucks being loaded with maize for export to Kenya from Bigando ACE in Kasese district

Fertilizer distribution to REACTS II partners in Bigando ACE

Business orientation of Twezimbe ACE reates better markets for farmers

By August 2018 when REACTS-II project, implemented by Kilimo Trust and funded by AGRA started working with Twezimbe ACE, the 600 MT storage capacity was empty yet that was the peak trading window because farmers needed cash for their produce. Also, the maize mill with an annual capacity to process 3,520 MT/year was at only 1.4% utilization capacity. Moreover, the cooperative was heavily indebted, and farmers had lost interest in cooperative activities.

The first REACTS-II supported intervention was to train cooperative leaders and the board on business orientation, cooperative governance and management, financial literacy, and management. This was followed by efforts to increase operational capacity of processing line by improving product brands. The latter action improved market penetration to as far as Hoima town. By December 2020, the annual processing capacity of the maize mill had increased to 6.6% (translating into 233.4 MT valued at UGX 312,654,180).

Through REACTS-II and Network of Producers and Exporters Uganda Limited (NePEU), Kenyan buyers committed to pre-finance bulking operations at Twezimbe ACE in an on-going business partnership. The Kenyan buyers deposit funds equivalent to a truck-load of maize (approx. 28 MT) on NePEU's bank account. NEPAU then advances the same amount to Twezimbe ACE to mobilize produce within 2-3 days. NePEU working with the buyer secures the truck and handles all border clearing processes. Through this arrangement, Twezimbe ACE has exported 196 MT of maize to Kenyan buyers in 2 months between 26th December 2020 to 4th March 2021. Compared to the same period the previous year, only 40MT were traded by the cooperative. The commission earned by the cooperative on this business arrangement totaling to UGX 5,880,000/- been used to pay farmers arrears. To address the working capital challenge, the cooperative has also been linked to Soluti Finance East Africa to access a UGX 206 million facility.

Remarkably, smallholder farmers are gaining confidence in the cooperative because they are assured of ready market. More farmers have started bulking with the cooperative again, yields have increased from 0.8MT MT/acre without fertilizer to 2.4 MT/acre because of blended fertilizer. The support to increase access to blended fertilizer has created more demand for blended fertilizers. Also, the quality of maize has improved because of the UGX 30 per kilogram markup received by farmers for premium quality grain. Board members and management staff Twezimbe ACE were trained on cooperative business orientation and governance. Village agents and management staff were also trained on quality management systems and specific requirements for EAC standards. As a result, Twezimbe ACE has improved the quality of processed flour and maize grain sold locally and exported to Kenya.

Offloading maize grain from Twezimbe ACE at the buyers premises in Nakuru Kenya

In Rwanda

Key achievements in Rwanda include:

a) Spearheading formation of Rwanda beans alliance which has increased coordination within bean value chain.

b) Aligning rice varieties promoted by research to market demand.

c) US$ 354,596 accessed by farmers as compensation through national agricultural insurance scheme.

d) Introduction of appropriate post-harvest technologies such as multi-crop threshers.

From the above achievements, the following impacts were registered.

a) Re-orienting seed research and multiplication to respond to market requirements.

It was a common phenomenon to find rice millers stuck with stocks of previous season because they could not find market for the rice varieties received from farmers. Instead, they would import rice from Tanzania leaving the Rwandese farmers stranded with no market. The Rwanda market preferred long grain varieties like Buryohe, Fashingabo as opposed to the short grain varieties commonly known Kigori that were widely grown.

To address the challenge working with different stakeholders (including millers, farmer cooperatives seed multipliers, members of the water users' associations, and Rwanda Agricultural Board - RAB), REACTS-II project addressed the market access challenge by aligning rice seed research and multiplication to respond to market requirements. Joint seasonal planning meetings for all stakeholders were organized at consortium level in all the major rice schemes in Rwanda. The meetings identified key rice varieties required by the millers, established millers rice demand which was then translated to seed plans that guided RAB and seed multipliers avail adequate seed of the right varieties to farmers. To ensure commitment of the different stakeholders, millers and cooperatives signed seasonal contracts. Using the same, cooperatives also signed contracts with seed multipliers. Guided by the contracts seed plans and action plans were developed and implemented by all stakeholders to ensure adequate seed of market demanded varieties at the beginning of each season.

As a result of this initiative, (i) proportion of demanded rice varieties sourced locally has increased from 40% to 70%, (ii) adoption of demanded varieties among farmers have increased from 30 to 70%, achieving 85% in some consortia like Bugarama and Mukunguri in Rusizi and Kamonyi District, and (iii) financing of seasonal consortium meetings to establish seed plans now fully taken over government through districts agricultural office, working closely with RAB.

Joint planning in Kamonyi District with MRPIC Ltd

RAB official observing the appearance of milled rice at a rice factory in Kirehe district

Farmers during the visit at Gatsibo rice factory to witness the impact of poor quality paddy on the performce of the factory

Kilimo Trust and RAB officials during the inspection of certified seed in Mukunguri valley

b. Adoption of Crop insurance among rice farmers in Rwanda

The National Agriculture Insurance Scheme (NAIS), dubbed "Tekana Urishingiwe Muhinzi Mworozi," was launched on April 23, 2019 by the Ministry of Agriculture and Animal Resources (MINAGRI), to mitigate risks and losses incurred by farmers due to unpredictable natural disasters, pests and diseases that affect their crops and livestock. NAIS was established to reduce the risk profiles of agricultural value chain actors and thereby attract lenders and investors to the sector. NAIS is Implemented through a multi-agency framework of insurance companies, financial institutions, NGOs, among others.

In July 2019, National Agriculture Insurance Scheme (NAIS) officials approached Kilimo Trust to introduce the scheme to cooperatives the project worked with. KODUMUGA and CORIMARU cooperatives in Bugesera District which grow rice in Gashora and Rurambi marshland respectively were the first to join the scheme in season 2019B. Under this arrangement, NAIS contributes 40% on premium and farmers contributes 60% on value of cost of the premium. Unfortunately, during that season, there were heavy rains that destroyed the whole crop. Through NAIS, the two cooperatives were compensated by the insurance company.

REACTS II team, NAIS and Insurance companies paying a visit to Rurambi wetland.

Following the raging floods in that season and intensive sensitization by the project, 23 cooperatives (31,936 farmers) also joined the scheme in the next season (2020A). Currently, 28 cooperatives that the project worked with have insured their crop under NAIS.

Again, the floods hit in 2020. Because of the arrangement, at least US$ 360,268 was paid to 23 rice cooperatives (benefitting 31,936 farmers) as compensation for their losses due to flooding.

> *"Kilimo Trust introduced us to crop insurance. We insured 400 hectares worth 8 Million Rwandan Francs with Radiant Insurance company. When we faced floods, our farmers were compensated with 12 Million Rwandan Francs. Now farmers are back to farming and have come to appreciate the importance of crop insurance and why they have to insure their crops each season"*, says Ignance Mugenzi, the president of COPRORIZ Abahuzabikorwa cooperative in Kamonyi District.

Farmers in Bugesera District receiving their compensation.

Truck loading consignment to France

Breaking the barriers for SMEs to participate in international trade

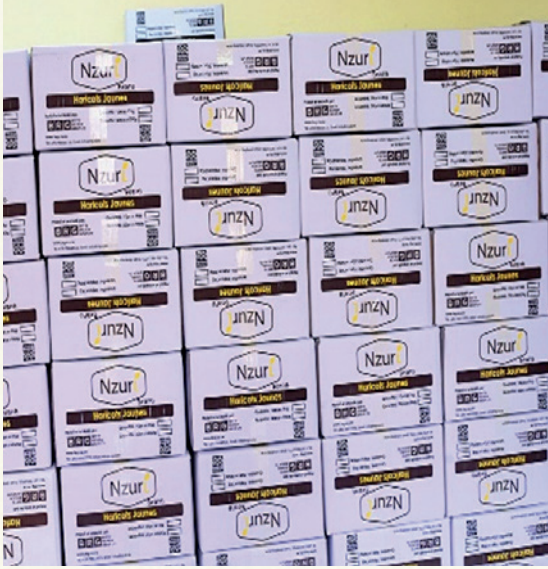
In 2019, REACTS II began supporting BRG Ltd, an exporter of dry beans to Middle East and Europe. At that time, BRG Ltd had secured its first contracts (equivalent 16MT of yellow beans) targeting niche markets in Oman. The biggest challenge was getting this bean variety in adequate amounts and quality required by the market. For this consignment sourced through middlemen, BRG Ltd incurred a loss equivalent to 20% of contract value due to aggregation and handling costs, and rejections.

When BRG Ltd decided to venture into European market, the requirements became more stringent, calling for better packaging, certificate of origin, specific yellow bean variety and proof of good storage.

Working with REACTS-II, BRG Ltd was linked to (i) Nzeyalex Ltd (REACTS II beneficiary and certified seed producer) to multiply the desired yellow beans seed in adequate volumes which was distributed to farmers, (ii) farmer cooperatives that would supply the required quality, (iii) Nyarutarama Business Incubation Center with right processing and storage facilities to ensure quality. BRG Ltd was also supported develop a business plan which was presented for a US$ 226,213 grant received from IDH through HortInvest project to invest in storage, postharvest equipment, and linkages to farmers. On the other hand, farmers capacity was also built to increase yields and quality through good agronomic practices and post-harvest handling trainings.

Because of the project support, (i) the company now supplies 16MT monthly as opposed to two consignments of the same volumes which the company used to export in a year, (ii) market channels have now increased to also include France and Belgium, (iii) beans rejects have reduced from 20% to 8%, and (iv) packaging and branding improved from ordinary bags to branded cartons.

BRG has some machines that support packaging



Ready to be exported boxes of beans at BRG warehouse

"Kilimo Trust did not only help me on the side of farmers but also on markets. Through REACTS-II, Kilimo Trust team has been like my business advisors. With them, I became more confident and now clearly now where I want to go in the future." says Elvis G Rwema., CEO of Best in Rwanda Group (BRG).

a. Post harvest loss reduction through promotion of appropriate technologies

Farmer cooperatives in Rwanda faced approximately 30% rejections of their harvest from off-takers due to poor quality produce (mostly mixed with stones, sand and mud, high moisture content). In cases where produce was accepted, prices offered were low. Poor produce quality is attributed to both use of rudimentary technologies and post-harvest practices.

Reagional East Africa Community Trade in Staples (REACTS-II) project (a projected funded by AGRA and implemented by Kilimo Trust) then embarked on promoting post-harvest technologies. It was after several trials, demonstrations and matching up farmers with locally fabricated threshers that the leadership of REACTS II realized that the designs and outcomes of the locally fabricated threshers were unsatisfactory. i.e., all the locally fabricated threshers were single-crop type, slow and small. REACTS II project then set-out to improve locally fabricated threshers to meet farmers' needs. In 2019, Kilimo Trust Rwanda through the REACTS II project established a partnership with Soybean Innovation Lab (SIL) from Missouri University (USA) which had better/ tested designs that can be adopted by fabricators in Rwanda to improve quality of their technologies. Furthermore, another partnership was established with Integrated Polytechnic Regional College (IPRC) Kigali, which has well equipped workshops that could be used for trainings.

Six days training was then conducted which attracted twenty-three (23) commercial fabricators of agricultural machines across East Africa (17 from Rwanda, 4 from Tanzania, 1 from Uganda and 1 from Burundi).

Upon completion of the training, two (2) complete multi-crop threshers with ability to thresh about 6 grain crops (maize, soybeans, beans, rice, sorghum) were fabricated and tested. This is in comparison with single crop type of threshers that were common in Rwanda. Interestingly while threshing maize, one does not need to remove the peels/maize ears which is not the case for locally fabricated threshers.

Following the introduction of this technology, several partners are now scaling up to different areas. For instance, Cultivating New Frontiers in Agriculture (CNFA) under the USAID Hinga Weze project contracted the two local fabricators (Orange Machinery Ltd and GIT Ltd), who were trained by REACTS-II project to fabricate 14 multi-crop threshers, valued at US$51,576. This is part of scale up plan highlighted in the MoU between USAID/FtF Hinga Weze Activity and REACTS II project to scale-up REACTS II efforts on postharvest management by improving access to postharvest technologies.

Apart from introduction of multi-crop threshers and fabrication of two proto-types, REACTS-II project through matching grant facility has: (i) upgraded 6 storage facilities (with total capacity of 900MT), (ii) constructed 3 drying yards (with total produce holding capacity of 40 MT at any one time), (iii) enabled value chain actors access different post-harvest equipment (e.g. 11 rice winnowers, ,and 10 rice threshers were accessed) and (iv) re-constructed a broken bridge to facilitate movement of produce from rice scheme to the market.

Due to intervention in post-harvest handling, 70% of farmers in cooperatives where drying yards were constructed, dry produce using these improved facilities which has reduced rejection rate to 10% up from 25%. Threshing time and cost have reduced, for instance the cost of threshing 1MT of rice has reduced from Frw 16,000 to 11,000. Impact of improved quality due to better technologies has led to price increment to cooperatives from off-takers by 10%.

During the training on fabrication of multi-crop threshers at IPRC Kigali

Multi-crop thresher design (left), upon completion

Drying slab for KEHMU Coop.

Threshers for KOIMUNYA Coop.

A store renovated for Abiyunze Kinazi.

b. Improving processing efficiency among rice millers

For some time, rice factories were not reaching their expected milling output due to limited skills of the operators especially on machine maintenance, efficiency and repairs. Low out-turn was always blamed on poor quality paddy supplied by farmers. Apart from the low out-turn the final product had 15% broken rice.

Upon thorough needs assessment, REACTS-II project realized that the gap was on the use of the installed milling technologies not entirely the quality of paddy supplied. REACTS-II project then partnered with Brazafric (Rwanda) Entreprise Ltd to train 54

factory operators from 5 milling companies (Mayange Rice Company Ltd, Gatsibo Rice Company Ltd, Nyagatare Rice Company Ltd, Mukunguri Rice Promotion and Investment Company (MRPIC Ltd), and Kirehe Rice Company Ltd. on milling efficiency.

The training was also used to resolve differences in machines design and performance, replacement of worn-out parts and repair of some that had broken down. For instance, at MRPIC Ltd, the De-stoner needed adjustment to effectively separate stones and brown rice, resetting of stones pneumatic system to enable stones to easily get out, and many others.

As a result of the training, out-turn has increased from less than 63% to 69%, broken rice has decreased from 15 to 10%, Operators are more knowledgeable and skilled on maintenance, repair and optimization of processes. Most importantly, MRPIC Ltd acquired a standardization mark (s-mark) from Rwanda Standards Board (RSB) after several unsuccessful attempts.

REACTS II team fixing the Grader and the De-stoner

Worn-out Whitener Protection Ring that required replacement

c. Increasing farmer profitability through efficient use of fertilizers

Low farm productivity remains a major concern among farmers within Rwanda and globally. Majority of the farmers do not use productivity enhancing technologies like fertilizers, mainly attributed to cost, availability and how to use. For a few farmers who use fertilizers, they have not been able to realize the expected output which demotivates them from using such technologies.

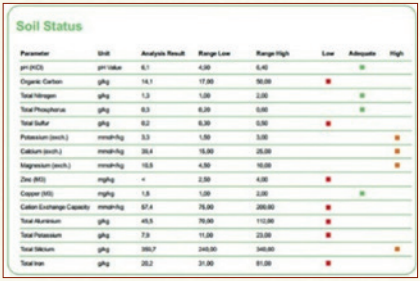
With respect to fertilizers, the major challenge is that most promoted fertilizers are generic (NPK 17:17:17) which are applied across broad spectrum of crops. However, crops' nutrient requirements are different. In addition, soil nutrient composition varies from one area to another. Thus, through generic fertilizers, farmers at times apply nutrients that are already adequately available in the soil (leading to excess

application) or apply less of a particular nutrient. Furthermore, most generic fertilizers lack micro-nutrients. Ultimately, farmers don't realize a significant economic benefit from using such fertilizers which demotivates them from investing in such productivity enhancing technologies.

Informed by the above, REACTS-II project partnered with ENAS, a Rwanda based fertilizer company that manufactures crop and soil specific fertilizers to (i) increase awareness of benefits of soil testing and use of crop/soil specific fertilizers in 12 districts, (ii) sample and analyse different soils for 20 cooperatives across project intervention areas, (iii) train cooperative extension officers on interpretation of soil analysis results, (iv) manufacture and commercially promote uptake of soil and crop specific fertilizers based on analysis results.

Through the partnership the following achievements and impacts have been registered: (i) soil status/analysis and fertilizer recommendations for 20 cooperatives in 12 districts established, (ii) 50MT worth US$ 30,435 of blended fertilizers purchased by COPRORIZ Abahuzabikorwa during 2021A season, (iii) rice yield increase from 5.1MT/Ha with generic fertilizers and 6.2MT/Ha with blended fertilizers from ENAS for farmers who applied blended fertilisers, which has translated in increased profitability by about 300,000 Frw per Ha

Soil sampling



Soil results/status

Fertilizer recommendation

Blended fertlizer

Cases of impact by numbers at SME level

a) Koperative Ejo Heza Muhinzi w'Umuceri (KEHMU)

Indicator	Before the project – End of 2017	By February 2021
Farmers served through the cooperative	2,121	2,400
Rice yields (MT/Ha)	5.1	6.2
Profitability per Kg of Rice	33	57
Farmers buying improved inputs on a seasonal basis	1,800	2,098
Number of farmers selling through the cooperative per season	1,800	2,098
Farmers accessing post-harvest services of technologies	1,200	1,800
Weight (Kg) of chaff & waste procured in every 1MT	90	60
Volumes (MT) sold to the factory every season	1,700	2,200
Farmers receiving financial services	100	500

In Kenya

Key achievements in Kenya include:

a) In 8 months over 15,000MT of maize and beans imported from Uganda by 25 millers through Agro-processors Association of Kenya (APAK) under structured arrangements.

b) Lobbied the National Cereal and Produce Board (NCPB) to lease 9,000MT of storage space to APAK to act as holding stores for imports from Uganda.

c) Supported 8 women owned SMEs to benefit from cross border trade as importers.

d) In partnership with Egerton University, increased availability of certified bean seeds at farmer level through community seed multiplication

From the above achievements, the following impacts were registered.

a. Structing of Green Gram Value Chain in Tharaka Nithi through Consortium approach to value chain development

Tharaka Nithi in Kenya is known for green grams production. However, before REACT-II project, farmers were largely not organized and always decried access to reliable markets. Linkages between different value chain players and support institutions were weak and were largely transactional based. There was no long-term vision among value chain actors for mutual development of the value chain.

To bring the different partners together for the development of the value chain, REACTS-II project employed consortium approach to value chain development to structure the green gram value chain.

The approach is premised on understanding the end markets first and using such understanding drive business partnerships and interventions design to respond to market signals.

Figure 2: Tegemeo Cereals Enterprise Ltd and Chabi Ltd's directors from Tunisia assessing green gram growth progress in a farm in Tharaka Nithi

After market research that characterized green gram markets, the project identified anchor partner (Tegemeo Cereal Enterprise Ltd, a local aggregator) who was linked to forward buyers (Yash commodities Ltd - an exporter; Equator Seeds Ltd in Uganda, Capwell Industries Ltd, ETG group, and Chibi Nuts Ltd in Tunisia). Tegemeo Cereal Enterprise Ltd was then linked to 7 producer groups (Tharaka Cereal Farmers' Co-operative Society Ltd, Mwika CBO, Imani aggregators CBO, Thiiti Mothers SGH, Macheria Youth SHG, Kereria CBO and Upendo CBO). Other members of the consortium who were on-boarded to provide different services/products based on identified gaps included: Equity Bank -Meru Branch (for finance); Kinyua investments (for mechanization); AgroZ Ltd, Syngenta Chemicals, Mwananchi Enterprises Ltd and Tegemeo Cereal Enterprise Ltd Agrovet (for inputs); Ministry of Agriculture, Livestock, Fisheries and Irrigation (MoALF&I) for extension services. Apart from establishment and nurturing of business partnerships, REACTS-II project also: (i) provided capacity building trainings to 4,017 farmers in good agronomic practices, post-harvest management, financial management, and business skills. (ii) Assisted Tegemeo Cereals Enterprise Ltd to acquire certificate of origin from Kenya Chamber of Commerce that enabled him to export green grams to other countries, iii) assisted 3 members of this consortium (Tegemeo Cereal Enterprise Ltd, Tharaka Cereal Farmers' Co-operative Society Ltd and Upendo CBO) to renovate their stores that enabled them to increase their store capacities by 1,100MT, iv) Organized learning trips.

Through this partnership, the following key results have achieved at SME level (Tegemeo Cereal Enterprise Ltd):

Indicator	Before the project – End of 2017	2020
Farmers served	2,500	6,500
Green grams yields (MT/acre)	0.2	0.5
Profitability per Kg of green grams at Tegemeo Cereal Enterprise Ltd (KES)	2	12
Profitability at farmer level per Kg (KES)	2	31
Farmers buying improved inputs on a seasonal basis	200	2,300
Farmers selling to Tegemeo Cereal Enterprise Ltd per season	800	3,500
Village agents under Tegemeo Cereal Enterprise Ltd	5	25
Farmers selling through village agents per season	600	3,200
Number of store/aggregation centers	5	8
Farmers accessing post-harvest services or technologies	1,200	3,600
Volumes (MT) procured by off-taker	770	3,287.8
Volumes (MT) exported	0	1,480
Reduction in post-harvest losses (%)	30	10
Farmers receiving financial services	150	1,700
Area of coverage	Tharaka Nithi	Tharaka Nithi, Kitui & Makueni

a. Breaking barriers that disfranchise women in cross border trade

Women traders face several challenges that block them from actively engaging in agricultural cross border trade. Key barriers include: (i) limited access to information and networking opportunities, (ii) limited access to finance, (iii) limited capacities and self-confidence, (iv) more importantly physical travelling and staying away from family, and (v) security risk caused by carrying cash.

Through REACTS-II project, 8 women cross border traders and processors (for example Cheptarit Star Ltd, Vine Foods, Themack Traders) have been supported to efficiently participate in cross border trade with minimal travels. Working through Agro-processors Association of Kenya (APAK) in Kenya and Network of Producers and Exporters of Uganda (NePEU) in Uganda, associations supported by REACTS-II project, women cross border traders make orders via whatsapp platform, transfer funds and receive cargo from Uganda without necessarily travelling across border.

In the period of 9 months since June 2020, women cross border traders (8) have imported over 2,000MT (of maize and beans), worth US$383,562 from Uganda, access to information has tremendously increased to guide better decision making, women can now procure big volumes at once without travel thus reducing cost and time for aggregation, 70% of interviewed women traders affiliated to APAK attested to improvement in maize quality sourced through NePEU in comparison to what is sourced through other channels, and incidences of loss of funds to conmen has not been reported under this arrangement.

Case of Cheptarit Star Women Group (women cross border traders)

Indicator	Before the project – End of 2017	2020
Volumes (MT) procured by off-taker	125	1,455
Volumes (MT) procured from Uganda	120	900
Proportion of produce rejected (%)	30	Below 10
Storage capacity (MT)	300	800
Number of employees (permanent and casuals)	12	32
Farmers integrated in supply chain excluding linkages with farmers in Uganda	400	1,137
Number of farmers accessing improved inputs	200	957
Beans yields (MT/acre)	0.5	1.0
Farmers accessing post-harvest services of technologies	175	957
Loan/Bank overdraft accessed (USD $)	3000	40,000
Area of coverage (Counties)	Nandi County	Uganda, and Kenya (Nandi, Uasin-Gishu and Trans-Nzoia)

Small scale traders and millers' associations can also play a significant role in fostering value chain growth if capacitated: Case of APAK.

It is common for development partners and governments to anchor value chain development on large scale investors (either processors or aggregators) who have made substantive investments. However, small scale enterprises (SMEs) equally play a significant role in influencing performance of different value chains given their numeric impact and the aggregate market share that they control. Thus, they cannot be ignored. Often, SMEs that subscribe to industry associations feel left out in decision making as "big boys" influence policy decisions, masking views of the small players.

Experience has shown that although large players can significantly integrate smallholder farmers in their supply chains, their partnerships in most cases are constrained by capacity mismatch. This is the reason why big players are less tolerant to non-adherence to all set trade terms and have a lot of bureaucracies and conditions for business engagement which in most cases SMEs and farmers do not adhere fully.

Realizing that direct business partnerships between smallholder farmers and large companies (including multi-nationals) were not performing as expected, REACTS-II project then changed strategy from anchoring the value chains on large players but also focus more on small and medium enterprises who are more willing to grow with smallholder farmers. In most cases, SMEs were a critical link between smallholder farmers and large buyers.

Eventually, REACTS-II partnered with Agro-processors Association of Kenya (APAK) which brings together 67 small scale millers and processors (5- 50MT per day) spread across Kenya (from Kitale, Eldoret, Nakuru, Nairobi, Thika, Nyeri and even beyond). Working with APAK secretariat, REACTS-II project has supported APAK members to (i) to access timely information on cross border supply options, (ii) business coaching

and mentoring to different members, (iii) supply chain management (iv) business networking and (v) advocate and securing buy-in from key government institutions to support SMEs engaged in cross border trade.

Through support to APAK, members, were able to directly import 15,000MT from Ugandan aggregators within 8 months of project support, increase in APAK membership and services from 67 to 75 members, and increased role in policy advocacy by APAK. Some of the interviewed members reported; (i) access to cheaper grains, (ii) procuring big volumes at once which has reduced cost and time for aggregation, (iii) improvement in quality compared to Busia market – 70% of interviewed buyers attested to this, (iv) improved trust and reduction in incidences of losing money to conmen – at least a full truck every trading season was lost before REACTS-II intervention and (v)increased sourcing options.

Responding to beans market demand: partnership with Egerton university

Access to certified bean seed for market demanded varieties was a major challenge for farmers in Kenya which resulted into low bean productivity and missed market opportunities. Beans being an open-Pollinated Variety (OPV) crop, seed companies are reluctant in committing their resource to produce beans seeds as farmers can buy the seeds once and recycle for the next 2 seasons until yields significantly reduce. So, it was not easy to get beans seeds in agrovet stores and in some cases if you access it then it could be expired with low germination rate.

Against this background, Regional East Africa Community Trade in Staples (REACTS-II) project partnered with Egerton university Seed Unit to increase certified seed availability and affordability through seed multiplication of market demanded Chelalang and Tasha beans varieties. Through this partnership, 1,500 seed multipliers in Nakuru, Nandi, Uasin-Gishu and Trans-Nzoia counties were linked to Egerton University for commercial seed multiplication. In addition, seed multipliers were trained on best practices of seed production. Upon harvest, Egerton university would buy it back, process and distribute to various agro-vets across the country.

Figure 25 Hellen in her Chelalang' bean seeds farm in Nandi County

Through this partnership, the project has created demand for certified bean seeds, something that was not there before. Off-takers/traders can now get single beans varieties as opposed to mixed beans (with different cooking time that their customers did not like) that they used to get before from farmers. Finally, through this arrangement Egerton university sold 177MT of Chelalang bean seed to the farming communities and seed multipliers received approximately USD$350 per MT.

Lessons Learnt

Key lessons from REACTS-II project implementation included:

- Focus on SMEs (including cooperatives) growth especially provision of tailored business development services can ease access to markets for smallholder farmers.
- To enhance cross border trade, more investments are required in establishment of quality management systems, investment in PHH appropriate technologies (especially drying facilities and aflatoxin testing) and coordination of logistics.
- Strengthening capacity of trade associations to support their members can enhance their ability to take advantage of profitable trade opportunities.
- Although agricultural infrastructural investment (e.g. storage facilities) is important, it is equally critical to invest in skills for sustainable management of such facilities.
- For regional trade to work, market off-takers need to be supported to access low-cost trade financing to facilitate produce aggregation during peak season.
- A neutral and respected facilitator is very critical for arbitration among business partners involved cross border trade.
- Digitizing agricultural systems is key to lowering cost of operations and turn around time.
- Upscaling low cost and efficient aggregation models such as village agent model and consortia approach improve service delivery and operational efficiency of supply chains.
- To increase national and regional trade, there is need to promote multi-sectoral approaches to enhance synergies and collaboration.
- Business to business networking such as exposure visits are critical for opening and sustaining trade opportunities.
- Increase collaboration among implementing partners to enhance synergies for greater impact in agricultural development.

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