

Africa RISING West Africa partners sift out “scalable” technologies for program phase 2 at review and planning meeting

Discussions at this year’s Africa RISING West Africa review and planning meeting led to serious dialog among partners on which improved agricultural technologies that have been tested and refined over the past four years can be scaled to benefit more farmers beyond the current project sites. The animated discourse at the meeting, which was held in Accra, Ghana from 30 March to 1 April, also cast a spotlight on how the research work already started in Africa RISING phase 1 and due to end in September 2016, will either be continued in a possible second phase or finalized in the 2016/2017 cropping season.

The shift in the posturing and tone of the meeting from a regular review of research results/progress and planning for the next season comes at a time when the project partners are in the process of writing a proposal for Africa RISING phase 2 that will be submitted to USAID in July. Project partners aim to provide a clear impact pathway from research to development that builds on achievements and lessons from the first phase of the program into the second phase. Partners participating at the meeting therefore discussed various ways to ensure Africa RISING will play a proactive role in the achievement of development outcomes within and beyond the intervention communities in the project countries while using research (Africa RISING’s comparative advantage) as the springboard.

“Phase 1 of Africa RISING has focused on situation analysis of the farming systems we are working in, the development of tools to support action research, and a lot of action research. While we will continue to be a research project, we will have to ensure in



Participants at the Africa RISING WA review and planning meeting

phase 2 that our research efforts lead to development outcomes,” explained Irmgard Hoeschle-Zeledon, Manager Africa RISING West Africa and East/Southern Africa Projects.

The message for this paradigm shift was echoed in the opening remarks delivered by USAID Ghana Country Mission’s Agricultural Programs Officer Jenna Tajchman. “It’s my pleasure to take part in an Africa RISING meeting for the first time. As a country mission we have had meetings before with Africa RISING project managers on the available opportunities for the research work done by Africa RISING to inform the development work being implemented by some of the projects we fund at the USAID Ghana country mission. Taking part in the deliberations today will therefore give me a good

general picture of some of these possibilities,” she noted.

A total of [23 posters](#) on various ongoing research activities in Ghana and Mali were presented. They highlighted the main findings of the research work, their implications in generating development outcomes, and how the work could possibly be carried forward into the second phase of Africa RISING.

For the first time, partners at the meeting also got the chance to review and make comments on the draft regional phase 2 proposals for West Africa as well as the program-wide “umbrella” proposal. The feedback given by the partners will now be used by a smaller writing team selected from among the partners to refine both documents before final submission to USAID.

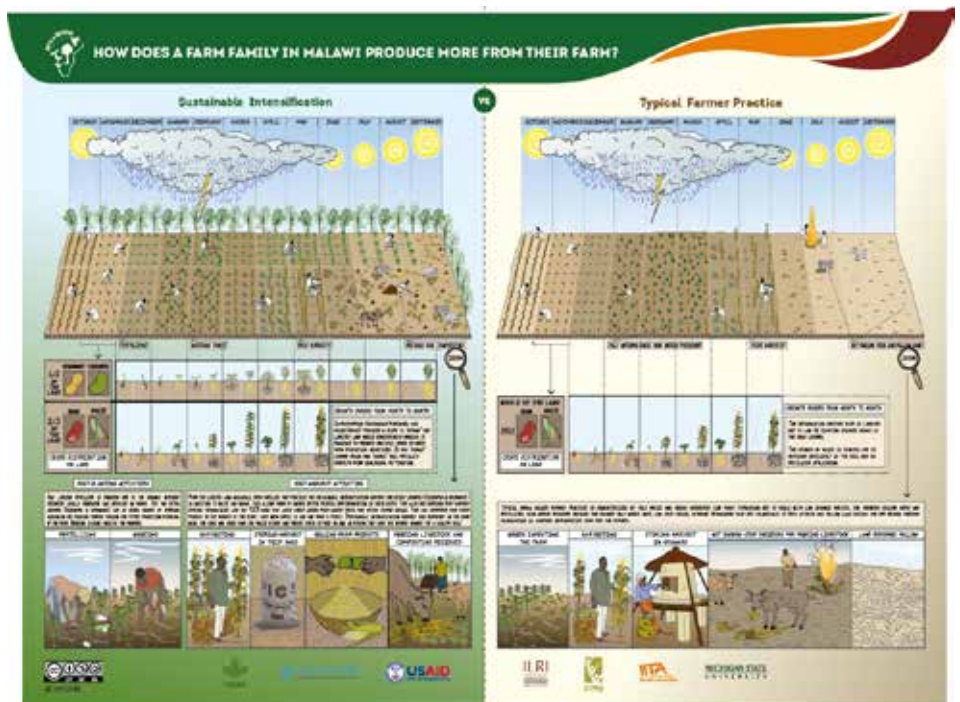
[Read online version here](#)

INFOGRAPHIC: how does a farm family in Malawi produce more from their farm?

A comparison of sustainable intensification vs typical farmer practice in central Malawi

The aim of Africa RISING is to provide pathways out of hunger and poverty for smallholder families through sustainably intensified farming systems that sufficiently improve food, nutrition, and income security. Sustainable intensification (SI) does not mean business-as-usual food production and marginal improvements in sustainability only. It rather implies a radical rethinking of food systems not only to reduce environmental impacts, but also to enhance animal welfare and human nutrition as well as support rural economies and sustainable development.

This newly published infographic which is largely based on Africa RISING program activities in central Malawi helps to visualize what SI means in the context of the farming system in the region and how it differs from the typical farmer practice. It also illustrates how the doubled-up legume technology works to ensure a farmer gets “double” legume grain yields and “double” soil fertility benefits from biological nitrogen fixation. The doubled-up legume technology is one



of the main intercropping systems that have been researched and promoted under the Africa RISING program in Malawi and was officially released in February 2016 by the Malawi Agricultural Technology Clearing

Committee for use by farmers in the whole country.

View and download the infographic here: <http://www.slideshare.net/africa-rising/esa-infographic2>

INFOGRAPHIC: different strokes for different folks

New Africa RISING infographic explains targeting of sustainable intensification technologies to different farm typologies in central Malawi

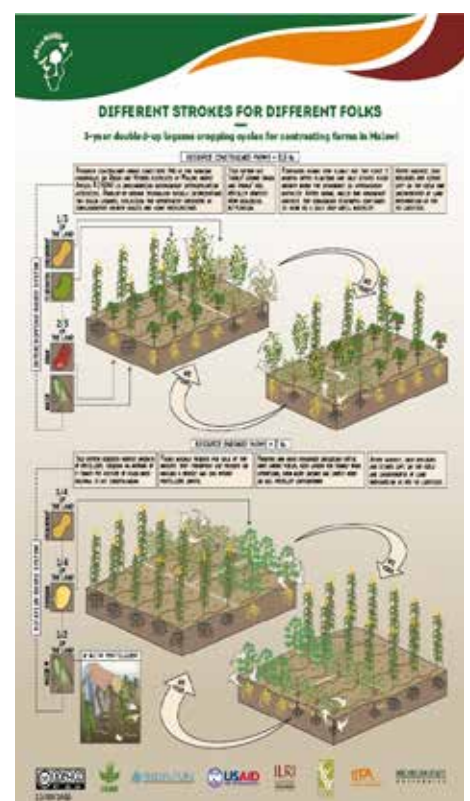
Smallholder farming households in much of sub-Saharan Africa are distinctly diverse within and across communities. Therefore, technological interventions to address the problem of poor productivity of smallholder agricultural systems must be designed to target socially diverse and spatially heterogeneous farms and farming systems. Agricultural technologies should therefore be developed to assess farm characteristics and the ability of farmers to invest, access resources, and attain the needed inputs. The doubled-up legume technology is one of the main intercropping systems that have been studied and promoted under the Africa RISING program in Malawi since April 2012.

This infographic seeks to visually explain the different “best bet:

best fit” pathways of intensification for contrasting farm categories (typologies). How can two sets of farmer categories -- resource-poor ones (whose farms average 0.6 ha) and resource-endowed farmers (whose farms average 2 ha) in central Malawi each be able to benefit from a novel agricultural technology like the doubled-up legume technology?

In both cases, the best bet cropping options harness biological N₂ fixation, ensure grain legume diversity for family nutrition and risk-buffered market opportunities, and concurrently add medium to high quality organic residues for soil fertility enhancement.

View and download the infographic here: <http://www.slideshare.net/africa-rising/esa-infographic1>



No small change: vegetable farmer cashes in on new varieties introduced by project in Tanzania

"I produce vegetables because this is ready cash for me and my family," says a beaming Hassan Saidi; one of the beneficiary farmers in the activities under the IITA led [Africa RISING-NAFAKA and TUBORESHE CHAKULA project](#) for fast tracking delivery and scaling of agricultural technologies in Tanzania.

Hassan is 20 years old and lives in Maweni village, about 25 km east of Babati town in Tanzania. He has participated in the USAID Tanzania mission-funded project since its inception in October 2014 and is finally reaping the benefits of making changes to his farming practices based on the advice of the project team.

Like the other 160 farmers trained by the project team in April 2015 on vegetable garden establishment and maintenance, Hassan was also provided with an [AVRDC](#) vegetable seed pack with improved varieties to cultivate. His results have been impressive!

"Since the first training took place, I have reproduced my own vegetable seeds from the AVRDC varieties for the third time," he said. Out of the six varieties AVRDC has introduced to his village, he chose tomato (Tengeru 2010), African eggplant (DB3), and African nightshade (Nduruma).

"These are the best I have ever grown. I don't need any other crop. I was able to harvest 20 bags of African nightshade, where I previously produced only 1.5



Vegetable farming can be so much fun...and profitable too. Says Hassan Saidi



A farm with Tomatoes

bags. My tomato yields doubled, and I am still harvesting African eggplant from the seed that I sowed half a year ago. Since I started with AVRDC varieties eight months ago, my income increased by more than TSH 400,000 [US\$190]," explains Hassan.

Asked about the secret behind his exemplary success, he says: "The reasons are many. Of course, the main reason is the improved varieties from AVRDC. But I also did other things like changing the spacing between seedlings. On the same plot [1/8 acre] where I sowed six lines of African nightshade before, I now sow only two lines. This is not to save seeds, but rather for disease control. As a result, I now face much lower disease pressure and can harvest African nightshade for more than three months! Previously I needed to stop harvesting African nightshade after only one month due to pests and diseases. I am now even able to supply African nightshade and African eggplant when other farmers have nothing in the field—and I hardly spray any chemicals on tomatoes, African eggplant, or African nightshade."

Hassan's success has also caught the attention of his neighbors. Now the shy youthful farmer has a thing or two to teach his older neighboring farmers. Perhaps his success can also just be

the jolt his fellow youth need to get into farming. "My neighbors come to visit me regularly and are impressed by the crops they see on my plots," says Hassan.

To improve his farm harvest, Hassan also carries out his experimentation and comparison of vegetable varieties. "I have established a separate one-acre plot on my farm, where I only grow AVRDC varieties and compare them with the other local varieties grown on another plot in my farm. With the seeds I have produced from my first two harvests, I also grow seedlings in my nurseries, which are established like we were taught by the AVRDC team. Now my neighbors come and ask for seedlings and I give them some for free."

This scaling project that brought success to Hassan supports other vegetable growers in Manyara, Dodoma, Morogoro, and Iringa regions. Since the project started in October 2014, the implementing team has introduced improved agronomic practices and vegetable varieties to 12 villages in the four regions, trained 230 farmers, and provided more than 800 farmers with seed packs of AVRDC improved vegetable varieties ready to be grown for home consumption and for sale in local and regional markets. A total of 230 farmers have been trained.

Just how much gender capacity exists in Africa RISING?

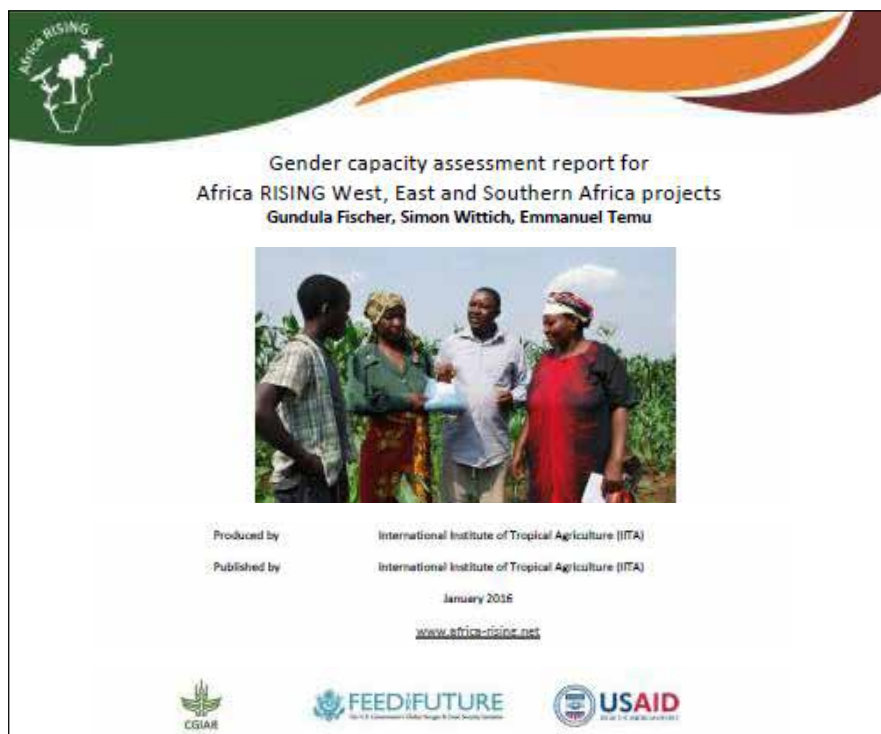
Gender significantly influences their day-to-day work—this is what 60% of Africa RISING's project partners in West, East, and Southern Africa indicated in a recent gender capacity assessment. Similarly, in a focus group discussion, members of the project coordination teams said they were strongly committed to gender equality and a need to do more.

These results are good news for the project as it works towards improving the livelihoods of female smallholders and their children. But this goal will be achieved only if partners have well-developed gender capacities.

In 2015, the IITA-led Africa RISING project conducted a gender capacity assessment to focus on the importance of gender capacities for the project's success. The report provides an outline for a capacity development plan that the project team will use to prioritize areas for increased efforts and set a baseline against which continuous capacity building in the project is measured.

Read the full report <http://hdl.handle.net/10568/72524>.

[Read online version here](#)



Knowledge is power: busting soil myths in Tanzania



A farmer gathers maize cobs harvested for further analysis in Babati, Tanzania.

Farmers know that soil is a precious commodity. However in Babati District, northern Tanzania, a long-held belief that mineral fertilizers spoils soils is preventing them from making informed decisions on how best to keep their soils healthy and increase their yields.

Researchers from the International Center for Tropical Agriculture (CIAT) and the Selian Agriculture Research Institute (SARI) are investigating best-bet fertilizer options and agronomic practices for maize in the region as part of the USAID-funded Africa RISING program. Their work is challenging local beliefs and changing attitudes [.....read more](#)

Integrated fertilizer policy guide for maize-legume cropping systems in Malawi

Experience has clearly demonstrated that greater sustained use of mineral fertilizers in Malawi is key to raising productivity and sustainability of smallholder maize-legume systems.

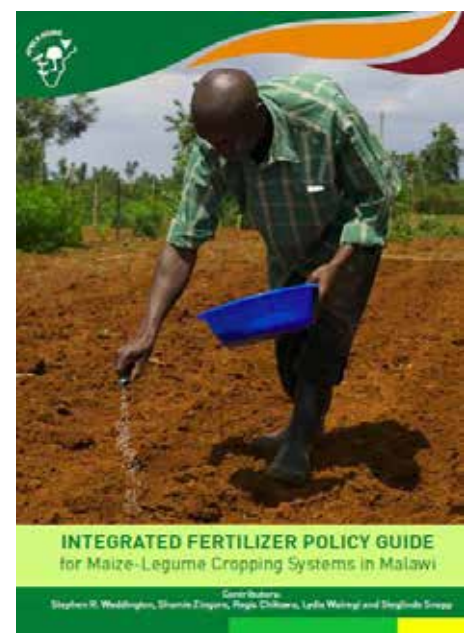
Provision of subsidized fertilizer under the Malawi Farm Input Subsidy Program (FISP) was estimated to have raised maize production in Malawi by around 500,000 tons of grain each year during the late 2000s. This greater availability and use of fertilizers on maize has therefore improved local food security and national self-sufficiency.

The high cost of maintaining input support programs means that there is compelling interest to ensure that the

fertilizer supplied is used as efficiently as possible. Currently, use efficiencies are low. This fertilizer policy guide presents options for consideration by the country's Ministry of Agriculture and the extension system for more efficient use of fertilizers.

This will lead to a reduction of the cost of fertilizer imports and raise the returns and benefits from subsidy programs for the country and its people. Returns to fertilizer use could be easily raised by 30-50% from current low levels by the timely supply and targeting of fertilizers to maize and grain legumes.

Read and download the publication here: <https://cgspace.cgiar.org/handle/10568/68890>



Quality cowpea seed production offers Zambian women farmers opportunities for quality lives

In economies such as Zambia, where maize-based farming is predominant, grain legumes such as cowpea and soybean add the much-needed fertility to the soils degraded by monocropping. Legumes are widely grown as intercrops or in rotations on maize-based farming systems. They fix substantial amounts of atmospheric nitrogen through biological nitrogen fixation in the soil, help to improve soil fertility and also contribute to improved crop productivity. However, one of the main challenges to growing legumes is the fact that their seeds are not easily available to farmers. But this challenge is being addressed thanks to an emerging breed of bold farmers who have taken to producing seeds for their colleagues in Eastern Zambia.



Growing cowpea creates new business opportunities for small scale farmers

Mrs Tichoke Phiri, a farmer from Kawalala camp in Katete district, Zambia, is one such farmer. She is part of a group of farmers involved in the activities of the [SIMLEZA-Africa RISING Project](#) to promote the cultivation of legumes.

“I was attracted to the idea of producing cowpea instead of soybean seed because we don’t have sources of improved cowpea seeds in my community and also because there are already a lot of farmers producing soybean seed. Cowpea seed will give me an advantage in the legume seed market.”

To establish their seed multiplication farms, the project gave Phiri and her fellow “seed producing farmers” 2 kg each of cowpea basic seed for multiplication after training on how to effectively raise quality cowpea and soybean seeds. Phiri planted those and took extra care of the crop, ensuring that her farm passed all field inspection tests.

Phiri harvested 165 kg of cowpea (the highest yield in her area), which was later certified as Quality Declared Seed. Because demand in her community

was high, she sold off her produce with ease, raising ZMK 900 (US\$145) in total. Such an income in one year is considered lucrative for smallholder farmers in Zambia who hardly make anything from subsistence maize production. She used ZMK400 (\$65) to purchase 4 x 50 kg bags of fertilizer and 10 kg of improved maize seed from the Farmer Input Support Program (FISP) through her cooperative. In addition, she paid ZMK150 (\$25) for her son’s school fees, bought a blanket and foodstuffs for ZMK250 (\$41), and set aside \$16 for cowpea seed production in the next cropping season.

Had she not participated in the project, she would have been unable to purchase fertilizer and improved seed which she needs to produce maize, her family’s staple, as well as meet other financial needs. As she explains, “Had I not taken part in the project, my financial problems would have persisted; I would not have been able to buy fertilizer that my farm really needs and pay my son’s school fees.”

Phiri plans to increase her production by planting 5 kg of seed instead of 2 kg. She hopes to make enough to renovate her house. “I would really love to replace my house’s thatched roofing with iron sheets,” she concludes with a smile.

[Read online version here](#)



Mrs. Tichoke Phiri with her son, Kenneth, at their homestead in Kawalala Camp

RISING voices: Gundula Fischer, Africa RISING Gender Specialist

Tell us about your background?

From my early days, I developed a great interest in the dynamics of society and culture. As a result, I pursued an MA degree in Social Anthropology from LudwigMaximilianUniversity of Munich, Germany. Later I did my PhD studies at Bayreuth University, Germany. A partnership with the University of Dar es Salaam enabled me to do my fieldwork in Tanzania.

My PhD thesis investigated how kinship impacts on the access to resources and the division of labour in a work setting. My later specialization in gender was a shift to another criterion that works in similar ways: gender often relates to the control over resources, to the type of work we do and the labor burden we have, to the way benefits are shared within the household.

What were you doing before joining Africa RISING?

Before I joined Africa RISING, I lectured at two private Tanzanian universities and supported them in the establishment of Master's programs in sociology and anthropology. In addition, I served as the research coordinator of a European Union-funded development project in Tanzania's Southern Highlands.

What do you do in your current position within the project?

I have multiple assignments. One of them is to support my colleagues (the biophysicists and economists working in the project) to integrate more gender aspects in their work with the target groups.

Apart from that, I conduct qualitative studies with a focus on gender. I am also in charge of a gender capacity assessment (ongoing) and gender action planning. These are just some of my activities.

Gundula Fischer, is the Africa RISING Gender Specialist at the International Institute of Tropical Agriculture (IITA). She introduces herself and her work within the [Africa RISING program](#). This is one of a series of portraits of key people in Africa RISING.



What are your early impressions of gender within Africa RISING?

When I talk to my colleagues in the project I often get interesting information about gender. Many make observations in the field. The important thing now is to develop a more systematic approach to collecting gender-disaggregated data and to perform gender analysis based on these data.

What does it mean when somebody says a project has fully integrated gender? What is the ideal benchmark?

Gender mainstreaming is like a two-headed arrow with one head pointing in the direction of the target group and the other head pointing towards the organization implementing the activities. On the one hand, it is important to understand more of the gender dynamics in our target groups, for instance how do our technologies interact with intra-household gender dynamics in our action sites. That is part of gender analysis. On the other hand, there is the second direction of gender mainstreaming which leads us to reflect on our own organization. How are we dealing with gender issues within our own project? What about our internal policies and arrangements?

What about our organizational culture? Gender is fully integrated when we are deliberately working towards both directions.

How do you see current gender activities with regard to a possible second phase of the project?

I think we are at a stage where we can prepare very well for the possible second phase. For instance, the gender capacity assessment will give us a baseline of the training needs and how to address them. Moreover, we have agreed that we will emphasize gender analysis in the research outputs "situation analysis" and "systems improvement". This will strengthen the gender foundation for the next phase.

Do you foresee any potential challenges in terms of data collection together with the biophysical scientists?

Of course, biophysicists, quantitative economists, and qualitative anthropologists adhere to different paradigms in the sciences. However, a dialogue across boundaries can be very fruitful and is especially important in a systems approach. There is always room for learning from both sides as long as both groups keep an open mind.

[Read online version here](#)

RISING voices: Haroon Sseguya, Africa RISING Technology Scaling Specialist

Tell us about your background

I was born in southwest Uganda near Lake Victoria. I have a BSc and an MSc in agricultural sciences from Uganda's Makerere University and a PhD in sustainable agriculture and sociology from Iowa State University, USA.

Give us a brief overview of what you do in your current position

Before joining IITA as Technology Scaling Specialist, I worked with the government in Uganda as an agricultural extension officer and as a lecturer at Makerere University. My PhD research was in a livelihoods improvement program in southeast Uganda, led by the Center for Sustainable Rural Livelihood (CSRL) of Iowa State University. I led monitoring and evaluation, communication, and extension support activities in the program and this is where I got hands-on experience in scaling-up technologies.

Can you tell us about your project in IITA?

The project I am supporting in IITA is a scaling project funded by the United States Agency for International Development (USAID) in partnership with Africa RISING and the other two USAID-funded project—NAFAKA and Tuboreshe Chakula (Let's Improve Food) in Tanzania. NAFAKA focuses on enhancing productivity of staple foods and Tuboreshe Chakula is focused on postharvest handling and nutrition. Because of our experience with the three projects, the USAID mission in Tanzania requested that we use the scaling-up lesson from the Africa RISING program to help farmers.

What is your specific role in the Africa RISING project?

My main role is coordinating Africa RISING scientists to share ready technologies and to create linkages with our partners in NAFAKA and Tuboreshe Chakula to integrate their activities as they are directly working with farmers and the private sector. I also coordinate the development and dissemination

Haroon Sseguya, Technology Scaling Specialist at the International Institute of Tropical Agriculture (IITA), introduces himself and his work with the [Africa RISING program](#). It is one of a series of portraits of key people in Africa RISING.



of strategies and the mobilization of partnerships which will enable us to reach more actors in the innovation systems, ensuring that all the different categories of people in the communities are involved, including women, men, and youth.

How do you determine the technologies that are likely to improve the livelihoods of smallholder farmers?

Our main goal in this project is to bring better crops and yields to farmers. We have selected three crops: maize, rice, and vegetables. Our second objective is to ensure good agronomic practices. We focus, for example, on tangible technologies and on the use of fertilizers to improve yields. Our third focus is natural resource management to make sure that farm resources are managed well for posterity. We have components in postharvest handling, nutrition, and community empowerment. We use a number of models to scale up these, depending on the crop enterprise and the setup in the community. For example, for the maize component, we use a farmer-led model that relies on village-based agriculture agents, who are trained and work hand-in-hand with local agriculture extension officers and their peers.

How do you decide when technologies are matured?

For each community group, we set up demonstrations of the promising technologies. The researchers set up demonstration plots and invite a minimum

of 25 farmers to come and learn and see the performance of different farming, natural resource management, and agronomy practices. At the end of each season, we also hold a farmers field day, so that they can, with us, observe and judge the different crop varieties, and whether they produce well or not. Feedback from farmers at these events and subsequent data analysis by project researchers help to determine which technologies are matured. This shared confirmation where the farmers see the results and scientists analyze the data is critical in ensuring farmer buy in on use of technologies. At the moment we have various seed varieties which are proven to work in semiarid and humid areas.

What are your future plans for scaling up technologies?

We want to mobilize local institutions to work with us more regularly so that they can understand our work and at the same time we can get their support for our activities. We also need to mobilize more resources to empower the community because we have realized that farmers need be organized to take up farming as a business because our technologies are improving crop yields, leading to surplus products and the need for markets.

What would you say is unique about this project so far?

The unique aspect of the program is the diversity of the team. We have people with different backgrounds working as one team. The project team leaders are also very supportive.

[Read online version here](#)

Child malnutrition in northern Ghana: evidence, factors, and recommendations from a new study

According to this survey report, child malnutrition remains a challenge in northern Ghana. The report which was part of a baseline conducted by Africa RISING in five districts in Northern, Upper East, and Upper West regions of Ghana also indicates that wasting in some of the districts was above the normal 15.0% level recommended by the World Health Organization (WHO) and can be described as being very high or critical.

Other revelations from the survey are that children did not eat protein-rich food often enough for good health as most (90.8%) were fed on cereal-based foods. Also the intake of foods known to have a good content of micronutrients and protein was less than satisfactory. For example, only 14.3% of children were fed on vitamin A-rich fruits and vegetables.

Over the past three years, Africa RISING has been implementing various

activities in northern Ghana and Mali to improve the household nutritional status of smallholder families. Ongoing research activities have focused on increasing crop and livestock productivity and household dietary diversity through cereal-legume-vegetable intercropping regimes.

The findings of this survey, among many others, confirm the need for agricultural research-for-development initiatives to address nutrition challenges faced by communities when designing and implementing programs and projects. This is because despite remarkable advances in agricultural research, progress in improving the nutrition and health of smallholder farm families in developing countries still lags. This is also in spite of a consensus that agricultural investments targeted to smallholder farmers are more likely to succeed if they address the human capital constraints due to malnutrition.

Read and download the report here: <https://cgspace.cgiar.org/handle/10568/67037>



Nutrition guide for community workers/ Guide de nutrition pour travailleurs communautaires

This document is a working guide for the agricultural and health extension workers specifically in Mali where Africa RISING is currently implementing different agriculture- and nutrition-focused research activities. It is meant to help them to improve their knowledge, skills, and nutrition practices to ensure greater returns on investments in agricultural research for nutrition and health impacts. Both agricultural and health extension workers play a crucial role in this process because they are in constant contact with the communities.

They therefore directly influence decisions made by smallholder farm

families; for example, which crops to grow, the correct agronomic practices, foods that are nutritious, and how to ensure the family consumes healthy or balanced diets. Having the right information goes a long way in assisting the communities to achieve better nutritional outcomes.

This guide is meant to help them in this role especially on the correct nutrition for young children and pregnant and lactating women.

Read and download the guide here: <https://cgspace.cgiar.org/handle/10568/72737>



Links to Africa RISING online resources

Africa RISING WEBSITE - <http://africa-rising.net/>



Africa RISING publications - <https://cgspace.cgiar.org/handle/10568/16498>



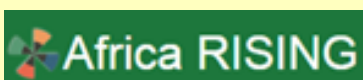
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