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AFRICA RISING - Enhancing partnership among Africa RISING, NAFKA and TUBORESHE CHAKULA Programs for fast tracking delivery and scaling of agricultural technologies in Tanzania Quarterly Report Quarter – 01 January 2019 – 31 March 2019



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Cover photo

Partners look on at iron-rich bean variety introduced by the Africa RISING – NAFKA Project for scaling. Photo credit: Filbert Mzee/ACDI VOCA.

I. ACTIVITY OVERVIEW/SUMMARY

Activity Name:	AFRICA RISING - Enhancing partnership among Africa RISING, NAFKA, and TUBORESHE CHAKULA Programs for fast tracking delivery and scaling of agricultural technologies in Tanzania.
Activity Start Date:	1 October 2017
Activity End Date:	30 September 2020
Name of Prime Implementing Partner:	International Institute of Tropical Agriculture (IITA)
Contract/Agreement Number:	BFS-G-11-00002
Name of Subcontractors/Sub awardees:	<ul style="list-style-type: none"> • Agricultural Research Institute (ARI), Dakawa/Chollima • Agricultural Research Institute (ARI), Hombolo • Agricultural Research Institute (ARI), Uyole • International Center for Tropical Agriculture (CIAT)
Major Counterpart Organizations	<ul style="list-style-type: none"> • District Agricultural Councils
Geographic Coverage (districts, regions, and/or Zanzibar)	<ul style="list-style-type: none"> • Babati District (Manyara Region) • Wanging'ombe District (Njombe Region) • Kilombero District (Morogoro Region) • Iringa Rural, Mufindi and Kilolo Districts (Iringa Region) • Mbarali District (Mbeya Region) • Mbozi and Momba Districts (Songwe Region)
Reporting Period:	01 January 2019 – 31 March 2019

I.1 Executive summary

The Africa RISING-NAFAKA partnership project focuses on the delivery and scaling of promising interventions that enhance agricultural productivity in Tanzania. The key interventions are promotion of climate-smart agricultural innovations, dissemination of best-bet crop management packages, rehabilitation and protection of natural resources, and reduction of food waste and spoilage. The project's focus is on three crop enterprises – maize, rice, and legumes – with nutrition and postharvest handling as cross-cutting themes. The key partners in the project include one USAID-funded project under the Feed the Future (FtF) Initiative in Tanzania – NAFKA, national agricultural research institutions (Dakawa, Hombolo, and Uyole), district councils as well as the private sector (seed companies, millers, and processors), and non-governmental organizations (NGOs). During the current quarter, project activities were implemented in eight districts in the regions of Iringa, Manyara, Mbeya, Morogoro, Njombe, and Songwe, all in the FtF Zone of Influence (Zoi).

Five key activities were implemented during the reporting period, as follows; (i) establishment of more demonstration (demo) sites (86 for legumes and 46 for rice) and model farms (39 for maize and 47 for rice); (ii) training of 33,256 farmers (17,875 males, 15,381 females) in subjects ranging from soil and water management and good agronomic practices (GAP) to pest and disease management; (iii) the

inspection and approval with TOSCI of sites for QDS production. For rice, 123 QDS farms were established covering 154.5 acres: whereas for legumes 108 farms were planted, covering 124 acres. In addition (iv) there was data verification in all the project districts following observations that some beneficiaries listed could not be traced to their villages. This was a joint activity by Africa RISING and NAFAKA conducted in 37 villages. It established that government extension staff sometimes provide services to farmers who live outside the project target villages but within the target districts. Also, some farmers report nicknames or maiden names (for females) which local leaders may not easily know when a follow-up activity such as a survey is implemented. Finally (v) there was a number of field monitoring visits that included high level visits. The Deputy Director General (R4D) of IITA visited the project activities in February 2019; the Africa RISING Management team visited the project sites in March 2019. All visits provided an opportunity for lesson learning and better scaling.

The key planned activities for the next quarter are (i) training of farmers and QDS producers (ii) training extension staff on data quality and ICT-related aspects; (iii) monitoring visits to project sites and data collection; (iv) conducting field days; and (v) finalizing the study on 'willingness to pay' for different services provided by the projects (Africa RISING and NAFAKA) as a way of ensuring sustainability.

1.2 Summary of results to date

Indicators	FY 18/19 target	Q1 FY18/19	Q2 FY18/19	Q3 FY18/19	Q4 FY18/19	Achievements FY 18/19	Percentage achieved FY19	LOP target	LOP achievements to date	LOP percentage achieved
EG.3.2 Number of individuals participating in USG food security programs [IM-level]	62,500	303	33,256					62,500	36,107	57.77
*EG.3.2-24 Number of individuals in the agriculture system who have applied improved management practices or technologies with USG assistance [IM-level]	42,000							45,000	34,156	75.9
*EG.3.2-25 Number of hectares under improved	50,000							56,000	38,293.9	68.38

management practices or technologies with USG assistance [IM-level]										
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*Data for these indicators are reported in the fourth quarter after the annual outcome survey.

I.3 Evaluation/assessment status and/or plan

Assessment Type	Planned for (date)	Status

2. ACTIVITY IMPLEMENTATION PROGRESS

2.1 Progress narrative

Africa RISING and partners are involved in the delivery of agricultural information and technology packages through a network of projects and other public and private sector actors that include ACIDI/VOCA that leads NAFKA, the USAID-funded cereals project in Tanzania. These collaborations are aimed at improving efficiency and enhancing disciplinary integration while contributing to the goals of the Feed the Future (FtF) initiative of harmonizing regional efforts to fight hunger and poverty in countries with chronic food insecurity and insufficient production of staple crops. Attractive interventions in this project include the promotion of climate-smart agricultural innovations, dissemination of GAPs, rehabilitation and protection of natural resources, and postharvest management.

The project focuses on three crop enterprises (maize, legumes, and rice) with postharvest handling and nutrition as cross-cutting themes. The key partners in the project include the International Institute of Tropical Agriculture (IITA) as the Lead institution, three institutions of the Tanzania Agricultural Research Institute (TARI)—Dakawa, Uyole, and Hombolo—and one USAID-funded project (NAFKA) led by ACIDI/VOCA. These work in partnership with the district local government institutions, specifically DAICOs, the private sector (seed companies, millers, and processors), and NGOs to deliver on the following objectives.

1. Introduce and promote improved and resilient varieties of food crops to farm households in a manner that complements their ongoing farm enterprises, contributes to sustainable agricultural resource management, and offers nutritional advantages and alternative market channels.
2. Disseminate GAPs along with the most promising new crop varieties suited to widely representative agroecological zones and market proximity.
3. Protect land and water resources and foster agricultural biodiversity through the introduction of soil and water management practices.
4. Introduce and promote postharvest management technologies for maize, rice, and legumes to reduce losses and bring quality up to market standards.
5. Offer and expand capacity-building services to members of grassroots farmers' associations, platform partners, and development institutions in the scaling process, paying particular attention to the special opportunities available to women farmers as technical and nutritional innovators and resource managers.

The project is currently being implemented in six regions of Tanzania: Manyara, Njombe, Morogoro, Iringa, Mbeya, and Songwe, all in the Tanzania FtF Zol (Fig. 1).

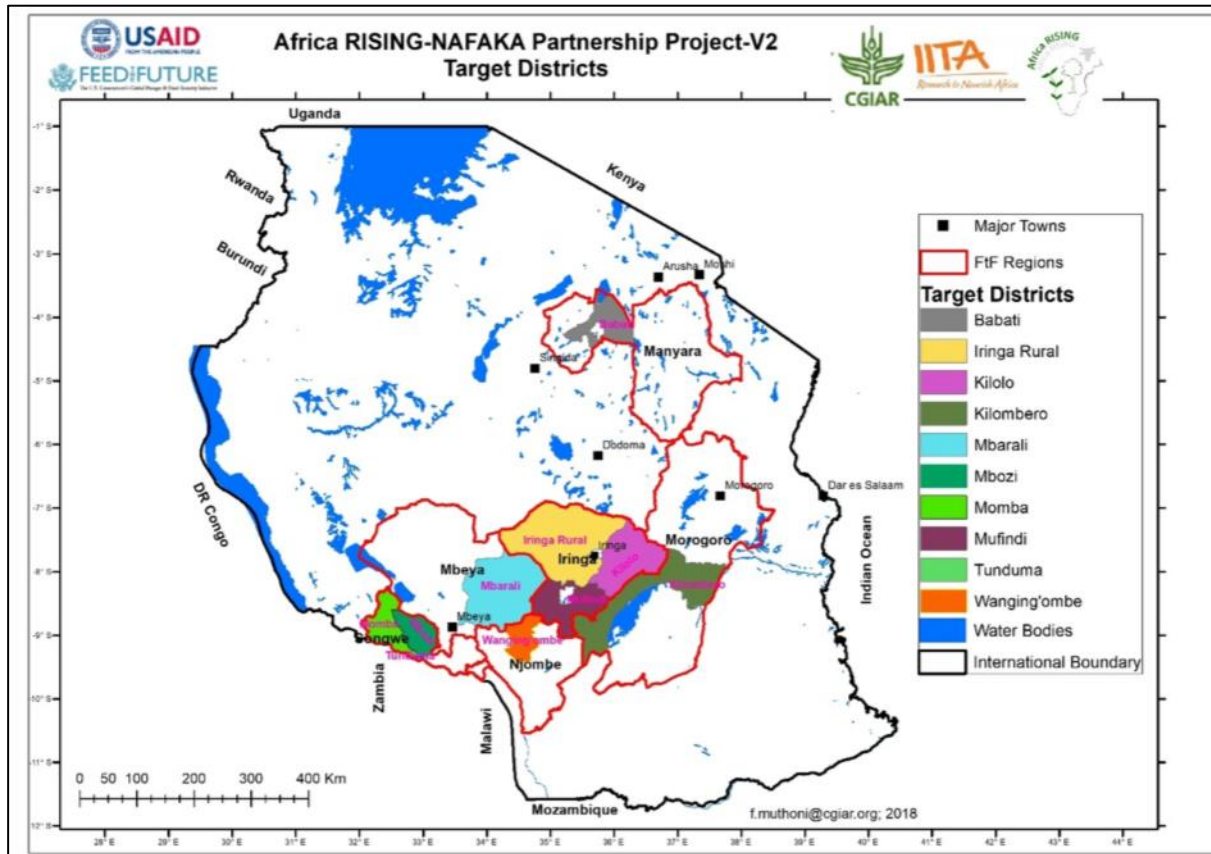


Figure I. Project locations.

All project activities contribute to the Development Objective (DO2) of the USAID Tanzania Country Development Cooperation Strategy (CDCS) including the sustaining of broad-based economic growth. This is Year 2 of the second project phase, and we plan to achieve the Life of Project (LoP) targets of 62,500 individuals benefiting from project activities and 56,000 ha under improved technologies as a result of project interventions.

2.2 Implementation status and planned activities

2.2.1 Establishment of demo sites and model farms

By the end of the first quarter (December 2018) some project locations had not yet received rains. Luckily, in the current quarter, almost all the project districts received ample rainfall to support the establishment of demos and learning sites as well as model farms. Whereas demo and learning sites (also called demo site(s)) have a variety of technologies from which farmers can learn, model farms have only a few selected technologies (for example, one improved crop variety, other management practices) that the host selects from the mother demo site to act as an example to fellow farmers in the vicinity. The other difference is that the mother demo is at scale, rather than plot, usually one acre and above. In the current quarter; 86 demo sites for legumes and 46 for rice were established in addition to 86 model farms (39 for maize and 47 for rice). When combined with those established in the first quarter, this brings the total to 117 demos for maize, 86 for legumes, and 46 for rice plus the 86 model farms, all spread over 155 villages in the project districts. Tables 1 – 3 show the distribution by district of the demos and model farms.

Table 1: Maize/legume demo sites established during the 2018/19 cropping season

District	Type of demo				Total
	Lime/maize variety/fertilizer	Maize variety/fertilizer/SWM	Common beans/ fertilizer	Soybean/ fertilizer	
Iringa Rural	13	7	18		38
Kilolo	30	7		8	45
Mufindi	10		10		20
Wanging'ombe	8	2	10		20
Mbozi	25		25		50
Momba	15		15		30
Total	101	16	78	8	203

Table 2: Rice demo sites established during the 2018/19 cropping season

District	Type of demo			Total
	Improved varieties /fertilizers (VarFer)	Improved varieties/managing salt-affected soils (SAS)	Improved varieties/alternate wetting and drying technology (AWD)	
Mbarali	18	1	1	20
Iringa rural	9	1	1	11
Momba	5	-	-	5
Kilombero	10	-	-	10
Total	42	3	1	46

Table 3: Model farms for maize and rice established in 2018/19 cropping season

District	Maize	Rice	Total
Iringa Rural	8	10	18
Kilolo	12		12
Mufindi	8		8
Wanging'ombe	5		5
Mbozi	2		2
Momba	4	7	11
Kilombero		10	10
Mbarali		20	20
Total	39	47	86

It was also noted that as a result of the bootcamp session conducted for government extension staff, coupled with early selection of sites (one of the action points effected after the bootcamp recommendation), more than half of the sites and model farms are located in easily accessible and visible areas (by the main roads). This siting will potentially enhance access by most beneficiaries, thereby augmenting the scaling activities.



Photo 1: A rice demonstration site in Mkwama Village, Mbarali District. Photo credit: Filbert Mzee/ACDI VOCA.



Photo 2: Maize demonstration site in Nansama Village, Mbozi District. Photo credit: Japhet Masigo/IITA.

2.2.2 Training activities

The main training activities for this quarter focused on farmers and were largely implemented by government extension staff with support from the project team. Training focused on **GAPs**, soil and water management, fertilizer application, and IPM (Table 4).

Table 4: Farmers trained on various practices in rice, maize, and legumes

District	Male	Female	Total
Iringa Rural	1,486	1,342	2,828
Kilolo	3,617	2,698	6,315
Mufindi	961	831	1,792
Wangin'gombe	872	501	1,373
Momba	1,029	448	1,477
Mbozi	2,517	2,084	4,601
Mbarali	2,735	3,186	5,921
Kilombero	4,658	4,291	8,949
Total	17,875	15,381	33,256

Beneficiaries in selected villages also received additional training depending on identified special needs. In Mbozi district, 311 farmers (193 male, 118 female) from the villages of Iwanje, Nansama, and Iyanga received training on the safe handling and proper use of two agrochemicals (SureStart® [herbicide] and Radiant® [insecticide]) introduced on the market by CORTEVA AgriScience, one of the NAFKA key partners. These villages were selected because of the relatively high number of farmers using improved technologies.



Photo 3: Farmers in Lipangalala Village, Kilombero District take part in a hands-on training on the use of direct paddy planter. Photo credit: Ndimubandi Mvukiye/TARI Dakawa.



Photos 4 and 5: Farmers in Iwanje Village, Mbozi District, participating in training on safe use of agrochemicals. Photo credit: Ibrahim Mkwiru/ACDI VOCA.

In Mbarali district, 390 farmers from Ukwama and Mtamba villages (133 male, 257 female) were trained on the mechanized application of herbicides (Glyphosate). The technology was appreciated by the farmers whose fields are normally invaded by difficult-to-control weeds, especially after crop establishment.

2.2.3 Production of Quality Declared Seeds

Following on the activity of selection of sites for production of quality declared seeds for rice and common beans, final inspection, approval, and registration for QDS production was done in collaboration with TOSCI. The approved sites were then planted. For rice, 123 farms were planted, covering about 154 acres of TXD 306 (SARO 5) variety (Table 5).

Table 5: Number of QDS farms and acreage of rice established per district

District	Number of farms	Acreage
Kilombero	60	60
Mbarali	45	76.5
Momba	8	8
Iringa Rural	10	10
Total	123	154.5

For common beans, 108 QDS farms were established, covering 124 acres for different varieties in six districts as shown in Table 6.

Table 6: Number of farms and acreage of QDS farms for common beans established per district

District	Farms per Bean variety				Acreage
	<i>Jesca</i>	<i>Njano Uyole</i>	<i>Mwaspenjele</i>	<i>Uyole 2</i>	
Momba	19				27
Mbozi	10	20			28
Wanging'ombe	7				7
Mufindi	7	15	4		26
Iringa Rural		15		1	26
Kilolo		7	3		10
<i>Subtotal</i>	43	57	7	1	
Total					124

2.2.4 Yield data

Following field observations that reported some beneficiaries could not be traced to their villages during subsequent activities such as surveys, we conducted a data verification in March 2019 to establish the true situation. The verification was conducted in all the project districts whereby for each village, the verification team met with selected village residents including the village executive officer, people who have stayed in the village for a long time with knowledge of most residents, and technical staff (extension staff). The exercise covered 37 randomly selected villages as indicated in Table 7.

Table 7: Villages and number of beneficiaries reached during data verification field work

District	No. of villages	Names reviewed
Mbarali	7	4,408
Momba	3	376
Mbozi	6	4,390
Wanging'ombe	3	444
Mufindi	3	601
Kilombero	3	1,419
Kilolo	6	3,387
Iringa DC	6	2,206
Total	37	17,231

From the exercise, most beneficiaries (99.9%) were verified. The challenges that may have led to difficulties for survey teams in easily tracing them included the following.

- Some farmers use abbreviations as part of their names or used nicknames.
- Some farmers, especially in rice producing districts, live outside villages where their farming operations are located and may not be known by the local leaders.
- Extension staff use the demo sites to train farmers outside the host villages (but within the wards). These participants are erroneously listed as members of the village(s) hosting the demo(s). Going forward, we agreed to modify the data collection form (DCF) to specify the village of each beneficiary instead of the maintaining the current DCF which indicates one village.
- Some beneficiaries farm seasonally and relocate to other areas during other months when farming activities are not intense; these may also not be known by guides who assist the survey teams.



Photo 6: Data verification exercise taking place in Igurusi Village, Mbarali District. Photo credit: Haroon Sseguya/IITA.

2.2.5 Activity monitoring visits

The project hosted two visits from IITA. In February 2019, the IITA Deputy Director General, Research for Development (DDG-R4D) Dr May-Guri Saethre and the IITA East African Hub Director Dr Victor Manyong visited southern Tanzania to see activities firsthand in which IITA are involved in the region. The delegation visited project beneficiaries in Mbozi district which included a village-based agricultural advisor, group members in Iwanga village, and an agroprocessor, Unyiha Associates, based in Mlowo township. They also visited the Tanzania Agricultural Research Institute (TARI) at Uyole. The two senior IITA leaders appreciated the efforts jointly made by Africa RISING and NAFKA to benefit tens of thousands of beneficiaries across the value chain in Tanzania and noted that many lessons learnt from the initiative can be taken elsewhere in Africa to transform agriculture for development.



Photo 7 (top) and 8 (bottom): IITA Deputy Director General R4D, May Guri and the Director for Eastern Africa Hub, Victor Manyong at project sites in Mbozi District. Photo Credit: Haroon Sseguya/IITA.

In March 2019, the Africa RISING Manager, Dr Irmgard Hoeschle-Zeledon, and other project staff also visited the project sites in Iringa Rural, Mufindi, and Mbarali districts. The team appreciated the project achievements, with key suggestions on ensuring that technologies approved for scaling should have clear benefits and be accessible by the beneficiaries, putting sustainability/exit measures in place, especially in respect of providing small packs of agro-inputs for farmers' trials, and finalizing technology briefs and training materials in time so that they can be used by our scaling partners.



Photos 9 (top) and 10 (bottom): Africa RISING Project Manager, Irmgard Hoeschle-Zeledon at project sites. Photo Credit: Filbert Mzee/ACDI VOCA.

2.2.6 Problems and challenges

The main challenge was inadequate rains in parts of Iringa Rural, Kilolo and Mbarali districts. In fact, some of the soil and water management technologies (e.g., in-situ water harvesting/tied ridges and AWD) show promise of being beneficial in such circumstances, and some farmers have already adopted them.

2.2.7 Planned activities

The key planned activities for the next quarter are the following:

- i. Training more farmers and QDS producers;
- ii. Developing ICT-based messages targeted for farmers and extension staff;
- iii. Training extension staff on data quality and ICT-related aspects;
- iv. Conducting monitoring visits to project sites and data collection;
- v. Conducting field days; and
- vi. Finalizing the study on 'willingness to pay' for different services provided by the projects (Africa RISING and NAFKA) as part of ensuring sustainability.

3. INTEGRATION OF CROSS-CUTTING ISSUES AND USAID FORWARD PRIORITIES

3.1 Gender equality and women's empowerment

The Africa RISING-NAFAKA project approach emphasizes consideration of gender at all levels of project implementation. In the process of building capacities of farmers, both males and females are trained, considering different groups, i.e., adult males and females and the youth (both sexes). Both male and female members have equal opportunities in the groups and efforts are being made to increase the number of females taking part as male participants constitute about 70% of project participants.

3.2 Youth engagement

Youth involvement is a key aspect of the project interventions. The youth are equally encouraged to participate in all activities. So far about 37% of project participants are young adults i.e. under 29 years of age.

3.3 Local capacity development

As in past years, the project continues to work with Government agricultural extension staff at district and village levels. In addition, collaboration by Africa RISING and NAFKA continues in supporting and training VBAs who not only complement extension staff trainings but also play a key role as frontline actors in the rural agro-input dealer network. Furthermore, the project works with farmers' groups and associations whose capacities are developed in GAPs and related technical areas.

3.4 Integration and collaboration

The NAFKA field staff coordinate the activities of the Africa RISING-NAFAKA partnership project supported by Africa RISING in all the project districts (except Babati). In addition, we have successfully sought collaboration with the private sector (Corteva, Seed Co, Meru Agro, ETG, Beula Seeds, Agriseed, Tanzania Fertilizer Association, and BASF) to support demo sites in all project districts. The companies provided both inputs and technical support (reported in quarter I report), and actively participated in organizing and implementing the field days. We have also sought collaboration with Esoko for ICT-based services.

3.5 Sustainability

The close collaboration with the Government extension staff at district level and private sector actors aims at linking the farmers to partners and development initiatives that will provide support beyond the life of the project. In collaboration with the NAFKA project, the team works with VBAs and selected Lead Farmers who manage demo plots, provide access to inputs, and produce QDS for legumes and rice to sustain the availability of varieties being taken to scale. Furthermore, the project team plans to continue linking local input and other service providers (e.g., machinery, crop insurance) with farmers and local extension staff to ensure the technologies continue to be accessible after the project ends.

3.6 Environmental compliance

In accordance with the project PERSUAP and other guidelines, the team emphasizes the judicious use of agro-inputs by promoting integrated soil fertility management without damaging the natural resource base. In semi-arid locations we encourage farmers to use improved technologies, such as tied ridges, for in-situ water conservation. Management technologies such as tied ridges for soils on steep slopes or those affected by acidity or high salinity and calcium content underlie the approach used in this project. Given the increase in problems of water availability for production, we emphasize the importance of using organic manure and minimizing the use of water in rice production. This is done, among other methods, by promoting the water-saving technologies such as the AWD technology and by establishing bunds around paddy plots. Also, the training of farmers and extension staff on the safe use and handling of agro-chemicals is one of the focus areas of the project.

3.7 Global climate change

Since the project is operating in the context of climate change, we have embraced scaling of technologies and agricultural practices that enhance resilience to climate variability.

3.8 Policy and governance support

The project's activities are in line with the GoT policy of fostering agricultural development and also contributing to ASDPII. Consequently, the team has received support from National, Regional, District, and Village local governments in all areas where the project activities are implemented in the form of joint implementation of development activities.

3.9 Private sector engagement, Public Private Partnerships (PPP), and Global Development Alliance (GDA) collaboration

The project works directly with many agro-input/seed companies in Tanzania, such as MeruAgro, Syngenta, Seed Co, and Corteva. Their staff have been instrumental in providing guidance on matters related to agro-inputs as well as in participating in the rural agro-input network spearheaded by the NAFKA project. We are also working closely with Esoko to ensure that we integrate ICTs in our activities.

The demand for the mechanical shellers/threshers and hermetic storage bags is gradually increasing owing to the increase in awareness about the technologies. We established partnership with the Poly Machinery Co. Ltd based in Dar es Salaam that can supply mechanical shellers/threshers and provide spare parts and after-sales services to farmers. We also established partnerships with two manufacturers of hermetic storage bags, i.e., A toZ Textile Mills Ltd and PPTL Co. Ltd. The companies have shown interest in continuing to work with farmers and other supply chain actors to strengthen the supply network especially in the rural areas. This will enhance continuity of the use of the technology.

3.10 Science, technology, and innovation

Nothing to report this quarter.

4. STAKEHOLDER PARTICIPATION AND INVOLVEMENT

See sections 3.3 and 3.4.

5. MANAGEMENT AND ADMINISTRATIVE ISSUES

Nothing to report this quarter.

6. MONITORING, EVALUATION, AND LEARNING

The PMP indicators are presented in Annex I.

7. SPECIAL EVENTS FOR NEXT QUARTER

None.

8. ANNEXES

8.1 Annex I. Performance against PMP indicators for Project Year V (2018/19)

Indicator / disaggregation	Target 2019	Quarter 1 (Oct–Dec 2018)	Quarter 2 (Jan– Mar 2019)	Quarter 3 (Apr–Jun 2019)	Quarter 4 (Jul – Sept 2019)
EG.3.2 Number of individuals participating in USG food security programs [IM-level]	56,255	303	33,256		
* EG.3.2-24 Number of individuals in the agriculture system who have applied improved management practices or technologies with USG assistance [IM-level]	42,000				
*EG.3.2-25 Number of hectares under improved management practices or technologies with USG assistance [IM-level]	50,000				

*These indicators are measured annually. Therefore, data for 2018/19 will be available in the last quarter of the project year and reported in the annual report.

8.2 Success stories

Africa RISING technologies transforming lives: A case of mechanized maize shelling in rural Tanzania

Kassim Hamisi Lehora started off as an ordinary member of a farmers' group in Dahinda Village, Kanga Ward in Mvomero District. Little did he know that joining the group would earn him plenty in future.

He has five employees in his new maize shelling business. This operates within Dahinda and its surrounding villages so he is not only a proud farmer but also an employer and a role model. Through his maize shelling enterprise he is helping families put food on their tables at an affordable cost, with less drudgery and minimum post-harvest losses.

Kassim's fortunes began to change in 2014 when the Africa RISING-NAFAKA project began post-harvest research activities in Dahinda Village. He was among the first group of farmers who expressed an interest in mechanized maize shelling and the post-harvest technologies that the project team demonstrated regularly within the village. Instead of manual methods to separate kernels from the maize cobs after these have been harvested and then dried, mechanized shelling uses low-cost motorized machines. Early research studies conducted by Africa RISING with farmers like Kassim showed that the use of mechanical shellers increased labor efficiency among them by 88% while reducing the cost of labor by 77%.

At the start of the project, Kassim and the members of his farmers' group were provided with a 4-hp diesel engine for use. It was at this point that his early interest in mechanical shelling as a business opportunity became so strong.

"We used the machine to shell maize as a group," Kassim explains. "We benefited because we could quickly turn heaps of produce into shelled grain within hours instead of spending several days in hard work as we used to do."

He agrees that the new technology has indeed saved them both time and money.

"Until that time, we shelled maize by putting the cobs in bags and then beating the bags with sticks. It cost a lot because many bags were needed to hold the maize and many casual workers too. A lot of the grain also got scattered or damaged in the process.

I could soon see the value of the machine very clearly," he continues. "So, I went ahead and bought a bigger machine (with a 16-hp engine). This was an obvious opportunity. I wanted to reach many more villages and make more money.

The machine has excellent shelling capability. It produces high quality grain without the breakage that often happens with manual shelling. My machine can shell at least 10 bags (1 ton) of grain in an hour. Usually, I can shell between 100 and 150 bags in a day."

Kassim charges his customers between Tsh.1000 and 1500 (USD 0.44 – 0.65) for a 100 kg bag. This is half the amount they would pay to casual workers for manual shelling.

Beyond service provision, Kassim is also creating jobs within his community. He currently has five casuals on his payroll and explains his methods.

“For every Tsh. 25,000 that I make, 5,000 is paid to my casuals. Thus, the machine provides employment to others and not to me alone. I make a gross income of between Tsh. 150,000 and 200,000 on a good day. From this I pay the casuals and pay for the fuel and the cost of moving the machine from one place to the next. I am usually left with a net income of Tsh. 130,000 (USD 56) every day,”

When asked about the cost of maintaining the shelling machine, Kassim notes that spare parts and artisans who can repair the machine are easy to find. He is also able to do minor repairs to the machine by himself since it was part of the training given by the Africa RISING – NAFKA project when the machines were being demonstrated.

“My living standards have really improved,” Kassim notes with satisfaction. “Because of the income I make in a day, I can now provide more for my family than I could do before. I am also happy that I have employed other young men to work with me and they can support their families through this job.”

Out of his success with maize shelling service provision, Kassim is now planning to expand his portfolio into rice milling, using the same mobile service provision approach. Using proceeds gained from the maize shelling, he has already purchased a rice milling machine and is currently waiting for the rice harvest season to start.



Kassim standing next to his 16-hpr maize shelling machine. Photo credit: Audifas Gasper/IITA.



Kassim inspects his newly acquired rice milling machine. Photo credit: Audifas Gasper/IITA.



Visible livelihood changes and impacts. Kassim conducts a tour around the house he is building, thanks to his booming maize shelling business. Photo credit: Audifas Gasper/IITA.



Moving the maize sheller from one point to the next is not easy. Kassim uses this truck to transport the shelling machine and his casual workers from one service location to the next. Photo credit: Audifas Gasper/IITA.

Adopting good agricultural practices was the game changer I needed!

The scene is Kilolo District. Utengule Village is one of the 37 villages where the Africa RISING – NAFKA project is demonstrating various improved agricultural technologies and practices to help smallholders improve their farm productivity. Embracing good agricultural practices (GAPs) in lessons from the project has turned around the fortunes of Method Magoda, a 39-year-old farmer, the father of three.

“I am grateful to have been part of those trainings,” he explains. “They helped me a great deal! I now understand what I need to do at different stages of the cropping season on my farm.

Before the project started its *shamba darasa* (demo plots) in Utengule Village back in 2016, farming for me and most of my fellow farmers had been trial and error.

I didn’t follow any procedures to guide the timing for planting, or the use of fertilizer, crop spacing, and so on. I just followed the traditional calendar for planting and weeding. I would then cross my fingers and hope for the best and a good yield.

But good yields don’t arise out of luck. There are a lot of things I could have done better!” he admits.

Until 2016, Magoda harvested fewer than 25 bags of maize each year from his 4-acre farm. Now, fast forward to the 2018 harvesting season. He had 80 bags from the same piece of land!

What had changed?

“It is simple,” he will tell you. “After the trainings I changed my way of doing things. In particular, I paid closer attention to everything: the timing for planting, proper crop spacing, the right use of fertilizer, pesticides, and herbicides as well as post-harvest management.”

Any farmer will tell you that a good harvest has its benefits, just as a bad one has its effects.

“After harvesting 80 bags, I went ahead and sold my maize at Tsh.70,000 per bag. This earned me a gross income of Tsh. 5,600,000 (USD 2,424)! This was the best I’d ever had.”

In a bid to set himself up for even more success, he used his income to buy two oxen. He now rents these out to his neighbors as they prepare for the coming cropping season. He charges Tsh. 45,000 (USD 20) for an ox to plough an acre. Already, in this season (2018/2019), he has earned Tsh. 500,000 (USD 216) from renting out his oxen.

Magoda’s neighbors are happy that he is a local success story. They are also learning a lot from him about GAPs and their proper application.

“Thanks be to the project for giving us knowledge through the agricultural extension staff and farmer-to-farmer lessons at the *shamba darasa*. We have learnt a lot too. We will keep on implementing these lessons because, like Magoda, we can see the benefits amongst us.” So says Magoda’s neighbor, Fesaly Nyemba who is also a farmer at Utengule Village.



Method Magoda and his family outside their house at Utengule Village in Kilolo District. Photo credit: Frednand Japhet/IITA.



Method Magoda, his wife and son at their home. Photo credit: Frednand Japhet/IITA.



Magoda and his wife inspecting their maize field. Photo credit: Frednand Japhet/IITA.

