PULSES FOR INCLUSIVE GROWTH PROJECT

END OF PROJECT INCEPTION PHASE REPORT

July,2021 through March, 2022

Small Enterprises Institutional Development

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Table of Contents

LIST OF ACRONYMS *4*

CHAPTER 1. INTRODUCTION *5*

1.1. Background **5**

1.2. Project Goal **5**

1.3. Project Purpose **5**

1.4. The Project Business Idea **6**

1.5. The Project Theory of Change **7**

1.6. The project implementation cycle. ***8***

1.7. Limitations of the Inception Phase **8**

2. PROJECT IMPLEMENTATION ***10***

2.1. Project Team **10**

2.2. Project Consortium **10**

2.3. Partner Roles **11**

2.4. Implementation Approach **12**

2.5. Project Risks and Mitigation measures **13**

2.6. Adjustments in the Project Proposal **15**

3. PROJECT RESULTS ***16***

3.1. SCA1: Intervention Area 1: Enhance Capacity of Private Companies, Farmer Seed Producer Groups and Public Research Institutions to Ensure Availability and Access of Improved Seed Varieties **16**

3.1.1. Increasing the production and supply of breeder/ foundation seeds by TARI Selian and TARI Makuru for the 4 Marketable varieties 17

3.1.2. Preparation of business plan for production and supply of basic seeds to seed multipliers 18

3.1.3. Signing of MoU for production and supply of basic seeds to seeds multipliers 18

3.1.4. Preparation of business plan for seeds multiplication and supply 18

3.1.5. Establishment of bulk seed purchase system with AMCOS 20

3.1.6. Negotiations with Agro-dealers (2 in each district) to stock certified bean seeds 21

3.1.7. Identifying 15 smallholder youth and women SMES (5 in each district) to be engaged as commercial QDS producers 22

3.1.8. Training 15 smallholder women and youth SMEs on QDS production agronomy 23

3.2. Systemic Change Area: Enhance farmers capacities to access and utilize GAP. **24**

3.2.1. Prepare and disseminate to farmers guides leaflets on GAP, conservation farming, soil testing and Post-Harvest handling techniques 24

3.2.2. Identify and train youths 12 SMEs on GAP, conservation farming, soil testing, crop quality and safety, mechanization for beans and guide them in provision of the services to farmers 25

3.3. Systemic Change Area: Enhance access and availability of financial services to producers inclusive of women and youths **26**

3.3.1. Negotiations with Vision Fund & SELF to establish financing of smallholder bean farmers through the AMCOS 26

3.3.2. Support setting up farmer financing mechanisms through AMCOS 27

3.3.3. Design/customization of financial products to be offered to smallholder women, men and youth farmers 27

3.4. Systemic Change Area: Facilitate farmer organizations to improve collective action for accessing markets 27
3.4.1. Design and establish collective bean market access through AMCOS 30
3.4.2. Identify and guide negotiations leading to contractual agreements between AMCOS been off-takers 30
3.4.3. Sensitize producers on accessing collective bean market linkages through the AMCOS 31
3.4.4. Guide RIVACU and AMCOS on identification of key issues that needs to be addressed at policy levels 32
3.4.5. Raising of 3 key case studies on policy reforms to be shared with other stakeholders 32
3.5. Systemic Change Area: Improved Value Addition Capacities along the Value Chain 32
3.5.1. Conduct rapid market analysis to determine market share, size and available technologies on value addition for common beans 32
3.5.2. Identify and build capacity of 10 women and 10 youth entrepreneurs on common beans value addition using available technologies 33
3.5.3. Build capacity of identified 10 women and 10 youth on branding, marketing, financial management and contractual arrangement with food vendors and FPGs 33
3.6. Systemic Change Area: Establish institutional arrangements that can address common challenges along the bean value chain in Manyara region 35
3.6.1. Sensitization and subscription of farmers on the We-Farm platform 35
3.6.2. Designing of the bean platform to include experts from the research institutions 35
4.0.1 Summary of Financial Expenditures against Budget. 36
5.0. CONCLUSION 37
5.1. The Project has met its objectives 37
6.2. The project has presented a proof of concept 38
6.3. The project has drawn key lessons for progression 38
6.4. The project has achieved tangible results 39
7. RECOMMENDATIONS 40
5.1. Recommendations for a Pilot Phase 40
5.1.1. Scale Up Successful Intervention 40
5.1.2. Introduction of Complementary Activities 40
7.2. Recommendations for a Bridging Phase, prior to the Pilot Phase 40
7.2.1. Post harvests loss-management activities for common beans..... 41
7.2.2. Follow ups on the activities implemented close to the end of the NCE, Youth and women VA, Mechanization extension services. 41
7.2.3. Collective marketing and sales to the off-takes who have shown demands..... 41
7.2.4. Supporting M&E functions of the MF with the newly introduced systems 41
7.2.5. Facilitations of FO's with output markets financing for QDS seeds. 41
7.2.6. Support administrative/overheads of the MF during the bridging window 42
Annex 1: Project Team profile 44

LIST OF ACRONYMS

1.	AMCOS	Agricultural Markets Co-operative Societies
2.	AMDT	Agricultural Markets Development Trust
3.	CBS	Crop Bioscience
4.	DC	District Council
5.	DED	District Executive Director
6.	LGAs	Local Government authorities
7.	MA's	Market Actors
8.	MAI	Manyara Agriculture Initiative
9.	MF	Market Facilitator
10.	M4P	Making Markets work for the Poor
11.	MRM	Monitoring and Results Measurement.
12.	PIG	Pulses for Inclusive Growth Project
13.	QDS	Quality Declared Seeds
14.	SCA	Systemic Change Area
15.	SEIDA	Small Enterprises Institutional Development
16.	SHF	Small Holder Farmers
17.	SIDO	Small Industries Development Organization
18.	TAMIP	Tanzania Agricultural Market Intelligence Platform
19.	TARI	Tanzania Agricultural Research Institute
20.	TC	Town Council
21.	TOSCI	Tanzania Official Seed Certification Institute
22.	VA	Value Addition

CHAPTER 1. INTRODUCTION

1.1. Background

The PIG project is an agricultural project implemented in Manyara region by SEIDA with the financial support of the AMDT. The project has just wound up its inception phase which targeted 6,000 common beans farmers in the Babati, Hanang' and Mbulu districts and has carried activities in these districts in the past 8 months. As per the project design and fund availability, the project has had six months of implementation and another two months of no cost extension.

The PIG project conforms to the overall AMDT program Market Systems Development (MSD) approach in which the project interventions are meant to enhance enterprise development and catalyze transactional relationships amongst market actors in target value chains. In so doing the PIG project has worked with a consortium of partners most of whom are enterprises doing business in Manyara region and have a commercial interest in the pulses value chain.

The PIG project inception phase is a preparatory phase in which the primary focus of the project is twofold:

- Testing models: The key project partners test their intervention hypotheses to see if they are viable, sustainable and commercially scalable.

- Beneficiary Mobilization: The project team reach out to target project beneficiaries to profile them and sensitize them to engage the project partners in testing out business concept through the business models that are being introduced

The project team has also used the inception phase to develop partnerships with other key stakeholders who do not have commercial interests in the project interventions. These key stakeholders include the central and local government authorities, similar development projects in the area and other stakeholder groups that could influence the project interventions

1.2. Project Goal

As per the approved project proposal, the goal of the project is to increase income and employment opportunities for smallholder women, men and youth farmers in the common beans value chain in Manyar region

1.3. Project Purpose

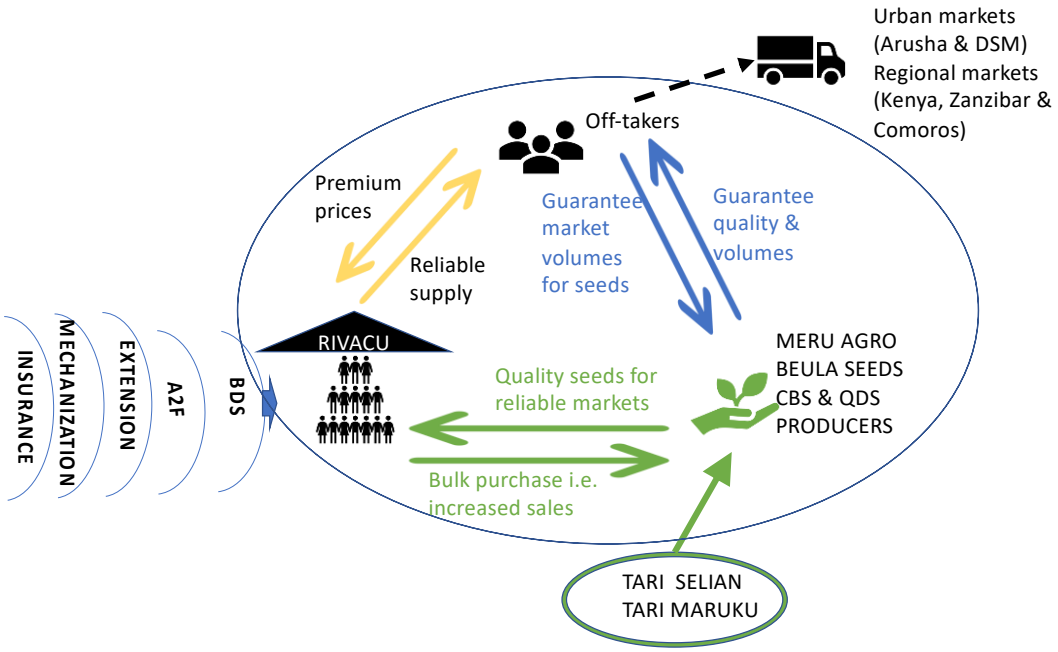
The purpose of this project inception phase was to:

1. Enhance capacity of private companies, farmer seed producer groups and public research institutions to ensure availability and access of improved seed varieties for smallholder women, men and youth farmers in Manyara region

2. Facilitate smallholder women, men and youth farmers' adoption of improved common bean seeds and Good Agricultural Practices in Manyara region
3. Facilitate the formation of new or strengthen (existing) farmer organizations supporting common beans farming in Manyara region
4. Facilitate contractual arrangements between small scale women, men and youth farmers in farmer organizations and offtakers in Manyara region

1.4. The Project Business Idea

The inception phase of the project was designed on the business idea that sought to address the relationship gaps amongst three key market functions as illustrated below:



As illustrated above, the malfunctions addressed by the project were primarily identified at the inputs, production and offtake nodes. The key gaps that the project sought to address at the three nodes included:

- **Inputs:** The key input challenge for the common beans value chain that the project sought to address was the challenge of availability and access to quality seeds for the five identified marketable bean varieties. The project sought not only to facilitate business models that could make these varieties available in the market but also to see how the farmers can access them in a cost and time effective manner

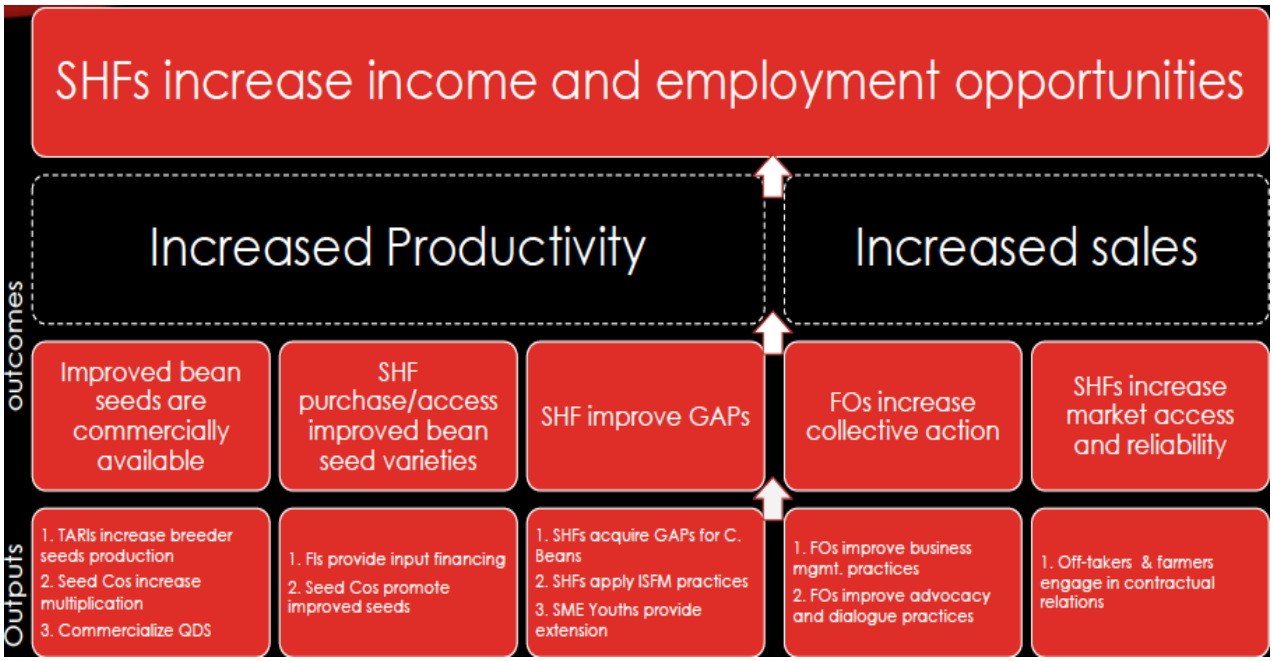
- **Production:** For production, the key challenge was how the farmers could efficiently access production knowledge and technologies to enhance their production of the

marketable varieties that are in demand. Furthermore, the project also sought to address the inefficiencies that existed in the existing extension systems that undermine the quality of common beans that are currently being produced by the farmers in Manyara region

- **Offtake:** The key issue addressed by the project under the off-take node is the overwhelming demand that the farmers seem not to service in the common beans value chain in Manyara region. The off-takers outcry for the quantity and quality of marketable common beans varieties in Manyara region was a key focus for the project

1.5. The Project Theory of Change

Based on the above project idea, the project interventions were therefore built on the following theory of change:



The activities implemented in the project aimed at delivering outputs as indicated in the illustration above and eventually contributing to the overall AMDT program goal of increasing income and employment opportunities. The project has eight outputs aiming at increasing farmer productivity and another three outputs aimed at increasing the sales of common beans. Between the outputs and the two major market system outcomes, the project aims at enterprise level outcomes which include the commercial availability of seeds, last mile access to the seed varieties, improved crop husbandry, increased collective actions and increased market access and reliability.

The inception phase therefore not only tested different enterprise level models but also laid ground for the achievement of the desired outcomes, adoption and scaling up of these results

1.6. The project implementation cycle.

Pulses for inclusive Growth during the inception phase was implemented with the philosophy of to test agreed business models with the identified partners. The Illustration below sums up pretty well the cycle and the expected way forward. The project implementing partners have used the below cycle under guidance's and backstops of the Market Facilitator whereby 5 business models have been promoted and sensitized to the project stakeholders including the smallholders. The five models tested 4 have proved to be workable and can go to the pilot stage without modification and 1 require further reviews (collective marketing for off-takes contracts), the details will be discussed under sec 3.4; The models were as hereunder

- Bulk seeds procurements through AMCOS (Subsidized promotion with SHF's, AMCOS)
- Inputs financing through AMCOS
- Mechanization bundling with Extension services for Youths and womens
- Business development extension services through Digital platform
- Collective marketing for off-takes contracts

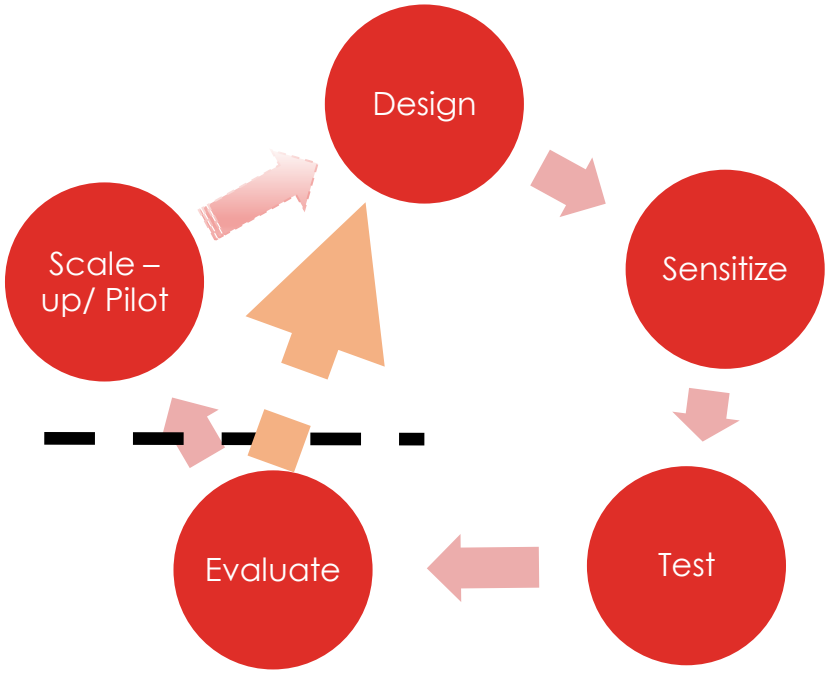


Table 1: PIG implementation cycle

1.7. Limitations of the Inception Phase

Despite the key results that will be presented in this report, it is important to note that the project activities have been implemented in a 6 months period and cannot therefore bring out a number of elements in the context of Market Systems Development and M4P. The following limitations are therefore important to note:

- **Enterprise Performance Indicators:** Even though the pilot phase has a few outputs on enterprise performance, they are only indicative of the potential change that can be achieved. Indicators like productivity, profit margins, production volumes cannot be

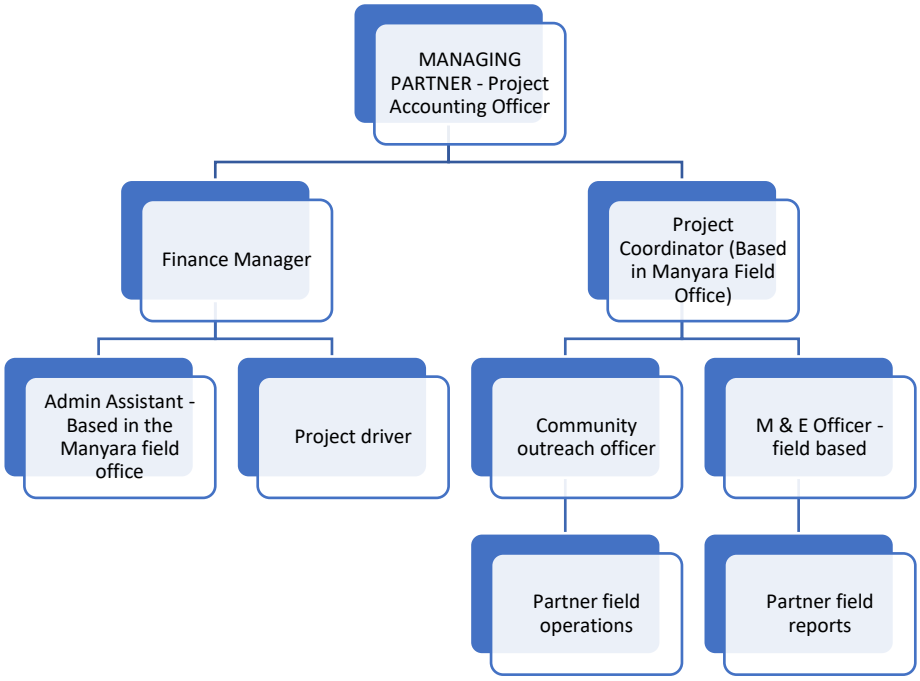
conclusively presented in the inception phase since there has only been one production season which was not even concluded by then of the inception phase

- Scale of Impact: The inception phase has just tested models in a few areas and cannot therefore give a good indication on scale of impact, despite the good signs that have been shown
- Crowd In: In the inception phase where different models have been introduced, it is difficult to achieve high rates of adoption to attract crowd in and adaptation. This will be better achieved as the project transitions to a pilot implementation phase

2. PROJECT IMPLEMENTATION

2.1. Project Team

The inception phase of the project has been implemented by a very lean team. The management of the project has been as per the organizational organigram below:



The qualifications and background of each project team member is found in the staff profile attached to this report as **annex 1**

2.2. Project Consortium

Despite identifying a number of project consortium partners in the proposal stage, the inception phase run with a few consortium partners to test a few models first. The revision of consortium partners was as shown in the table below:

Market Function	Proposed Market Actors	Engaged Market Actors
Collective Action	RIVACU & member AMCOS	AMCOS and Masenga TTC
Seed multiplication & suppy	Meru Agro, Beula Seeds, Crop Bio Science & QDS Producers	Meru Agro, Crop Bio Science & QDS Producers
Produce offtake	TTI, Nafaka Halisi, Union Stores, Bajwa Investments, Mema Holding	Bajwa Investment Co (Pearl Fresh Ltd); Vegrab Co Ltd; Silverland Co. Ltd; Musoma Food Co. Ltd. Maharishi Agro-Processing Ltd

Seed Distribution	Agro-dealers - Meru Agro – Babati, Baida, Msuya, Happiness	Meru Agro
Finance	SELF & Vision Fund	SELF & Vision Fund
Extension	AYEGRO, CFU	Crop Bio Science & TARI Selian
	SME Youth Groups	
	We-Farm	
Business Development Services	TAP-BDS & PIDDERS	Masenga Polytechnic
	TCCIA	
Mechanization	Crop Bio Science, Hans Machinery & Conservation Farming Unit	Crop Bio Science
Collective Marketing	Tanzania Mercantile Exchange (TMX)	Masenga Polytechnic

2.3. Partner Roles

As per the project design the engaged market actors sought to address different market malfunctions as detailed in Table below:

Market Function	Market Actors	What problem are we solving? What is the business incentive?
Collective Action	AMCOS and Masenga Polytechnic	Increased access to inputs and output markets Reduced costs of production Reliable markets and market prices Membership services efficiency and increased farmer resilience
Seed multiplication & suppy	Meru Agro, Crop Bio Science & QDS Producers	Very low demand for common beans seeds. Seed companies do not understand the farmers demand patterns Unfair competition from recycled seeds by grain traders
Produce offtake		Unreliable volumes of supply of marketable varieties Poor quality of produce
Seed Distribution	Meru Agro	There is fragmented and unclear seed demands making difficult supplies predictions.

Finance	SELF & Vision Fund	Finance companies do not understand the farmers business case for common beans in Manyara
Extension	Crop Bio Science & TARI Selian	Low productivity due to poor crop husbandry practices for common beans
Business Development Services	Masenga Polytechnic	Lack of business relationships with Farmer Organizations to demand their services.
Mechanization	Crop Bio Science	There is inadequate demand due to farmers limited knowledge. Increase of demand will result in more competitive prices of mechanized services
Collective Marketing	Masenga Polytechnic	Farmer Organizations lack business skills to adequately engage in collective marketing

The revision of the list of project partners was advised by the view of the implementation timeframe and the fact that the inception phase was more of a testing phase and therefore did not require many market actors. A partner's profile is annexed to this report as Annex 2

2.4. Implementation Approach

The project implementation approach used in the inception phase was more participatory and facilitative. The following key elements have therefore been considered and tested in the implementation approach taken by the project especially at the inception phase which was considered a test phase:

Ownership: Process ownership is a key indicator of the relevance of both the identified constrains and the approach to the solution. The inception phase was a good platform for the selected market actors and beneficiaries to show their ownership of the project activities. In our assessment, the level of ownership has been very high amongst the beneficiaries and the market actors. This has resulted in a higher level of involvement of market actors compared to what was dedicated in the proposal write up. The high level of involvement is evident in the results most of which has exceeded the targets as will be seen in chapter 3

Market Response: Even though it is too early to see market response to the project interventions, the inception phase point to some symptoms of market response. This was evident in the systemic change area 1 where seed companies which were not part of the inception phase like Beula seeds sought to adopt bulk supply model that was being tested with Meru Agro. More market response has also been seen in agro-dealers who are now getting more interested in stocking bean seeds due to the demand created by the project interventions.

Scale of Impact: One of the areas against which the interventions and proposed models were being tested was the scale of impact. The inception phase was used to gauge if the interventions brought by the market actors could reach a large number of productive poor, in this case, the smallholder farmers. The sensitization of farmers on improved bean seed and the availing of the required varieties through innovative distribution systems and QDS systems has given confidence to the off-takers who can now engage a larger number of farmers, hence, a potential scale of impact.

Sustainability: Sustainability was tested through the market incentive for each intervention that the market actors were engaged in. At the inception stage the market incentive was considered the key motivation for engagement in the project interventions. The market actors who did not have a market incentive were expected to drop off the interventions. The market incentive and the level of engagement will therefore be discussed in chapter three when discussing the results for the specific systemic change areas

Pro-poor orientation: For the sake of the PIG project, the productive poor are considered to be the smallholder bean farmers. The inception phase was therefore used to confirm that the business models were farmer-centred and could offer more business opportuntieis for the bean farmers in Manyara region. In this case, the opportunities were considered in the aspects of farmer productivity, profitability and signs for increased income

Systemic Change: It is not possible to achieve outcomes for systemic change in the early stages which is the inception stage. However, the symptoms for systemic change could be seen in the proposed models even at the testing stage. The inception phase therefore tested models which aimed at bringing positive change at the market system level and not just the enterprise level. Target systemic changes in the PIG project include farmer adoption of improved bean varieties, availability of more marketable bean varieties in the market, a closer transparent and contractual engagement of farmers and off-takers and availability of more business support services in the bean value chain in Manyara region. These will be discussed more in chapter three under each systemic change area as per the project design.

2.5. Project Risks and Mitigation measures

In the project design the following were the identified risks, their likelihoods and their envisaged mitigation measures:

Risk	Likelihood	Impact	Mitigation Measures
Operational Risks			
Project fund disbursement is delayed – may affect the activity calendar especially season related activities	L	H	Negotiations with AMDT to ensure timely disbursement of funds

Partners change their mind on the agreed approach	L	M	SEIDA to engage partners on areas of their highest incentive to minimize change of heart
Partners lack of interest on the project approach	M	M	Engage partners in negotiations and MoUs prior to engaging them as partners
Output Risks			
TARI Breeders do not consider common bean seed variety breeding as a priority	L	H	Farmer organizations to lobby the Ministry to put bean seed breeding as a high prioirity issue
Farmers experience adverse weather effects on the new common beans seeds being promoted	H	H	Promotoin of crop insurance services for farmers to ensure minimized risks
Farmers or offtakers default on collective marketing terms	M	H	Introduce emergency financing to cushion farmers from liquidity pressures just before harvest
Outcome Risks			
Agro-dealers do not see the commercial incentive to stock improved bean seeds	M	M	The project to build a business case for agro-dealers for them to take over
Sub-standard common beans seeds penetrate the commercial seed distribution channels	H	M	Farmers are trained on traceability systems put in place by TOSCI to verify seed quality
The government makes policy declaration that undermines collective marketing	M	H	Farmers to engage the government in constant policy dialogue to avoid counterproductive policy pronouncements

In the course of the project implementation the following key challenges and lessons were learnt:

Delay in the Activity Calendar: The project commencement was delayed as partially anticipated. This resulted in the project commencement being delayed by almost 6 months. This has resulted in the confusion of project implementation ending up with only 2 project quarters instead of four as planned.

Reshuffle of Project Partners: - SEIDA has learnt that sometimes the partners committed had capacity and management challenges. As a result, some of the key project partners were dropped. A good example was for RIVACU which failed to undertake the given roles after acquiring a more lucrative partners Agretta Craft /SNV. This caused additional responsibilities shifted to Masenga Polytechnic in the second quarter of implementation. However, the latter managed to mobilize and enroll the substantial number of smallholder farmer organizations.

Some of the project partners were also dropped during the negotiations with AMDT mainly due to lack of time or money, for instance CFU and Hans machinery.

The need to work with the Finance team: The project inception phase has experienced a design problem due to the nature of budget lines being rigid and not easily changed after contracting. The procedures for reallocation are lengthy with a lot of back and forth paper works. The challenge is mainly experienced in the activity plan where the activities budgeted for are remitted in installments that doesn't adhere to the season at hand, a good example is on the final payment which is anticipated after the close of the phase and hence the partners were hence forced to pre-finance the implementation of the activities without funds at their hands.

The need to strengthen partnerships and mutual trust; During the project implementation the facilitator noticed varied levels of understanding on partnerships from different core facilitator teams. The facilitation of the project of this nature entails supportive facilitations from the main facilitator on the partners operational and systems, problem solving and importantly open discussions on exchange of progresses and challenges being encountered.

2.6. Adjustments in the Project Proposal

During the project negotiations between AMDT and SEIDA, some adjustments were made, guided by the communications annexed to this report as annex xx. These adjustments had implications in the planned project activities and presented budget which saw SEIDA revise its present budget by a reduction of 21% The following are some of the key changes that were therefore made prior to the commencement of the inception phase:

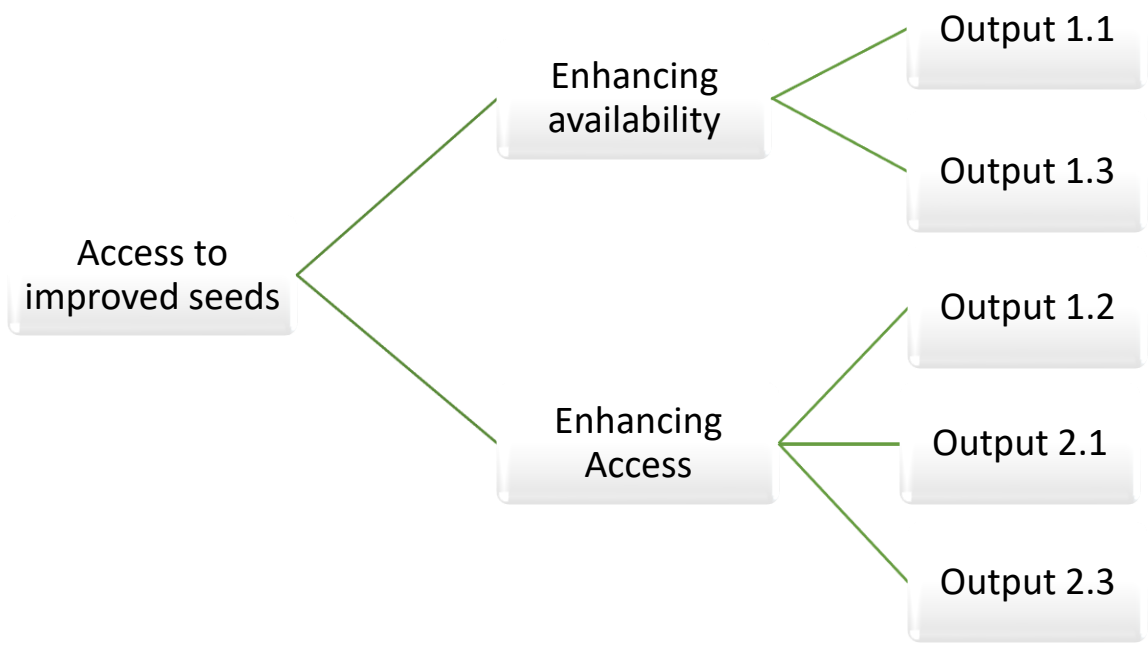
- The target beneficiaries were reduced from 12,000 to 6,000
- The proposed budget was reduced from USD 200,000 to USD 158,000
- Target activities were reduced from 52 proposed activities to 29 activities approved in the project budget
- Staffing reduced from 9 to 4 paid for by the project
- The number of Systemic Change Areas were increased for budgeting convenience

3. PROJECT RESULTS

3.1. SCA1: Intervention Area 1: Enhance Capacity of Private Companies, Farmer Seed Producer Groups and Public Research Institutions to Ensure Availability and Access of Improved Seed Varieties

Under this Systemic Change Area (SCA), the project aims at establishing commercial models through which smallholder women, men and youth farmers in Manyara region can reliably access and use quality bean seeds and in return improve the quality and quantity of their beans as per the market demands. During the project preparation, it had been established that farmers were generally experiencing declining yields and chronic diseases like bacterial wilt and anthracnose due to constant use of recycled bean seeds. It was estimated that only 7% of legume seeds is obtained from formal seed actors like agro-dealers, NGOs and governments (Scaling Seed Technologies – ICRISAT 2017)

The project interventions under the two SCA, at the inception phase were therefore bisectional and can be easily explained by the figure below.



As detailed in the figure above, the interventions aimed at the following outputs:

The project was implemented with the core aims of testing main 5 models with the market actors with the intention of to learning with the project stakeholders and be in the position to scale up the successful models in the following pilot phase. The below illustrations Fig sum ups pretty well the project implementation cycle during the inception phase.

Expected Output 1.1: TARI Selian & TARI Maruku increase their production & supply of foundation/breeder seeds for 4 marketable varieties
Expected Output 1.2: Meru Agro, Beula Seeds & Crop Bio Science Increase the volume and quality of common bean seeds sold to women, men and youth farmers
Expected Output 1.3: QDS Producers establish commercial seed production systems for bean seed varieties

Expected output 2.1: Vision Fund, SELF & SACCOS provide input financing to 3,000 smallholder women, youth & men bean farmers
Expected Output 2.2: Acre Africa sells crop insurance services to 3,000 smallholder women, men and youth farmers
Expected Output 2.3: Crop BioScience, Meru Agro & Beula Seeds raise awareness of 6,000 smallholder women, men and youth

During the project negotiations between SEIDA and AMDT, output 2.2 was withdrawn from the inception stage, leaving the project with five out of the six target outputs. Activities were also revised under each output resulting in the omission of some of the planned activities presented in the project proposal. Based on the five outputs, the achieved results of the inception phase are as summarized in the output table attached to this report as annex xx. However, the achievements under could be generally discussed by each market function

3.1.1. Increasing the production and supply of breeder/ foundation seeds by TARI Selian and TARI Makuru for the 4 Marketable varieties

This intervention sought to address the problem of availability quality seed for the four varieties that were on high demand by the off-takers. The four varieties were:

a. Soya Njano (Selian 13)
b. Soya Gololi
c. Lyamungo 90
d. Red kidney (kalima)

The two research institutes (TARI Uyole and TARI Maruku) that produced these varieties were seen to be producing these varieties were TARI Uyole and TARI Maruku. However, at the inception phase, only TARI Selian was engaged due to its proximity to the project area. Considering that TARIs are centrally managed, it would be easier for TARI Selian to liaise with the other TARIs in the implementation of the activities. The main objective of TARI Selian's involvement in the inception phase was to understand the demand patterns for basic seeds for the marketable varieties and the multiplication channels for the seed varieties so as to develop a demand forecast for the coming seasons for farmers in Manyara region. TARI Selian therefore implemented the following activities in the inception phase

Scanning and establishing the actual demand of seeds per bean variety: In the analysis conducted by TARI Selian, it was lastly established that to address a gap in availability and accessibility to improved common bean seeds and the short project duration it was feasible to invest into developing a cadre of QDS producers who are closer to smallholders farmers than the seed companies. The QDS farmers could, if developed demanded even more volumes since they have a direct marketing channel with the farmer organizations in their specific wards than the agro-inputs providers.

3.1.2. Preparation of business plan for production and supply of basic seeds to seed multipliers

The preparation of a business plan was planned to enable the research institute respond to the demand that they have established in the previous activity. At the inception phase, TARI Selian engaged in a fact-finding exercise in which it was involved in the QDS system to learn of the demand patterns. However, in the course of the implementation this activity was given to Meru-Agro which undertook the seeds promotion and marketing role as well as sales. This activity is discussed under the Meru-Agro below;

3.1.3. Signing of MoU for production and supply of basic seeds to seeds multipliers

An MoU was signed between TARI Selian and Crop Bio Science in which TARI – Selian committing Crop Bioscience to produce improved beans basic seeds varieties for scaling up adoption and multiplication of basic beans seed varieties. Because of this mandate, the project entrusted CBS to foresee management and distribution of the starter seeds for the QDS producers upon which a total of 5.04 tons of seeds were offered and supplied to the producers and the CBS management. A copy of the MoU is attached to this report as **annex 3.**

	DISTRICT	Seed Volumen(Kgs)	No. of Farmers	% Female
	Babati	2,268	06	50%
	Hanang'	420	04	25%
	Mbulu	445	05	0%
	Simanjiro	1,907	03	33%
	Total	5,040	18	28%

A detailed list of starter seeds distribution is attached to this report as **annex 4**

3.1.4. Preparation of business plan for seeds multiplication and supply

Meru Agro's delivery model of bulk supply of seeds to Farmer Organizations is a model that had not been tried amongst the farmers. The inception phase not only gave Meru Agro an opportunity to try the model but also to develop a business plan that would ensure sustainable relationship with the Farmer Organization. The business model outlines Meru Agro's response to demand and supply of common beans seeds in Manyara region. On the supply side, Meru Agro's long term plan is to have a local production of bean seeds in the region to reduce the

logistics cost compared to production in Mbeya where it has been producing bean seeds. Meru Agro's plan is therefore to strengthen its partnerships with the AMCOS in the region following the promotion on the use of the improved beans seeds by the "pulses for Inclusive Growth inception work.

In the established business plan, Meru Agro intends to partner with 19 farmer organizations with market infrastructures which can be used as storage and collection points of improved beans seeds spread in the 19 wards and in the three districts of Mbulu, Babati and Hanang respectively. The stablished demands as from the Meru-Agro findings during the development of their seeds road map for 3 years indicates that the project targeted outreach of 6000 smallholders translates into a minimum of 3,461 Ha which requires 315 Metric tons of seeds. This requirement is huge that with the company capacity it can not serve within the period of the forecast and therefore it will still complement the supplies from the initiated cadre of QDS farmers within the project areas without posing a threat in terms of market.

The cadre of QDS producers who got starter seeds for 2021/2022 season were 18, whose seeds demands was estimated to be 7,350 kgs, for the 210 acreages. However, the project supported only 5,040 kgs which can only suffice 144 acres, only 68.5% of the demands was met and this is expected to reduce the seeds deficit in the project area by 18.2% of the demands by the cadre of the identified producers. This it clearly shows that the cadre of QDS producers' market will continue to serve demands of their fellow AMCOS members in the region and without affecting the meru-agro business with the same target groups.

In terms of varieties, Meru Agro produces seven varieties of basic seeds from its two farms 20 ha in Moshi and 1000 ha at its Mbozi seed farm, Mbeya. However, the farms produce not only beans seeds as the company also produces seeds for maize, sunflower and beans. Seeds of interest for the project from the company are Uyole 03, Lyamungo 85, Lyamungo 90 and to a less extent Bolote (sugar beans); The company operates countrywide in the 3 zones of Southern highlands, Lake zone and Northern zone of the mainland Tanzania. As per the production and sales projection table below the company anticipates to meet the demands of the Manyara region by 25% per the seed's variety as per the table below: This is an extract from the established seeds road map business plan of Meru-agro.

Table 2: Meru-Agro beans seeds production V's sales target

Production and Sales Projections										
			Farm size (acres)		Seeds		Production		Sales Targets	
District	Beans Variety	Farmers	Average/ farmer	Total	Kgs/acre	Total (MT)	Kgs/acre	Total (MT)	% of total Sales est.	Sales (MT)
Simanjiro	Lyamungo 90	400	1.5	600	30	18	32	14.4	25%	3.6
	Lyamungo 85	133	1.5	200	30	6	32	14.4	25%	3.6
	Uyole 03/Selian 13	140	2	280	20	6	32	14.4	25%	3.6
	Sugar Bean	550	1	550	20	11	32	14.4	25%	3.6

Sub Total		**1,223**		**1,630**		**41**	**128**	**57.6**		**14.4**
Babati	Lyamungo 90	100	1.5	150	30	5	32	14.4	25%	3.6
	Lyamungo 85	200	0.5	100	20	2	32	14.4	25%	3.6
	Selian 13	90	0.5	45	18	1	32	14.4	25%	3.6
	Sugar Bean	320	1.5	480	16	8	32	14.4	25%	3.6
Sub Total		**710**		**775**		**15**	**128**	**57.6**		**14.4**
Mbulu	Lyamungo 90	800	2	1,600	30	48	32	14.4	25%	3.6
	Lyamungo 85	800	1	800	20	16	32	14.4	25%	3.6
	Selian 13	300	2	600	30	18	32	14.4	25%	3.6
	Sugar Bean	1,000	2	2,000	20	40	32	14.4	25%	3.6
Sub Total		**2,900**		**5,000**		**122**	**128**	**57.6**		**14.4**
Hanang	Lyamungo 90	800	1.5	1200	30	36	32	14.4	25%	3.6
	Lyamungo 85	1400	1.5	2100	20	42	32	14.4	25%	3.6
	Selian 13	400	1.5	600	30	18	32	14.4	25%	3.6
	Sugar Bean	1600	1	1600	20	32	32	14.4	25%	3.6
Sub Total		**4,200**		**5,500**		**128**	**128**	**57.6**		**14.4**
Total		**9,033**		**12,905**		**306**	**520**	**230.4**		**57.6**

In PIG's own assessment the volume of seeds to be produced by Meru Agro can only meet the seeds requirements in the project areas by 18.8%, though again as can be noted in the table above their production goes also to other areas of their coverages. See annex 5 the Meru-agro seeds roads map.

3.1.5. Establishment of bulk seed purchase system with AMCOS

Meru Agro designed a model for bulk supply of seeds and other inputs through AMCOS and district based agro-dealers. The model focus was to ensure availability of improved bean seeds by producing and supplying certified seeds of which the bulk supply enabled reduction of distribution and acquisition costs by Meru Agro and the farmers. The seeds distributed through the model included Lyamungo 90 and 85, Glory Njano, and Sugar Bean (Boloto). 3,168 of the initially profiled 14 SHF were sensitized about the MA bulk supply model through the AMCOS in the participating Groups. The Groups took the agency role of establishing the inputs needs from all their members and provides the list to the MA and the latter delivers the seeds to the group. In the arrangement, a commission is agreed with the group on the price discounts to allow members buys seeds at the market prices but the group gets a commission for operational functions of the activity. The commission collected by AMCOS in this arrangement is 1000 Tsh/2Kg of seeds sold. The early champions of the program include AMCOS and SACCOS from the following areas; HYDERER, BARGISH, MARETADU in Mbulu, and MDC Women in Haydom; SAYUNI in Hanang, ENDASAK SACCOS, and GALAPO in Babati.

Other than sensitization, Meru Agro has also invested in the establishement of demonstration plots for the seed varieties that they are promoting. 17 demonstration plots have been established in all the 4 project districts. The sites and lands were agreed upon by Meru Agro and the FO's and Village Governments. In matching with the planting season, Meru Agro provided inputs required for demos to the champion FO's, seeds, fertilisers as per the below table and the land preparations were done by the selected FO's. Meru Agro's teamed with

champion farmers and extension staff in some areas for GAP's as per the conditions of the demo's management.

The purpose of the demonstration plots was to stimulate an investment for promoting the use of improved seeds that are sold and marketed by the Meru Agro under bulk purchase by Farmer Organizations (FOs) or through agro-dealers channel. A total of 204 kgs of fertilizer and 119 kgs of beans seeds were supplied for planting of demo plots. Managing the demo plots and providing technical support to farmers is managed by the MA. A list of demo plots established in Manyara is annexed to this report as annex 5

Bean seeds were supplied at a price of 4,000 Tsh/Kg as a wholesale price and Agro dealers/ AMCOS sold at 5,000 Tsh/Kg. The extra 1,000 Tsh/Kg charged by AMCOS covered the operational costs for AMCOS. The seeds supplied by type and quantity are as follows

A. Lyamungo 85 – 2,300 kilograms
B. Selian 13 (Glory Njano) – 500 kilograms
C. Lyamungo 90 – 1900 kilograms
D. Sugar Bean (Boroto) – 3000 kilograms

Table 2: Beans seeds distribute through AMCOS and Agro-dealers:

Sn.	AMCOS	Quantity	Variety	Stock
1	MDC-HYDOM	140 KGs*	Lyamungo 85	Completed
2	HYDERERE	350 KGS	Lyamungo 85	Completed
3	SAYUNI	160 KGS	Lyamungo 85	Completed
4	ENDASAK	190 KGS	Lyamungo 85	Completed
5	GALAPO	400 KGS	Lyamungo 85	Completed
6	RIRODA	600 KGS	Lyamungo 85	Completed
6	MARETADU	460 KGS	Lyamungo 85	Completed
7	BAAMA	600 KGS	Lyamungo 90	Completed

3.1.6. Negotiations with Agro-dealers (2 in each district) to stock certified bean seeds

Other than the direct channel of supplying seeds to farmer organizations (AMCOS), Meru Agro also engaged agro-dealers to stock and sell their bean seeds varieties. Through this channel, Meru Agro managed to sale 1,300 kgs of improved beans seed in Manyara region alone.

Prior to selling any seeds through the agro-dealer channel Agro dealers were sensitized on beans business by Meru Agro in preparing them for business with AMCOS and FOs in the project area. Sensitization meetings were carried out in Hanang, Simanjiro, Babati and Mbulu districts

Agro dealers sensitized for beans seeds awareness and demand creation: Hanang" district -7 Agro-dealers Mbulu district- 12 Agro-dealers Babati district- 17 Agro dealers Simanjiro district- 5 Agro-dealers

For the inception phase, the following volume of seeds was sold through the agro-dealers channel:

Table xx: Agro dealers' outlets for Quality Beans Seeds

Sn.	Agro dealer	Quantity	Variety	Stock
1	MAMBA RAFIK FIDE	500 KGs*	Lyamungo 90	Completed
2	MKULIMA AGROVERT-KATESH	200 KGS*	Lyamungo 90	Completed
3	BAYDA AGROVERT	600 KGS*	Lyamungo 90	Completed

*Beans sold at 4000 Tsh/Kg as whole sale and Agro dealers/AMCOS sold at 5,000Tsh/Kg

3.1.7. Identifying 15 smallholder youth and women SMES (5 in each district) to be engaged as commercial QDS producers

The project's promotion of QDS for bean seeds was motivated by the fact that lower costs of production gives the farmers an advantage to offer more competitive prices for the quality declared seeds. Furthermore, there is an estimated 40% of farmers who cannot be reached by the seed traders' network. The objective of introducing QDS production was to come up with a commercial QDS production where a few farmers could act as satellite producers in strategic areas that could not be reached by the formal seed systems due to lack of commercial incentives. In the inception phase, the project engaged in identifying a few farmers who have been trained and certified by the seed's agency TOSCI to produce and sale seeds at their areas for smallholders. The followings were some of the criterion used to identify the candidates;

- ✓ Track record in the production of common beans (seed beans was an added advantage)
- ✓ Availability of land for own production
- ✓ Geographical location i.e. proximity to a potential AMCOS and lesser risks and pest pressure
- ✓ Being closer to the road and access to extension services.

A total of 18 farmers were selected for the commercial seed production and their training is discussed below;

Table 3: Attendees for the QDS training

3.1.8. Training 15 smallholder women and youth SMEs on QDS production agronomy

The training of smallholder farmers was a multi-stakeholder initiative in which Crop Bio Science partnered with TARI – Selian and TOSCI in not just training the farmers but ensuring that the farmers are certified QDS producers. It therefore involved demonstrations and on-farm agronomic oversight to ensure that the farmers had "hands on" skills to produce QDS. Through the trainings the following were achieved:

- ✓ 23 QDS beans producers from (Babati TC, Babati DC, Mbulu TC, Mbulu DC, Hanang and Simanjiro) were accredited to produce Quality Declared Seeds. These producers have been issued with certificates as recognition for them to produce QDS. Crop Bioscience has continued to monitor these producers during the NCE period up to the time of harvesting in end of March
- ✓ 5040 kgs of starter seeds were distributed to QDS producers in Babati TC, Babati DC, Hanang, Mbulu and Simanjiro. Beans growing season in Simanjiro started at the end of this month, the three QDS producers from the district are expected to plant their crop in this February.
- ✓ GPS mapping of all 23 QDS producers was done and completed by Crop Bioscience as planned, QDS producers now know the actual size of their plots as well as their boundaries.
- ✓ 20 QDS fields that were planted have continued to be supervised by officials from TOSCI.
- ✓ 20 QDS producers have received field agronomic skills and continue to receive backstopping for beans seeds production from CBS and extension officers in respective districts.
- ✓ About 210 acres have been planted to produce improved beans seeds for the coming season

- ✓ CBS technical team together with local extension staff from respective district councils participated in supervising QDS producer's fields during planting and continue to do so until producers harvest their crop at the end of March
- ✓ Soil Sample Tests were conducted to all 23 QDS producers and the soil results have shown a need for improving soil fertility through manures to boost production

3.2. Systemic Change Area: Enhance farmers capacities to access and utilize GAP.

The project objective under this intervention area was to improve smallholder women, men and youth farmers' agronomic practices in order to maximize their yields. This was to be achieved through field demonstrations and commercial linkages to inputs and agronomic service providers. The project specifically through Meru-agro and Crop bioscience promoted extension services that induces maximum productivity in using business like farming practices; this was demonstrated through demos and at Dareda mechanization centre by the Crop bioscience, where maximum tillage, seeds planting through mechanization to attain required plant population, soil sampling and testing as well as in promotion of use of improved seeds and support inputs.

3.2.1. Prepare and disseminate to farmers guides leaflets on GAP, conservation farming, soil testing and Post-Harvest handling techniques

Crop Bioscience and Meru Agro jointly provided and disseminated adequately the elementary basic information on Good Agricultural Practices (GAP) required by farmers for producing basic seeds (Basic seeds production inputs) both at the Dareda mechanization centre by CBS and Meru-Agro during AMCOS annual general meetings (AGM) at HYDERER, BARGISH, MARETADU, and MDC. This information was aimed to enable farmers to understand the dos and dont's for attaining maximum productivity from their production and hence adopt practices of farming with business practices in mind.

The information disseminated include:

- ✓ Pre Plough spray chemical and spraying
- ✓ Ploughing, harrowing and planting
- ✓ Basal Fertilizer
- ✓ Pre emergence spray chemical and spraying
- ✓ 1st Top Dressing Fertilizers
- ✓ Early post emergence herbicide and spraying
- ✓ Insecticides
- ✓ Late post emergence herbicide and spraying labor
- ✓ Detasseling costs
- ✓ Field Inspection fees
- ✓ Harvesting
- ✓ Cob selection
- ✓ Shelling
- ✓ Transportation from field to warehouse
- ✓ Loading, offloading and staking costs
- ✓ Cleaning, grading and hand sorting

- ✓ Seed Dressing inputs (Turbo seeds, Vetazyme and Seed Care, Seed pigment)
- ✓ 1Storage and seed handling

3.2.2. Identify and train youths 12 SMEs on GAP, conservation farming, soil testing, crop quality and safety, mechanization for beans and guide them in provision of the services to farmers

The activity aimed at providing simple solutions to farmers while at the same time providing employment. The target youth groups were to be trained on a range of services that were required by the farmers in their villages. Crop Bio Science provides different solutions including hired tractors, soil health fertility management and testing, farm GPS mappings and other technologies. CBS identified 12 youth groups that it would train in offering a catalogue of these solutions that would in a way provide economies of scale to the company as well as providing revenues streams to unemployed youths.

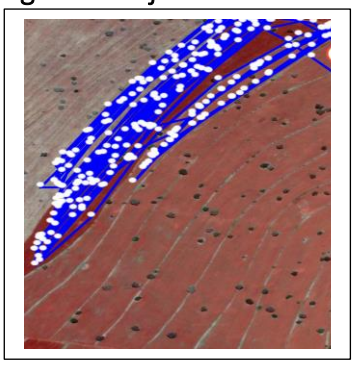
Two attempts were made to conduct the activity without getting a good turnout, from the initially profiled youths. It was established that the targeted youths had reallocated for other green pastures out of their wards and districts. However, due to the importance of the activity in the inception phase as well as to the market actor the activity was finally conducted towards the end of the NCE window for only 5 youths as per below bullets;

- 5 youths trained in GPS mapping, soil suppling and labeling, tractor mechanization scheduling and booking
- Training took place in Simanjiro on 29-30th March 2022 at Matayo Lonyoke beans farm
- CBS technical team together with local farmers Simanjiro district councils participated in field training

Table 1. Trained youth (see *photo 1*)

Farmer Name	District
Erick Eldephonse	Simanjro
Emanuel Philipo	Babati
John Qarry	Hanang
Ponsian Rwezaula	Babati
Viviano Mweta	Babati

Photo 1. Youth GPS farm mapping Training in Simanjiro



3.3. Systemic Change Area: Enhance access and availability of financial services to producers inclusive of women and youths

The aim of linking farmers to financial services was to enable them access their factors of production especially inputs and therefore improve on their production of common beans. Generally, it was noted that financial institutions are shy of engaging farmers especially common beans farmers since there isn't enough information about their production and marketing practices. The project aimed at not only linking the financial instutions with the AMCOS but also ensuring a quicker access for the Financial Insitutions to the KYC information for farmers and make quicker decisions on developing appropriate loan products for beans farmers. This intervention was led by Masenga Polytechnic which was tasked with offering Business Development services to the farmer organizations. Masenga therefore reached out to SELF-MICROFINANCE and Vision Fund Tanzania based on their involvements in working with smallholders in the region.

3.3.1. Negotiations with Vision Fund & SELF to establish financing of smallholder bean farmers through the AMCOS

In the inception phase a meeting was organized between financial service providers and AMCOS. The meeting brought together participants from Simanjiro, Mbulu, Hanang' and Babati Districts. Financial service providers including Vision Fund and SELF MICROFINANCE discussed with representatives of farmers from the 16 AMCOS about their available loan products to farmers for financing agricultural activities. After this linkage meeting AMCOS leaders took the information back to their members for sharing and discussion. It will be the decision of members to take loans depending on their demand.

The financial institutes explained to representatives the available options for them to access credit to facilitate agricultural investments. Each financial institution presented its products and available possibilities to work with the farmers. What they insisted was the ability of the borrower to recover the loan provided given other aspects remained constant. Another aspect to consider was the economic benefits the loan will bring to the business and the community. SELF MICROFINANCE agreed to provide the operating capital to the AMCOS and SACCOS for beans collection. The interest rate to farmers organization (FO) is 8.4 % per year. Meanwhile, Vision Fund offer loan to individual farmer for 4 % interest rate per month. They were given bronchus for them to take to their board for discussions and consult FI's for loan acquisition. A total of 40 participants 31 male and 9 females attended the meeting.

Table 6: Participants in meeting with financial institutes

Participants	Female	Male	Total
Mbulu	3	7	10
Babati	3	20	23
Hanang'	3	2	5

Simanjiro	0	2	2
Total	**9**	**31**	**40**

Outcome of this activity:

1. AMCOS were supplied with relevant information for their members about available loan products from financial institutions that they can use for making decision on whether to borrow or not.

3.3.2. Support setting up farmer financing mechanisms through AMCOS

Beyond sensitization of the farmers on the available products, the project expects that the relationship created with the financial institutions could be used to further tailor financial products that will be more suitable to the farmers and in their special groupings e.g. products targeting women and youth farmers

3.3.3. Design/customization of financial products to be offered to smallholder women, men and youth farmers

A special focus was given to women and youth farmers who are most of the time disadvantaged when it comes to accessing financial products, due to the fact that they do not own property like land that could be used for collateralizing financial products. In the explanation of the financial institutions, product design takes time and could not be possible within the time of the inception phase. However, due to the KYC given and linkage with the FOs, they will now consider developing customized products for youth and women in the project target areas

3.4. Systemic Change Area: Facilitate farmer organizations to improve collective action for accessing markets

Manyara region is one of the regions where cooperatives are very well developed. Most of them own assets including storage warehouses and even parcels of land which are used by the members to conduct their agricultural businesses. Considering the farming practices in Manyara, the members of the AMCOS engage in different crops, some of which are marketed through the AMCOS. In some districts like Mbulu, some marketing cooperatives have developed to form their own Savings and Credit Cooperative Societies (SACCOS) which offer financial services to the members

Given the project short window and after exit of RIVACU the profiling and enrollment of Farmer organizations was given to the BDS provider Masenga; It is important to say that the recruitment of farmers was not done at a single quarter and therefore FO's joined at different and varied paces which also affected kind of messages and information that was disseminated to them. Up to the period of NCE some FO's joined depending with various activities which were being implemented by different implementing partners or through word of mouth from

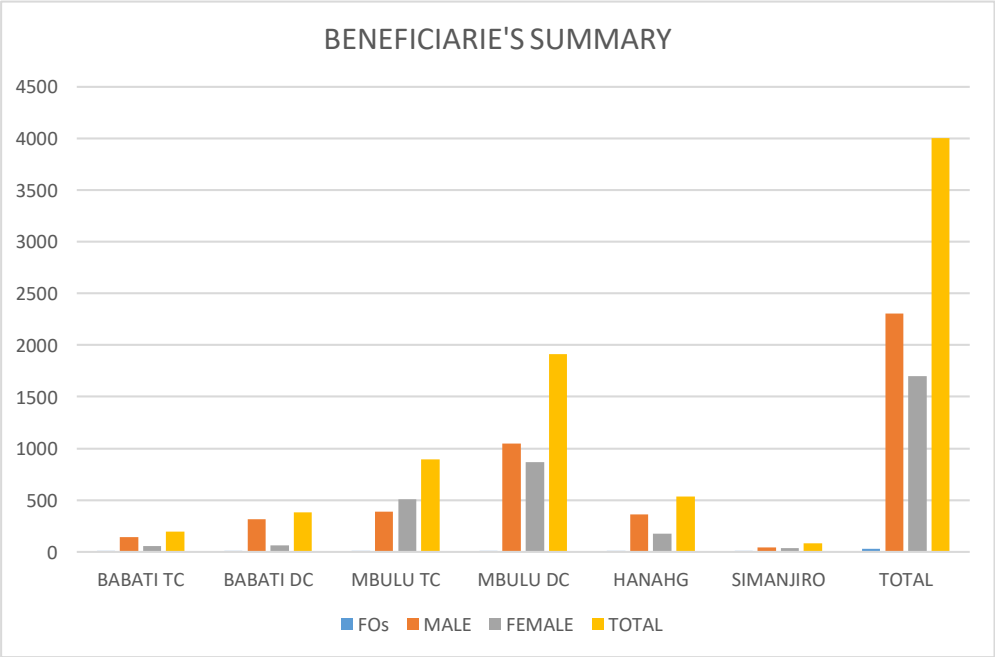
their peers in other places. But as it can be noted in the below beneficiaries table, up to the end the number of beneficiaries enrolled was 4,004. In terms of beneficiaries composition, women were 42%, male 58%, while the districts participation Mbulu had 45% ,Babati 24% Hanang 17 and finally Simanjiro 13%

During the project period efforts of collective actions was not well tackled, due to the fact that the collective actions are functions of institutional development and strengthening as well as business like behaviors. The BDS partner acted as information provider only at least during the inception and this was clearly noted when the activities for off-takes linkages was taken at different AMCOS. The enrolled organizations together with the fact that they all had legal registration but they have shown weak organizations development on areas of business records, lack of strategic and management plans, poor financial records, lack of authentic members records on farm sizes, productivity, ages etc. The gaps noted contributed to some extent ability of SHF's to seize opportunities presented during the inception for example from the off-takes where up to the end together with the firm demands that came from serious local and regional markets, they preferred trust than written MoU's for uncertainty of failures on their part to meet terms and conditions but also on expectations to remain free to sale to whoever comes during the season.

Because of the above, the model on collective marketing for off-takes have not been well achieved and hence in case of next stage of pilot it will undergo improvements by investing on institutional strengthening of farmer organizations to exhibit most of the business attitudes but also working with off-takes who are willing to provide multiple products as part of strengthening their ties with the SHF's and build confidence to them. This is possible by provision of inputs such as seeds, fertilizer, pesticides as part of contract farming which finally is either deducted during the sales of produces or through financial institutions input finances against the off-takes contracts as the collateral.

BENEFICIARIE'S SUMMARY

Discription	FOs	MALE	FEMALE	TOTAL
BABATI TC	3	144	53	197
BABATI DC	4	318	64	382
MBULU TC	8	388	507	895
MBULU DC	5	1047	868	1915
HANAHG	5	360	174	534
SIMANJIRO	4	46	35	81
TOTAL	**29**	**2303**	**1701**	**4004**



The project objective under this intervention area were to equip the farmer organizations with input and out puts market information's and advocacy that would have increased their collective actions and in turn support them in confronting challenges of markets and inputs access and availability for their members. As above explained the only area where collective actions have been exhibited is on access to seeds, while on part of output markets have not been well recognized for the given information but also due to early exit before the complete farming cycle.

3.4.1. Design and establish collective bean market access through AMCOS

This activity was led by Masenga Polytechnic. Amongst other things, Masenga introduced a digital platform through which the AMCOS and their members could be reached by different services and which could be used by the AMCOS for collective marketing. The digitized Farmers' platform will accelerate interactions between people/farmers' groups and other users by leveraging network effects.

In collaboration with YARA Masenga conducted promotion and demonstration of the APP in Babati Town to 16 AMCOS, the APP will be useful to SHFs, buyers, consulting firms, seed suppliers and extension service providers. The APP is meant to solve many challenges faced by stakeholders in accessing beans related extension service information and reduce the costs associated with obtaining this type of information. A total of 40 participants 9 female and 31 Male attended the launching. The following is an App ***link: tamip.masengaindustries.com***. The registered customers in this APP are individual farmers, farmers' organization (AMCOS, SACCOS, Groups, and processors), Input suppliers, local aggregators and beans buyers as well.

Table 5: Participants in business inputs outputs model linkage.

Participants	Female	Male	Total
Mbulu	3	7	10
Babati	3	20	23
Hanang'	3	2	5
Simanjiro	0	2	2
Total	**9**	**31**	**40**

Their particulars were obtained after completing the exercise of SHFs profiling in the Action Areas.

The website accommodates all necessary information that is required by all actors along the value chain. These are farmers' names, location, acreages cultivated, crop varieties, quantity produced, Inputs like seeds available, fertilizers, pesticides, infrastructures, storage facilities, value addition practiced and buying posts on the side of demand. An App display the list of off-takers available, quantity and volumes of beans grains demanded, the standards of beans demanded by the buyers, terms offered from the buyers including the buying prices, post-harvest technologies available and their prices.

3.4.2. Identify and guide negotiations leading to contractual agreements between AMCOS been off-takers

Access to the reliable beans market by the SHFs is a major concern. The process involves taking purchase order of the bean variety, volumes and demands of buyers throughout the beans

farming cycles. Masenga facilitated the linkages meetings which involved FOs in 16 AMCOS and 5 identified buyers. Masenga explained to participants about the requirements and specifications detailed in the terms and conditions of would be the linkages with the markets for production, collections, timeframes , volumes and other parameters of standards, qualitiesand sell beans together to make sure the agreed volumes, standards, qualities and moisture content are met before sale The next step involved making the FO's Boards and the buyers to meet and agree on the business terms. These separate meetings were conducted in Mbulu, Babati, Hanang' district at different times during the implementation phase: The emerged experience is that the AMCOS boards are quite hesitant in entering into any paper binding them to the off-takes, despite the fact that the BDS provider had done a thorough checks on the introduced off-takes which in away reduced risks to the smallholders. On the side of the buyer, Masenga did a due diligent to find out the potential buyers prior-linking them with the SHFs. This helped to make sure the identified buyers have the potential markets, see if the buyer will honor the agreed terms and conditions for beans business, reduce a risk to farmers and associated transaction costs that will benefit the SHFs. The Masenga facilitated linkages and a total of 6 provisional off-takes are hereunder provided: (Attachment of provisional MoU's).

Table 8: List of firm off-takes for the common beans established

sn	Off- taker	Location	Quantity& type	Contact.
1.	Silverland Co. Ltd	Arusha	2,000 tones (Rose coco, Red-kidney)	0754483456 ekko@silverland.co.tz
2	Vegrab Co Ltd	Dar Es salaam	5,000 tonnes (Rose coco)	manager@vegrab.co.tz
3.	Musoma Food Co. Ltd.	Shinyanga	1800 tones	0767110310
4	Maharishi Agro-Processing Ltd	Mikese - Morogoro	3,000 tones	0684031101
5	Pearl fresh Ltd (Bajwa Investment)	Babati,Manyara	30,000 tonnes of Rose coco, Sugar beans and Red-kidney)	0682222322
6	Alexander Massay	Box 151, MBULU, MANYARA	5,000 tons of Glory Njano, Soya Njano)	0762520498/ 0789360212

3.4.3. Sensitize producers on accessing collective bean market linkages through the AMCOS

This activity was combined with activity 3.4 above. Farmers were sensitized on the market potential and how to access markets and market information through the website and application that was launched by the key project stakeholders.

3.4.4. Guide RIVACU and AMCOS on identification of key issues that needs to be addressed at policy levels

Massenga conducted a consultative meeting with AMCOS together with other stakeholders in Manyara Region with a number of objectives in mind. Among these were to identify issues that hinder markets developments for the smallholder farmers. are the need to protect the wellbeing and livelihoods of smallholder's farmers well as the sustainability of businesses and the improved business relations. The documented 3 cases were geared towards the achievement of these generic objectives in the LGA's bylaws reform it proposes. In addition, the objective for consulting farmers were to propose reforms to improve Business Environment in the Region to reduce the regulatory burdens and risks faced by businesses in complying with regulations. However, the recommendations provided by the farmers were:

The bylaws to be reviewed to reduce the regulatory burden to businesses by

A- Adopting and implementing mechanisms that will promote and ensure an efficient regulatory policy.

B- This will guarantee that the gains arising out of the reforms are not eroded by the introduction of counterproductive legislations, whether communal or gazetted;

C- Promoting legislations which are people development centered and promote business like farming and markets.

3.4.5. Raising of 3 key case studies on policy reforms to be shared with other stakeholders

The three cases were raised by the farmers as discussed in section 3.4 above. Consultations with AMCOS' and Village governments/ LGAs. Masenga consulted representatives from 14 AMCOS and QDS producers' functions and other stakeholders in the region. See annex 6:

3.5. Systemic Change Area: Improved Value Addition Capacities along the Value Chain

Value addition is considered as one of the key ways to stimulate demand by giving the consumer different options for even a better product. It is considered a good solution for farmers who cannot compete in the mass markets due to smaller volumes of production. Value addition was also considered another avenue for more engagement for women SME's and youth to provide them with different options in beans products as opposed to only one use of beans at household level.This area has been addressed in the section 3.5.2 below.

3.5.1. Conduct rapid market analysis to determine market share, size and available technologies on value addition for common beans

From the implementing partners assessment and the market facilitator, the activity was found not relevant as the outcome of such study could have not in any way assisted neither provided

incentives to the market actor nor the project target group. Determination of market share of a value addition technology can only be done at the request of the technology provider. Based on this the project agreed through a joint stakeholder's review meeting the activity done to find out appropriate and available value addition technologies for the common beans that can be promoted to the smallholders particularly women SMEs. Because of this fact, the activity was combined and discussed in the following section.

3.5.2. Identify and build capacity of 10 women and 10 youth entrepreneurs on common beans value addition using available technologies

The activity involved profiling the farmer organizations that were enrolled in the project to identify which ones were best placed to receive trainings on value addition technologies on common beans. Masenga Polytechnic used a mix of different critera to come up with a list of 10 women and 10 youth groups to be engaged in the capacity building activities. The criteria used included the following:

- ✓ Gender and age – the training was meant for women and youth as target beneficiaries
- ✓ Geographical distribution: - the selected groups were balanced amongst the three districts where the project was being implemented
- ✓ Proximity to a target consumer base: - the selected groups showed a market potential that they could tap into
- ✓ Commercial orientation: - the strength of the FOs on doing business and previous business engagements were of added value

3.5.3. Build capacity of identified 10 women and 10 youth on branding, marketing, financial management and contractual arrangement with food vendors and FPGs

A capacity building event was organized by Masenga Polytechnic in partnership with TARI Selian as technical partners. Members of the selected groups were trained by TARI SELIAN on the appropriate VA technologies for semi-cooked beans and the economic impacts that would be achieved if the value addition would be practiced by the VA groups. TARI SELIAN promoted to participants about available technologies for beans processing and value addition. Practical testing of the technologies was conducted and each participant got the opportunity to self-demonstrate on the use of skills and knowledges and used 45 minutes to complete self-practical learning using the value addition equipment demonstrated by TARI SELIAN

Figure 1: Women SME's VA training

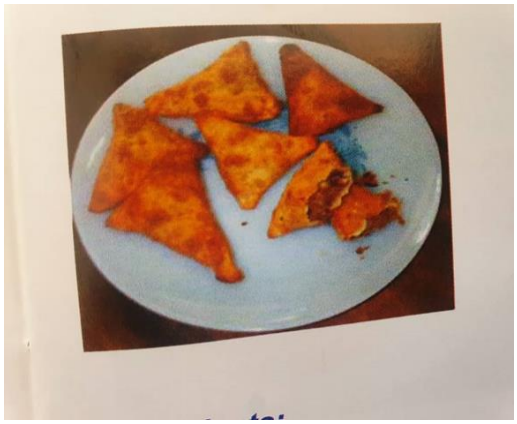


Table 4: beans sambusa made during a training

during training. Some of the technologies that the groups were trained on includes various beans dishes making, beans sambusa, beans rolls, bean snacks, beans porridge, beans soup, beans machalari, beans leaves vegs and beans sauce.

A total of 15 participants attended the training in Babati. The training provided to VA groups has brought a huge exposure to them on the possibility of expanding their value-added beans products to meet the market demand. The lessons learnt will be transferred to their respective groups. Value Addition groups were Madima group, Upendo group, and Enyuata group. Unfortunately, Sinyati group from Simanjiro failed to send participants due to other overriding commitments. Masenga agreed to assist the VA groups in provisional of business plans for procuring the simple VA equipment

The technical training needed to be complemented with entrepreneurial trainings so that the groups could commercially apply the value addition knowledge that they had acquired. The agreed to invest in VA technologies and access financial institutions to seek funding whenever required. However, the project anticipates to follow up with this activity during the scaling up window through entrepreneurship trainings if the opportunity is provided.

Figure 2: Practical training session on VA for women SME's

Table 7: Participants in the value addition training

Participants	Female	Male	Total
Mbulu	04	01	05
Babati	06	02	08
Hanang'	00	00	00
Simanjiro	02	00	02
Total	**12**	**03**	**15**

Outcome of this activity:

1. Women who received training of trainers will be resource persons to their communities for disseminating information on value addition.
2. Increase use of Value Addition technologies by women and youth entrepreneurs in their groups.

3.6. Systemic Change Area: Establish institutional arrangements that can address common challenges along the bean value chain in Manyara region

This systemic change area is similar to the systemic change area number xx in this report. However, there are different dynamics of institutional arrangements and capacities and the two systemic change areas speak of them differently. In this particular systemic change area, the arrangements speak to the ability of the Farmer Organizations to communicate with each other, learn from each other and even have a common ground on some of the issues that affect them similarly. It is more about the capacity for peer learning

The activities for this systemic change area were planned for execution by RIVACU. However, when the proposal was revised this activity was amongst the areas that were reduced and hence it was not implemented. The facilitator feels this activity is still relevant and will be followed up in the scaling up phase.

3.6.1. Sensitization and subscription of farmers on the We-Farm platform

We-Farm runs a free subscription mobile platform where farmers have access to and subscribe. This allows peer to peer learning on the specific crops, share lessons, challenges and at the same time able to solve the operational problems in their fields and markets. Masenga Polytechnic promoted the we-farm platform to all the farmer organizations and demonstrated how they can join and utilize the facility. The follow ups made to the AMCOS have established that secretaries of the 6 AMCOS have utilized the opportunity and prescribed into the We-farm platform with their peers particularly on issues of pest's managements, and markets.

3.6.2. Designing of the bean platform to include experts from the research institutions

As already reported in the above sections, Masenga Polytechnic has developed a web portal with close participation of all the key stakeholders in the project, the portal introduces the

stakeholder's products to the broader stakeholders beyond the scopes of the region that offer market information required by the other partners and stakeholders. However, under this activity, the knowledge platform targets a wider pool of experts and researchers who can learn from each other. At the end of the inception phase, Masenga has only made provisions for key stakeholders' information and products, from Financial Institutions, Research, Off-takes,input providers and agro-dealers, AMCOS and FO's who participated in the project. But this is an information portal and it is open for other stakeholders to use it in accessing as well the market actor services against a fee. It is an initiative that the project anticipates to strengthen and use the feedback that is being gathered during this period it is running under trial basis for the next phase.

4.0.1 Summary of Financial Expenditures against Budget.

SEIDA
Pulses Inclusive Growth (PIG)
Mar-21
US$

Market System/Management Costs	Jan - Mar 2021	Apr - June 2021	July - Sept 2021	Oct - Dec 2021	Jan - Mar 2022	Total Expenditure	Total Budget	Variance	Variance in %age	Explanation for Variance
Access to Seed	-	-	7,510.21	9,902.86	2,418.84	19,831.91	30,360.00	10,528.09	34.68%	The partner has pre-financed implementation of activities as per the agreed W/Plan but has not yet submitted financial supporting documents as required.
Post-Harvest Handling	-	-	1,645.66	4,392.09	6,627.12	12,664.87	12,600.00	(64.87)	-0.51%	
Access to Finance	-	-	-	1,275.45	5,780.26	7,055.71	7,100.00	44.29	0.62%	
Beans Market Access	-	-	4,360.00	3,338.87	2,035.56	9,734.43	9,790.00	55.57	0.57%	
Business Development Services	-	-	-	706.52	9,264.48	9,971.00	10,000.00	29.00	0.29%	
Value Addition	-	-	-	7,586.87	11,409.84	18,996.71	19,000.00	3.29	0.02%	
Stakeholders Platform	-	-	-	169.57	7,205.66	7,375.23	7,200.00	(175.23)	-2.43%	
Human Resources	-	-	8,267.64	10,543.80	6,669.36	25,480.80	26,897.60	1,416.80	5.27%	
Project Monitoring Costs	-	-	3,228.26	3,353.74	3,705.39	10,287.39	13,440.00	3,152.61	23.46%	
Office Administration	-	-	1,174.00	-	826.00	2,000.00	2,000.00	-	0.00%	
Capital Expenditure	-	-	5,336.96	-	356.52	5,693.48	6,200.00	506.52	8.17%	
Overhead	-	-	2,732.46	4,224.77	6,171.62	13,128.86	14,407.50	1,278.64	8.87%	
Total Expenditure	-	-	**34,255.19**	**45,494.54**	**62,470.66**	**142,220.38**	**158,995.10**	**16,774.72**	**10.55%**	

PREPARED BY: ERICK RWEHUMBIZA

APROVED BY : FREDRICK OGENGA

5.0. CONCLUSION

As the project comes to the end of the inception phase, the PIG project team is very confident that the project, to a large extent, has met the objectives. The project has not only had a proof of testing the conceived business models, concept and lessons drawn as a traditional objective of a project inception phase, but also had some tangible achievements within a very short turnaround. It can therefore be concluded that:

5.1. The Project has met its objectives

1. Enhance capacity of private companies, farmer seed producer groups and public research institutions to ensure availability and access of improved seed varieties for smallholder women, men and youth farmers in Manyara region: - the inception phase has demonstrated that bean seed can be made commercially available against the traditional belief that it can only be recycled. Breeder seeds have been availed, commercial seed companies have engaged in seed multiplication and distribution and QDS farmers now have the right knowledge to produce quality seeds that can be sold to their fellow farmers and groups.

2. Facilitate smallholder women, men and youth farmers' adoption of improved common bean seeds and Good Agricultural Practices in Manyara region: - Farmers have not only been trained on GAPs but also equipped with the necessary technologies to enable them adopt the GAPs. These include services like soil testing and introduction of value addition technologies to enable them add value and sell a variety of products. It is important to emphasize that this particular intervention is an incentive to both the Market Actors CBS and Meru-Agro whose services is growing day and day within and beyond the region, utilising youths and women in the mechanizations services while employs the youths but also provide revenues to the MA while doing other activities. Through the Demos established where the GAP were promoted it is evident that adoption of use of improved seeds broadens markets for the Meru-Agro as the time goes by.

3. Facilitated and demonstrated business models to the key market actors that began creating revenues during their very trials, this is true with bulk supply of seeds through AMCOS, BDS digital extension services through stakeholders portal, where non stakeholders have shown interest to partner with the MA in implementing the Tanzania Agricultural markets Intelligence Portal (TAMIP), Mechanization bundled extension services under CBS is growing beyond Manyara region and the demands is showing opportunity for the partner to invest in staff and scale to meet the increasing demands, it is therefore evident that PIG has laid feasible beacons for the next scaling up in many different fronts.

4. Facilitation of financial linkages for inputs and output markets; together with the short period and linkages on financial and off-takes towards end of the NCE, the SELF-MICROFINANCE bank did submit to the stakeholder's banks decision to open a branch at Babati, Manyara to better serve the growing banks products from AMCOS and SACCOS.
5. Established cadre of QDS producers is a breakthrough worth proud of by the project, together with the fact that the project is closing before actual sales of the seeds is made by the producers, but the demand created through use of improved bean seeds confirm that the market is bigger than the supply and therefore the producers are sitting on the white gold.
6. Finally, PIG has restored confidence of regional and local authorities in a manner in which the private sector and development stakeholders can implement development project which address the blue prints of the Government and its development partners.

6.2. The project has presented a proof of concept

The proof of concept is better-illustrated in the theory of change presented in the introduction. The inception phase has illustrated the desired change process and demonstrated the causal relationships from the activities to the desired impact. If improved bean varieties are commercially available and farmers access them in a cost and time-effective manner, if there is a reliable market and farmers improve on their collective action, then farmers' increased sales and market opportunities will lead to increased incomes and market opportunities for the productive poor.

6.3. The project has drawn key lessons for progression

Lessons have already been drawn from the operational side of the project and key issues that have affected the project implementation have already been discussed in chapter 2 of this report. However, there are lessons that are related to the business models testing results achieved, hereby referred to as lessons for progression. They can be discussed by asking the following questions:

Why are farmers now willing to demand, asks and purchase improved common bean seeds while the practice before was recycling?

The appetite for purchased seeds for farmers has been catalyzed by introduction and promotion of various avenues for access and availability of the same through their FO's and Agro-inputs. The farmers knowledge on the markets and productivity has been complemented by the availability of seeds for marketable varieties which were not present in the past.

Why have the agro-dealers now accepted to stock and sell bean seeds?

During the project design, only one agro-dealer (Msuya Agrovet in Mbulu District) was stocking common beans seeds and even then the volume was hardly 50Kgs. Now there are more than

Seven (7) agro-dealers stocking common beans seeds. The sudden change in business has been motivated by the demand from farmers as per question 1 above.

Why are Off-takers now interested in working with farmers in Manyara?

Interviews with off-takers before the project depicted farmers in Manyara as unable to supply the market desired volumes and at the specified times and hence they were mainly preferring agents for collections from the farmers. Even though up to the time of reporting farmers have shown reluctance in entering into official MoU's, but the markets confidence in partnership with the AMCOS and SFO's has grown remarkably. Up to now 6 large off-takes have placed demands of 46,800 tons of common beans up to July,2022; this includes 1 off-takes with 30,000 tones for exports (Pakistan) market.

Why is Meru Agro opting to sell seeds through AMCOS and not agro-dealers?

The AMCOS present a very big market for Meru Agro in terms of both inputs' seeds, pesticides and chemicals and in cash or under banks inputs financing. This is only possible with the AMCOS and SACCOS, but above all the stocks gets finished as soon as the delivery is made at the SHF organization. However, initially Meru Agro was adamant in dealing with the AMCOS before, due to the high financial risks that exist in the AMCOS. However, the project has demonstrated to Meru Agro the controls that can be put in place when dealing with smallholder farmers

6.4. The project has achieved tangible results

Tangible results have been achieved in the inception phase against the expectation of many. Tangibe results can be seen in the performance measurement framework, project database annex 7 table of the M & E documents.

7. RECOMMENDATIONS

As the inception project comes to a close, SEIDA is optimistic that lessons learnt from the project can be used to design a very productive pilot phase that will achieve even greater benefits to the smallholder beans and pulses farmers at large. Recommendations are therefore made to AMDT for a consideration of a pilot phase. The following are the recommendations:

5.1. Recommendations for a Pilot Phase

SEIDA is very optimistic that with the achievements made in the inception phase despite the logistical challenges, the pilot phase still stands a chance to benefit the productive poor even much more. The following are therefore recommended for the pilot phase:

5.1.1. Scale Up Successful Intervention

The following interventions are recommended for scale up

- ✓ Recruitment and training of QDS farmers
- ✓ Engagement of more agro-inputs providers and AMCOS in the bulk seed procurements systems
- ✓ Capacity building of AMCOS on organizational development
- ✓ Mechanization Bundled extension for women and youth
- ✓ Sensitization of Farmer Organizations on Bean Value Addition
- ✓ Business Development extension services through digital portal
- ✓ Input and output finance through AMCOS

5.1.2. Introduction of Complementary Activities

- ✓ Introduction of financial products for the farmers in common beans
- ✓ Introduction of commercial soil testing services
- ✓ Introduction of market information system for common beans farmers in Manyara
- ✓ Introduction of youth extension and logistics services in the villages
- ✓ Promotion of climate smart agriculture, soil conservation, zero tillage etc

7.2. Recommendations for a Bridging Phase, prior to the Pilot Phase

SEIDA recommends that the activities that were financed and were underway by the end of the project be financed to allow their conclusion within 2-3 months. The list of activities that should be included in the bridging window includes;

- Post harvests losss-management activities for common beans
- Follow ups on the activities implemented close to the end of the NCE, Youth and women VA, Mechanization extension services .
- Collective marketing and sales to the off-takes who have shown demands
- Supporting M&E functions of the MF including getting right information on farm sizes, ages etc which are important but have proved extremely difficult to extract due to lack of clear records at the SHF's
- Support AMCOS with output markets finance on QDS seeds produced for next season.
- Support administrative and overheads of the MF during the bridging window

7.2.1. Post harvests loss-management activities for common beans

The changes in climatic conditions has contributed to late plantings and this has caused delays in harvests of beans in the 3 Districts of the project, Babati, Mbulu and Hanang, while Simanjiro are planting during the period of closing an inception phase. Smallholders farmers learn and adopt practices that are imparted while they are in the period of doing the related activity. It would have been useful for the CBS to support both QDS farmers and bean grain farmers with post-harvests management during the proposed bridging window.

7.2.2. Follow ups on the activities implemented close to the end of the NCE, Youth and women VA, Mechanization extension services.

Since we are proposing scaling up of business models and their key activities considered for scaling up during the pilot phase then it would have been good for the activities that have been just concluded during the NCE provided follow ups with the respective partners to allow drawing of lessons and where possible provide on spot field support.

7.2.3. Collective marketing and sales to the off-takes who have shown demands

The project through the BDS implementing partner as well as the project office has received and communicated the demands of beans from the harvests being expected up to June,2022. As discussed earlier on the facilitations for off-takes contract, while there have been expressed demands which have not been enforced into contracts, continuity of the implementing partners to continue with linkages will provide confidence to both parties to finally transact.

7.2.4. Supporting M&E functions of the MF with the newly introduced systems

The AMDT has introduced improved M&E systems including the online reporting tools towards the end of the inception phase, it would have been ideal for the introduced systems fully managed by the MF staff while also working with the implementing partners to perfect their utilization, get the lessons on their utility for next phase operations. But also given the weak registry systems of the farmer organizations, there have been some missing information which are crucial for the project and its stakeholders and partners, these include for example establishing ages, farm sizes as well as sales records.

7.2.5. Facilitations of FO's with output markets financing for QDS seeds.

During the short inception phase one of the outstanding achievement on improving availability and access to improved seeds was on the development of cadre of QDS producers. There is an urgency need of to make FO's access output finance from the participating financial institutions to enable some AMCOS procure the seeds that are being harvested, failure of which the next season the same problem of seeds will be rampant as it was in the inception as the producers have produced with business mindset and not to restore for the next season. The BDS provider can continue to work with the

MFI's to ensure that the QDS producers gets markets within the project areas for them to continue in the next season.

7.2.6. Support administrative/overheads of the MF during the bridging window

To make the above activities suggested in the short bridging window, it makes sense to maintain a lean key staff and related overheads in the project office. This will allow managing different follow ups that comes from the project partners and stakeholders but also to enable smooth planning of the anticipated next phase.

List of Annexes

Annex 1: Project staff profiles

Annex 2: Project Database

Annex 3: MoU between Tari-selian and Crop-Bioscience

Annex 4: Meru-Agro seeds road map

Annex 5: Masenga developed cases for policy dialogue

Annex 6: Partnership performance assessment of the MA's

Annex 7: MoU's for agro-dealers and off-takes

Annex 1: Project Team profile

Name	Area of Expertise	Position Assigned	Tasks Assigned
Fredrick E.Ogenga	MSc- International Business/Trade; Indian Institute of Foreign Trade (IIFT); 2013 Bachelor of Laws, LLB: Degree Master Trainer Certificate in Start and Improve Your Business (SIYB);	Assignment Team Leader [SEIDA CEO]	The Project Accounting Officer, responsible for smooth and timely implementation of the project activities. Deployment of SEIDA key professional and support staff. Backstops the implementation teams. Project Quality Assurance Manager (QAM's) Maintains positive Regional and National level relations with the main facilitator [AMDT], the Government and implementing partners.
Hermengild Mtenga	MSc.Business Administration, Post Graduate in Regional Planning and Advanced Diploma in Transport Management	**Program Manager-July,2021-Oct,2021**	The first SEIDA contact person at the field level, maintains high quality field level relationship with Market Actors, Government and other partner staff. Develop the overall coordination and management of all project field activities, and provide onsite technical guidance to staff, government officials, project partners and other stakeholders on the implementation of the planned project activities. Overall in charge of preparation of project work plans, budgets, implementation and timely generation of reports on the progress of the project. Field level accounting officer. Extends Capacity Building (coaching and mentoring) to implementing partners teams/staff.
Johannes Osarya	MSc (Agriculture) Sokoine University of Agriculture (1999), BSC (Agriculture)	**Project Manager-Nov 2021-Feb,2022**	The first SEIDA contact person at the field level, maintains high quality field level relationship with

	Sokoine University of Agriculture (1994		Market Actors, Government and other partner staff. Develop the overall coordination and management of all project field activities, and provide onsite technical guidance to staff, government officials, project partners and other stakeholders on the implementation of the planned project activities
Yusuf Tumaini.	MSc. Community Economic Development;2014 BA.Community Development ;2002	Monitoring and Evaluation Officer	Backstopping regular and periodic M &E roles including documentation on the KM, reports. Develop efficient and participatory Monitoring appropriate for working with the varied project Market Actors.
Joseph Mpongo	MBA.Agribusiness, SUA (2009) BSc. Agricultural Economics & Agribusiness, SUA (2007)	Livelihoods & Business Development Specialist	Develop appropriate project activities as per the agreed terms and deliverables. Backstopping Compilation and generation of periodic project reports as per the contract with funders.
Erick Rwehumbiza	BCom Accountancy - Institute of Finance Management (2011)	Finance & Administration Manager (FAM)	Support the Project Management in ensuring that all financial orders and regulations referring to financial standards are complied with by project and all the other partners. Continuously backstopping post-audit of procurement procedures and payments to ensure that all project goods, services and works are properly ordered, received, examined and paid for in accordance with the terms and conditions of the awards.

			Carry out periodic payroll audit in order to ensure conformity with the approved staff emoluments; Conduct systematic review of financial and accounting systems in place in view of identifying weak areas; and suggest areas and means for improvement in terms of efficiency, adequacy and relevance to Project operations; Review internal control systems in place in view of identifying the weak areas and suggest ways and means for improvement in terms of efficiency, adequacy and relevance; Carry out physical verification of inventory and other fixed assets in a view of ensuring safe custody, their efficient and economic usage ascertaining their condition and disposal; Review procedural omissions and important irregularities that may be identified by the Funding agency/partner.
Sylvia Sikeria	Diploma in Business Administration - Accountancy (2015)	Admn Assistant; SEIDA Hqtrs	Support the Project Management in ensuring operations and administrative functions; maintains the head office petty cash, Attends calls and visitors etc.
Michael T. Mapunda	Certificate in PCV NIT; Secondary School Education Certifcate	Driver	Transport the staff in undertaking project activities; Maintain the project vehicle and ensure that it is in good running conditions, enters and use movement Logbooks for every movements made.

T.O.T TRAINING ON VALUE ADDITION TO WOMEN SME'S-PIG, MANYARA