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Enhancing partnership among Africa RISING, NAFKA and TUBORESHE CHAKULA Programs for fast tracking delivery and scaling of agricultural technologies in Tanzania

Quarterly Progress Report (1 October 2014 – 31 December 2014)



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Contract No.

IITA – International Institute of Tropical Agriculture

QUARTERLY PERFORMANCE REPORT (1 October 2014 – 31 December 2014)

Thematic Implementing Partners:

AfricaRice – Rice Systems

AVRDC – Vegetables

CIMMYT – Maize Systems

IITA – Postharvest and Nutrition

COVER PHOTO

Hassan Mndiga (left, blue shirt, Horticultural Research and Training Institute-Tengeru) and Manfueti Tiliya (right, blue shirt, Horticultural Research and Training Institute-Tengeru) in discussion with a Women Vegetable Producer Group in Kaloleni village, Kiteto District.

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List of Acronyms

Africa RISING	Africa Research in Sustainable Intensification for the Next Generation
ARI-Hombolo	Agricultural Research Institute, Hombolo
ASA	Agricultural Seed Agency
CIAT	International Center for Tropical Agriculture
CIMMYT	International Maize and Wheat Improvement Center
COUNSENUITH	Center for Counseling, Nutrition and Health Care
DAICO	District Agriculture, Irrigation and Cooperative Officer
FtF	Feed the Future
GAP	good agronomic practices
HORTI-Tengeru	Horticultural Research and Training Institute-Tengeru
ICRAF	World Agroforestry Center
IITA	International Institute for Tropical Agriculture
IPM	integrated pest management
NAFAKA	Tanzania Staples Value Chain Activity
SMS	subject matter specialist
TFNC	Tanzanian Food and Nutrition Center
TOSCA	Tanzania Official Seed Certification Agency
QDS	quality declared seeds
ZOI	Zone of Influence

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Figure 1: Map of the derived agroecological zones of Tanzania showing the location of the project action regions. Source: Project document at: http://africa-rising.wikispaces.com/AR_NAFKA_TUBOCHA_Project 4

I.0 EXECUTIVE SUMMARY

During the reporting period, partners participated in the project inception workshop after which they developed activity schedules at the thematic level with identified milestones and budget allocations. Some of the thematic teams developed protocols for implementing the setting up of demonstration plots and their management, selected village and action sites, and initiated planting of the mother demonstration trials. This was after trainings had been conducted for extension partners who would supervise the targeted 25 demonstration sites (households) per District. The process of recruiting a Technology Scaling Specialist was completed; Dr Haroon Sseguya will take up his position on 16 February 2015. The recruitment of a GIS Specialist is in progress. A Communication Specialist has been hired on a consultancy basis for 6 months. Major activities in the second quarter will include continued installation of the mother demonstration trials and trainings tailored to offer knowledge and skills to farmers; this will facilitate the cascade scaling.

2.0 INTRODUCTION

2.1 Project Description

Africa RISING partners have been involved in identifying and developing best performing interventions for improving agricultural production. These are being compiled into information and technology packages to be delivered through a network of NAFAKA, TUBOCHA, and other institutional grassroots organizations, creating an opportunity for mainstreaming into wider rural development programs. Attractive interventions include the introduction of improved crop varieties; dissemination of best-bet crop management packages; rehabilitation and protection of natural resources; and improvements in food and nutrition security. The main project description has been further refined with activity specifications during the thematic work plan developments, briefly described below.

Under the rice production system, the technologies include the introduction of two improved varieties, appropriate small-scale agricultural equipment, good agricultural practices (row planting, land leveling, weeding), extension materials, and decision support tools for farmers.

The vegetable component is introducing superior varieties of tomato (*Solanum lycopersicon*, Tengeru 2010), African eggplant (*Solanum macrocarpon*, Tengeru White) and amaranth (*Amaranthus* spp., Madiira 1) that have resulted elsewhere in increasing production by 9–40%, and contributed to increasing household consumption to about 200 g/person/day. Empowering smallholder farmers into the vegetable seed system is essential to enhance the availability of these superior varieties to wide communities. Training will be conducted to cover technical/agronomic aspects, as well as sessions on laws, regulations, and procedures for QDS in Tanzania, in collaboration with the Agricultural Seed Agency (ASA) and the Tanzania Official Seed Certification Agency (TOSCA). AVRDC will leverage its extensive network with seed companies in Tanzania to streamline seed and actual vegetable production in the target areas.

Six maize varieties (TAN H600, SAH 636, NATA HI05, NATA K6Q, MAMS H913, MERUHB 513), three common bean varieties (Jeska, Uyole Njano, SUA Njano), one soybean variety (Line 8) and two groundnut varieties (Pendo, Mnanje) will be promoted for mono- or intercrop systems. These are tolerant to many environmental stresses such as drought and low soil fertility, as well as many major common foliar plant diseases. Better agronomic practices and integrating in situ water harvesting techniques such as tied-ridges and ripping (where hard pans exist) will have a significant impact on achieving the potential yields of these new crops. Farmer-friendly seed systems will be developed in collaboration with seed companies SUBA AGRO, MAMS AGRICULTURE, AMINATA QUALITY Seeds, TANSEEDS and MERU AGRO.

The postharvest and nutrition component will introduce food fortification in collaboration with TUBOCHA, improved grain storage facilities such as the SGB and PICS bags for hermetic storage to prevent losses from pest attacks, an innovative low-cost drying case to reduce spoilage of produce during storage including infestation with fungi causing mycotoxin, and community maize shellers to reduce drudgery, especially for women. All technology introductions will be complemented by the appropriate training of farmers in their use.

Africa RISING partners will play a leading role in identifying, working with the local research and development institutions and building their capacity for synergies and institution strengthening, and will focus on engaging smallholder farming communities as a means of scaling the technologies. But we shall also engage local committees, District committees, and representatives from local communities to ensure that the project's outcomes and sustainability will be achieved.

2.2 Goals and Objectives

The objective of the project is to accelerate the process of scaling and delivery of agricultural technologies to improve smallholder maize- and rice-farming systems, household nutrition, and dietary practices in Tanzania's FtF zone of influence as a means of enhancing food, nutritional, and financial security among the least endowed smallholders (http://africa-rising.wikispaces.com/AR_NAFKA_TUBOCHA_Project).

The goal is to (a) have at least 47,000 households with access to the technologies to diversify and increase their food supply and income sources, and improve the quality of degrading smallholder cropland, (b) expand the area under improved rice production technologies by at least 58,000 ha, and (c) increase yields of both maize and rice by 50% per unit area as a result of these technologies being adopted. These aims will be achieved by the joint implementation of scaling and lesson-learning events for the intensified production of maize, vegetables, and rice using improved varieties, and targeted production and product-loss reducing technologies that are underpinned by scientific evidence. Specific objectives are as follows:

1. Introduce and promote improved and resilient varieties of food crops to farm households in a manner that complements their on-going farm enterprises, contributes to sustainable agricultural resource management, and offers nutritional advantages and alternative market channels;
2. Disseminate best-bet agronomic management packages around the most promising new crop varieties suited to widely representative agro-ecological zones and market proximity;
3. Protect land and water resources and foster agricultural biodiversity through the introduction of soil and water management practices;
4. Increase food security and improve household nutrition among the most vulnerable households and their members, especially women and children, by introducing locally adapted and nutrient-rich vegetables;
5. Introduce and promote postharvest management technologies for maize, rice, legumes, and selected vegetable crops to reduce losses and bring quality up to market standards;
6. Offer and expand capacity services to members of grassroots farmers' associations, platform partners and development institutions in the scaling process (capacity building), paying particular attention to the special opportunities available to women farmers as technical and nutritional innovators and resource managers.

Thematic activities have been formulated and will be implemented to address these objectives.

2.3 Geographic Zones of Influence

During the 3-year project period, project activities will be conducted in the primary regions of Manyara, Dodoma, and Morogoro, with extension to Iringa and Mbeya planned in year 2, all in the FtF's ZOI (Fig. I).

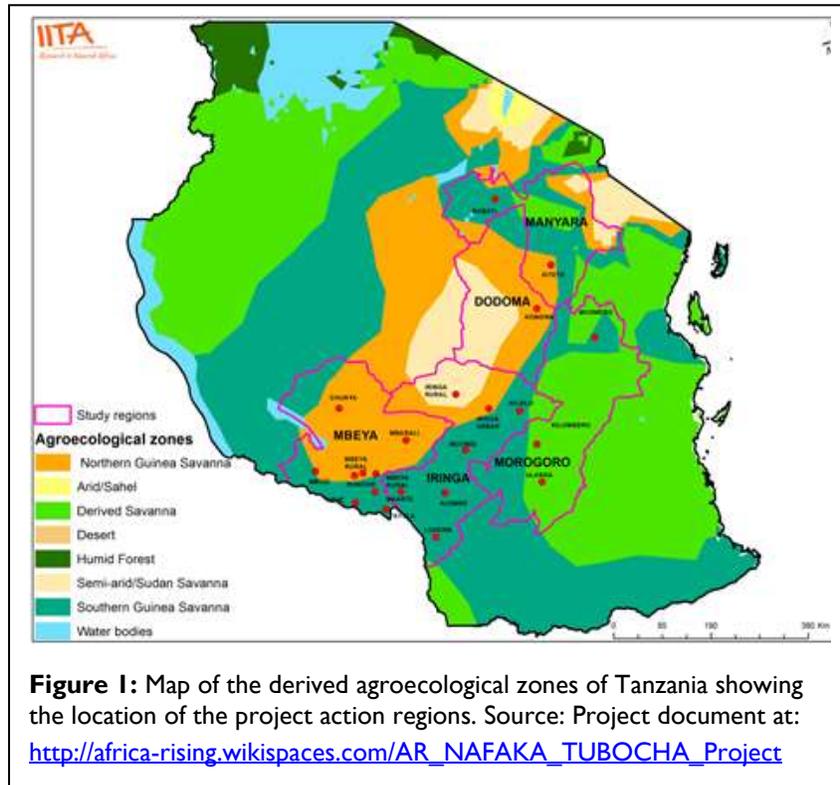


Figure I: Map of the derived agroecological zones of Tanzania showing the location of the project action regions. Source: Project document at: http://africa-rising.wikispaces.com/AR_NAFKA_TUBOCHA_Project

3.0 IMPLEMENTATION PROGRESS

3.1 Management Team Meeting

The inaugural meeting of the Project Management Team (PMT) was held on 29 October 2014 in Dar es Salaam. The minutes of the meeting may be accessed at <http://africa-rising.wikispaces.com/file/view/AR-NAFAKA-TUBOCHA-InauguralMeetingMinutes.pdf/532810672/AR-NAFAKA-TUBOCHA-InauguralMeetingMinutes.pdf>. The PMT discussed and agreed its ToRs and thereafter deliberated on issues relating to partners' commitment and responsibilities, data management, and communications. The proceedings were reported to the Stakeholders' Meeting.

3.2 Stakeholders Meeting

On 30-31 October 2014, an inception workshop was held in Dar-es-Salam, Tanzania, attended by 32 participants (http://africa-rising.wikispaces.com/AR_NAFAKA_TUBOCHA_Project). There were plenary reflections on the project proposal mainly confirming action Districts and targeted technologies, agreeing on institutional approaches for activity implementation, and identification of "monitoring" indicators. Thematic team discussions developed activity plans, schedules, and milestones. The minutes will be uploaded on the http://africa-rising.wikispaces.com/AR_NAFAKA_TUBOCHA_Project when ready.

3.3 Site Selection

The action Districts agreed during the inception workshop are given in Table I. The Maize Systems Team has already selected villages; those in which they have initiated activities during QR01 are given in Table I. The activities of this team are very much more sensitive to the rainfall patterns than those of other teams and quick action was required. Other teams are in the process of identifying action villages, aiming at activity co-location where it is feasible. The process of site selection and demonstration implementation is guided by protocols developed by each team.

Table I: Action districts and villages identified by the Maize Systems team and in which implementation of activities was initiated during the first quarter of the project

Region	Districts	Villages
Manyara	Babati	
	Kiteto	Esuguta, Ngipa, Mbigiri, Kaloleni, Kiperesa
Dodoma	Kongwa	Lengaji, Vihingo, Chang'ombe, Nduru-buni, Ndaribo
Morogoro	Mvomero	Lukenge, Msufini, Kigugu, Hembeti, Kwadoli
	Kilosa	

4.0 ACHIEVEMENTS AND RESULTS

It is too early to provide any meaningful results. However, the following have been achieved:

- The Management Team was constituted and its ToRs identified
- Integrated Thematic Scaling Teams were identified, each with a lead institution
- Thematic work plans (activity schedules) and budgets were completed. These formed the basis for developing contracts with IITA and the disbursement of funds to partners
- Development of protocols for setting up technology demonstrations was initiated and is ongoing
- NAFKA agronomists have been trained on the implementation of demonstration trials and the protocols to be used for setting up demonstration plots
- Selection of action villages and sites was initiated and is ongoing
- Implementation of mother-demonstrations by the Maize Group has been initiated and is in progress in 15 villages, 5 each from Kongwa, Kiteto, and Mvomero
- The Vegetable Group has identified three villages in Babati (Endadosh Maweni, Sangara, and Qash) and three in Kiteto (Kaloleni, Kibaya, and Sunya), all with access to irrigation water for off-season vegetable production
- The process of recruiting staff to implement the project activities was initiated

5.0 PROBLEMS AND CHALLENGES

Some problems and challenges were encountered, especially during meetings at District level and site visits.

- The first quarter was quite time-restrictive in terms of meeting the necessary institutional requirements and logistical preparations for technology delivery with a fast approaching rainy season.
- The condition of rural infrastructure, especially roads, is challenging. This hampered the teams' visits to some villages and farm locations, especially because these took place during the rainy season.
- Although several farmers' groups were identified, their relatively poor group governance and dependency on donor funds may mount a challenge during the execution of the project.
- The slow rate of responses of some partners is a challenge for the effective management of the project.

6.0 PLANNED ACTIVITIES FOR QUARTER 2

6.1 Rice Systems Team

- Develop a protocol on the development of an electronic decision support tool for weed management in rice and decide how best we can link it to RiceAdvice (an already existing decision support tool on fertilizer management in rice).
- Import motorized lowland rice weeders from India and Japan and develop a protocol on the development of a locally fabricated motorized weeder.
- Put in place a rice nursery in Kilombero and Dakawa (near Morogoro) to establish a test-field where we will invite farmers to select the best type of weeder and to provide us with feedback.
- Establish farmers' groups (10 groups each of 5 farmers), select test-fields. and start rice sowing in Kyela.

6.2 Vegetables Team

- Site selection in the Kongwa District will be finalized by 10 January 2015.
- A training curriculum, together with a training manual, will be developed.
- At each site, awareness on vegetable production, consumption, and marketing will be created. Both the importance of vegetables for the security of household nutrition as well as vegetable farming as a business for income generation will be stressed.
- One modality to create awareness will be through "rallies": these are quick "in-and-out" promotional events in villages whereby households are provided with concrete information, partly through leaflet distribution. Leaflets will be prepared in local languages that focus on vegetable production and consumption, and postharvest handling.
- Training will be initiated on good group governance.
- Vegetable seedling nurseries will be established and will go hand-in-hand with training on nursery management.
- As one of the major activities, seeds for vegetable seed kits will be bulked at AVRDC, Arusha, Tanzania and a first set of seed kits will be distributed in the target areas.
- Distribution of vegetable seed kits will go hand-in-hand with the establishment of demonstration plots which will be managed locally.
- A detailed monitoring and evaluation plan will be devised.

6.3 Maize Systems Team

- Planting in Kilosa and Mvomero Districts early February
- Training of lead farmers scheduled for the last week of January 2015

6.4 Post harvest and Nutrition Team

To develop appropriate strategies to reduce food waste in NAFKA and TUBOCHA project areas, the project team intends to have planning meetings with these partners to understand their project activities. The team will gather baseline information from the project locations to include crops produced by the farmers, the method of utilization, nutritional status of the vulnerable groups, postharvest management practices, level of crop wastage, status of processing and storage infrastructure, and other indices. In collaboration with TFNC, COUNSENUH, and other partners, the team will establish pilot operations to introduce and promote improved grain storage techniques, food-to-food fortification and small-scale food drying and grain shelling technologies.

7.0 SPECIAL ISSUES

No special arose during the reporting period.

8.0 CROSS-CUTTING ISSUES

8.1 Gender Integration

In all visited villages, the Vegetables Team observed promising leads to fully empower women in the vegetable value chain. In the Babati and Kiteto Districts, some villages have female vegetable farmers' groups. In the Qash and Kaloleni villages, for example, women vegetable growers' groups have expressed great interest and the team is planning to work with them during the establishment and management of the demonstration plots. In the Kiteto District, over 90% of vegetable growers in the Kaloleni village are women who are highly innovative, and have access to land and water for vegetable production along the river valleys. However, they lack training on GAP and business skills, areas which this project is aiming to address. In other villages, vegetable groups are a mix of both male and female farmers.

8.2 Behavior Change Communication

The Vegetables Team used direct communication (meetings and farmers' group discussions) during the process of site selection, together with key informants such as DAICOs, the District's SMSs, local extension agents, and leaders of vegetable farming groups. A project brief in Swahili was also provided to all key informants. During the execution of the project, training will be paramount and will use a combination of communication media to change behavior, such as training manuals, fact sheets, audio-visual tools (e.g., to demonstrate pests and diseases, and postharvest handling practices). On-farm practical demonstration plots will also help farmers to change their behavior. In future, all teams will be supported by a Communications Specialist who has been recruited on a short-term basis.

8.3 Environmental Compliance and Natural Resource Management

GAP technologies will be promoted to ensure that soil and water are used sustainably (e.g., through the use of farmyard manure, organic mulch, and ridging for soil conservation). Different types of seed beds will be demonstrated according to local factors such as terrain, soil type, irrigation method, and season. In situ water conservation and harvesting will be emphasized, instead of the use of running water that may lead to soil erosion and the loss of nutrients. The problem of the indiscriminate use of chemicals will be approached by introducing IPM practices in addition to the introduction of varieties that are more resistant/tolerant to pests and diseases, thus reducing the need to apply pesticides. For example, the tomato variety Tengeru 2010 that is being introduced is blight resistant, and this reduces the need for frequent use of fungicides and conserves the environment.

8.4 Monitoring and Evaluation

A monitoring and evaluation plan is being devised.

9.0 ANNEXES

Annex 1: Performance against PMP indicators

No achievements have been made against the PMP indicators during the reporting quarter.

Annex 2: Success stories submitted to USAID Mission during the quarter

No success stories have been submitted to USAID during the reporting quarter.