AR-NAFAKA Project Rice Component: 2016–2017 Progress

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Summary description of key activities for rice component

Technologies demonstrated

Six technologies were demonstrated.

- These aim at promoting:
  - the use of improved rice varieties in combination with proper use of fertilizer,
  - use of salt-tolerant rice varieties in salt-affected rice growing areas in combination with management options for salt affected soils,
  - use of safe alternate wetting and drying irrigation method,

- soil fertility improvement by use of legumes in paddy fields,
- reduction of drudgery during rice planting by Introducing and promoting locally fabricated rice seeders and
- reduction of health hazards associated with spraying herbicides by introducing and promoting locally fabricated herbicides applicators.

The planned activities Sept 2016 - Sept 2017

- Visiting target districts and villages to reconfirm previous and new sites
- Collecting soil samples and soil analysis for site characterization
- Training of farmers on QDS production
- Procurement and distribution of basic seeds, gypsum and fertilizers
- Demonstration of the improved rice varieties (Komboka, TXD 306, SATO1 & SATO6) and fertilizers (both basal and top dressing)

Activities cont.

- Demonstration of management options for SAS (use of gypsum, FYM, SA)
- Introduction of direct-paddy planters
- Capacity building on training of trainers (extension officers and lead farmers) and lead farmers training other farmers in baby demos
- Production of reports (Quarterly)
- Conduct field days on established demonstration plots

On going activities

- Harvesting and yield data collection
- Establishing rice - legume relay cropping demonstrations
- Introduction of herbicide application machinery
- Demonstration of proper water management practice (AWD)
- Conducting feedback meetings with stakeholders
- Preparing radio program and documentary to create awareness on disseminated technologies

Activities implemented and achievements

Activity 1: Inception meeting

- It was conducted in order to
  - identify and familiarize with various stakeholders involved in rice production,
  - present and share the protocols for the planned technologies to be demonstrated this season.
- A total of 116 stakeholders attended the meetings.

Activity 1: Inception meetings

S/N	District	Title of stakeholder	Number
1	Kilombero	DAICO'S Office	2
		Village Extension Officers (VAEOs)	20
		Lead farmers	20
		NAFAKA Staffs	1
2	Mbarali	DAICO'S Office	2
		Village Extension Officers (VAEOs)	10
		Lead farmers	10
		NAFAKA Staffs	3
3	Iringa rural	DAICO'S Office	2
		Village Extension Officers (VAEOs)	10
		Lead farmers	10
		NAFAKA Staffs	2
4	Mvomero	DAICO'S Office	2
		Village Extension Officers (VAEOs)	10
		Lead farmers	10
		NAFAKA Staffs	2
Total number of stakeholders			116

Activity 2: Sites selected for demo plots

District	Number of villages
Mvomero	10
Kilombero	21
Iringa	10
Mbarali	10
Total	**51**

Activity 3: Establishment of demonstration plots

Mother demos		
Types of demos	Number of demos	Targeted
VARFER	46	
SAS	4	
Calcaric	1	
AWD	3	
Total	54	

Baby demos		
District	Number of demos	Targeted
Kilombero	407	500
Mvomero	206	300
Iringa rural	89	250
Mbarali	140	250
TOTAL	**842**	1300

Activity 3: Cont.

- Mother demos
  - Mother demos were established depending on the need of the site/location.
  - They were established in collaboration with farmers, DAICOs' office and NRS

Activity 4: Procurement and distribution of basic seeds

District	Number of farmers received improved seed			Targeted
	Male	Female	Total	Total
Iringa rural	4763	3606	8369	2180
Kilombero	6263	5529	11792	4360
Mvomero	2206	1671	3877	2180
Mbarali	4203	2805	7008	2180
Total	13611	17435	**31,046**	**10,900**

Quantity and type of seed distributed per district

District	Type of seed				
	SARO 5 (TXD 306) (kg)	KOMBOKA (kg)	SATO1 (kg)	SATO6 (kg)	TOTAL (kg)
Kilombero	3150	280	0	0	3430
Mbarali	1110.5	98	442	4.5	1655
Iringa rural	710.5	98	192	4.5	1005
Mvomero	1015	140	0	0	1155
TOTAL (kg)	5986	616	634	9	**7245**

Farmers received improved seeds cont.

- Three times the expected farmers received improved seed (Komboka, SARO 5, SATO 1 and SATO 6)
- More farmers demanded improved seeds therefore additional seed (7 tons) were distributed making a total of 14 tons (including small packs)

Fertilizer and gypsum

- 7 tons of fertilizers distributed to 51 villages
- 8 tons of gypsum distributed to six salt affected soil villages (Iringa and Mbarali)

Activity 5: Soil sampling and analysis

- Fifty one soil samples were collected from the mother demo sites to determine the quantities of the major three nutrients(N P K) required by rice plant
- The results revealed that the soils of all sites have low N content.
- The quantities of P and K were found to be adequate for rice production in all sites except few sites in Mbarali

Photo soil test

- Farmers have realized the importance of analysing the soil before applying fertilizer to minimize unnecessary production cost

- Activity 6: Training stakeholders (farmers, VAEOs and lead farmers)
  Both classroom and field trainings were conducted
  47.9 % men and 52.1 % women were trained

District	Number of farmers trained			Targeted
	Male	Female	Total	Total
Iringa rural	971	1113	2084	4360
Kilombero	3923	2931	6854	9470
Mvomero	976	1389	2365	5860
Mbarali	392	329	721	4360
TOTAL	6262	5762	**12,024**	**24,050**

Classroom training session

Field training session

Trained cont.

- Each farmer in a member group trained about 15 farmers in his or her baby demo

- Training activity met 50 % of the targeted beneficiaries
- This is caused by shortage of rainfall (or erratic rainfall) in some sites (number of baby demos were reduced –Mbarali & Iringa rural)

Activity 7: Demonstration of Direct Paddy Seeder

- The technology has been demonstrated in three villages namely, Kisegese and Kikwawila in Kilombero and Kanga in Mvomero districts
- A total number of 75 beneficiaries were reached.

Farmers planting rice seed using direct paddy seeder at Kanga village in Mvomero

Activity 8: Farmer field days

One field day conducted in each district in one village

Location	Men	Women	Total	Targeted
Mbarali	35	40	75	400
Mvomero	38	45	83	400
Iringa	40	34	74	400
Kilombero	49	48	97	400
Total	162	167	329	1600

Field day cont.

- About 50.8 % men and 49.2 % women participated in the field day.
- Farmer field day events were broadcasted in media (TVs & radio) in order to reach more people
- Field days activities are in progress

Types of partner	Partners	Role(S)
Local government	DAICOs' office VAEOs	Selecting villages Establishing and supervising demos Report writing Supervising distribution of fertilizer, seed & Gypsum
Training institution	MATI Igurusi	Training VAEOs, Farmers
Research institution	ARI KATRIN	Establishing and following-up demos Training VAEOs and farmers
Project Partner	NAFAKA (MVIWATA, FIPS)	Collecting data (Distributing and collecting DCFs) Distributing seed and fertilizer
Input suppliers	Fertilizer & gypsum suppliers (YARA, Efrem Agro trading,, Alpha Agrovet suppliers limited & ARABA LTD)	Supplying and distributing fertilizers and gypsum
Seed regulator	TOSCI	Inspection and certification of seed
Producer organization	UWAWAKUDA	Selection of demo sites

Challenges, constraints and lessons learned

- Rainfall:
  - Delayed onset of rainfall in some of the sites
  - Erratic rainfall (reduced number of baby demos)
  - Destroyed road networks (Digoma and Mpanga villages)
  - Floods (some demos were washed out (Mbogo, Lukenge, Digoma))
- Fall of armyworms and outbreak of stem borers in some sites (Mvomero and Kilombero)
  - Action taken
    - Farmers were advised to spray insecticides

Available transport to Digoma village during rainy season

Challenges cont.

- Unavailability of improved rice seeds at village levels affecting sustainability of intervention.
  - Suggested interventions:
    - To strengthen QDS production.
- Difficulty in finding sites that are easily accessible (near the road)

Lessons learned

- The mode of involving farmer groups are necessary for wider dissemination of the technologies
- Training of trainers making training more sustainable
- Involving Local government and other stakeholders in technology dissemination strengthened research – extension linkages
- For the technology to have more impact it has to be well-packaged

Lessons cont.

- Farmers learn more when classroom training is combined with field training
- Involving farmers in all stages of training increases rate of adoption and ownership of the technologies
- Farmers could improve rice productivity even more by analyzing soils of their particular fields for their fertility status prior to planting (Soil analysis will enable them understand properties of their fields and consequently use fertilizers judiciously).

Activities needing improvement in future

- It is important to avoid coincidence with peak farmers activities when conducting field days
- For sustainability of interventions there is a need of investing more in training extension service providers

Exit strategies

- To sustain availability of improved seeds by training more farmers on QDS production
- To extend the technologies to more farmers by increasing the number of VBAAs and provide necessary facilitation for their work
- To strengthen linkages of farmers with agro-dealers and other agricultural extension service providers

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