

Rice to feed Africa

Stories from the emergency rice initiative

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November 2009

Africa Rice Center

Cotonou, Benin

Introduction

A Project is part of life. Even though people plan it, and work hard, problems happen along the way. For example, in this emergency rice project in West Africa, one rice farmer accidentally killed her field. Some farmers rioted over fertilizer. And just as in the rest of life, a project has jealousies, and logistical headaches (like struggling to get 250 tons of rice seed into small bags and in the hands of 19,063 remote, poor farmers before the rains come).

There were some surprising personalities, such as the one crooked extension agent, and the benevolent but naïve fertilizer dealer. Some things happen in projects that don't happen elsewhere; for example monitoring the project sometimes gets in the way of actually conducting the project.

All that said, the project worked. Rice seed really was delivered to farmers in Ghana, Mali, Senegal and Nigeria, in time (usually) for the 2009 season, to help avoid another rice crisis like the one in 2008.

This is a collection of stories from the USAID-funded Emergency Rice Initiative Project, written by people who worked on it. The stories are refreshingly frank and critical, but a sense of optimism runs through them. Next year will be better.

Following soaring food prices in 2008, an emergency rice initiative was developed by the Africa Rice Center (AfricaRice), the International Centre for Soil Fertility and Agricultural Development (IFDC) and the Catholic Relief Services (CRS) under the Food and Agriculture Organization (FAO) Soaring Food Prices Initiative, as a rapid intervention to boost rice harvests in Africa. Under this initiative, USAID donated \$5.1 million to help four countries in West Africa – Ghana, Mali, Nigeria and Senegal.

The project aims to improve farmers' access to quality seeds of improved rice varieties and better techniques for growing rice. The fertilizer subsidies are not provided by USAID, but the project staff mobilizes existing government subsidies to benefit those who receive seed from the project which is implemented in collaboration with the national agricultural research and extension services and other national stakeholders.

This volume has five chapters, one each on Nigeria, Ghana, Mali and Senegal and another on other West African countries. Each chapter is divided into several stories, each written by a single author, but reviewed by six to eight of the author's peers, all people working on the ground. The first story, by Tom Remington, describes how three very different sorts of institutions got together for this project.

Unlikely partners for rice in West Africa

By Tom Remington

CRS

When global food prices started to soar in 2007, CRS began thinking about how to respond. Besides helping the urban poor to buy enough food for their families, we decided to do a “rice initiative” for the smallholder farmers who grow rice across West Africa. It was an opportunity to help poor rice farmers earn more from selling rice and also get more rice to the cities that were dependent on imported rice and experiencing food riots.

The CRS rice initiative soon resulted in a partnership with IFDC and AfricaRice. A faith-based NGO, an organization that promotes chemical fertilizer and an international research institute seem like an odd partnership, but all three shared a vision of increasing incomes of poor farm families by increasing rice productivity and profitability. CRS is committed to linking poor farm families to markets to escape deep and persistent poverty. The new generation of NERICAS developed by AfricaRice performs well under farmer management and, unlike hybrid maize, farmers are able to maintain their own seed of the NERICAS without loss of performance. And IFDC supports the fertilizer supply chain within an integrated soil fertility strategy. Deciding to partner was easy – the challenge was to make this new partnership work in four countries across West Africa.

We started working under a tight deadline to get seed and fertilizer to farmers in time for planting. In each country we worked under the leadership of the host National Research Organization. Though this definitely did not eliminate or reduce disagreement, it required each of the countries to work through their issues and arrive at a consensus way forward. This they succeeded in doing.

The need to target poor households, and especially women, created a challenge in how to first define vulnerability and then how to identify households that would receive a valuable voucher worth 25 kg of certified seed. We wondered if we should use government lists or rely on the communities themselves or use a rigorous, transparent and participatory approach. The answer was a lot of compromising to reach consensus and stay in the good graces of government officials and village leaders.

The project had a successful first year – that included reaching targets for numbers of farmers accessing certified seed. More importantly, the organizations in the project – AfricaRice, CRS, IFDC and the National Agricultural Research Organizations strengthened a partnership and learned to work as a team.

The partnership enters the second year with more understanding of the roles of the formal seed sector and the farmer seed system, of the fertilizer supply chain (especially the role of government subsidy) and the critical role of private input dealers. We see now that complex challenges require complex partnerships.

1 Nigeria

The following stories tell how farmers feel about the seed they received, and that fertilizer is so valued people may even fight for it. We see what can happen when you leave a baby untended to grant a monitoring interview, that sometimes project partners disagree, and that perhaps farmers are more open to new ideas than some researchers.

Benefits for the *talakawa*

By Francis Ayinzat
CRS/Nigeria

The seed fair for Bunkure had been fixed for the 18th of May, 2009 at the Islamic centre at 12:00 noon. It was past mid-day when the team that was to conduct the seed fair reached one of the distribution centers in Bunkure in Kano State, Nigeria. People were already gathered and the crowd was large, even though a few could still be seen coming in from their farms with hoes hanging on their shoulders. There was a lot of discussion in the crowd about the seed voucher system, the registration of farmers which had already been carried out and how the project would validate it. "I'm not sure how it will be done?" they were asking.

Everybody was excited and waited to be certain that his or her name was on the list. Only a few women participated in the seed fair. When two of the women were asked how they got the information about the seed fair, they said that they had heard the jingles on the radio and that the town of Bunkure was mentioned. This made them curious and they had to ask their husbands to give them more information about the fair. The husbands obliged and thus the women were able to participate.



Two women holding the seed vouchers and the posters. They heard about the seed fair on the radio

Photo by F. Ayinzat

Several farmers came around when they heard of the seed fair being organized, but they were disappointed to learn they had not been registered. They talked to the validation team who, in-turn, discussed the matter with the village head and other farmers to validate their claim. When all doubts had been cleared, they were registered and given vouchers which they exchanged for seeds. Then their sadness turned into joy as they walked away with their bags of

certified rice seeds. As they moved away, one of them, Mohammed Abubakar, Bunkure, exclaimed in Hausa “yanzu ne talakawa zasu chi moriyan gwamnati” meaning “It is now that the poor will benefit from Government”. He further said that “hakika wanan itace tabattachen shiri domin tabatar da yanchin talakawa” meaning “Indeed, this is the assured way of ensuring the right of the poor”.

One could see the satisfaction and gratitude in their hearts. This gave me joy to know the poor are indeed being reached despite the difficulties.

The above story highlights the joy of poor farmers who received improved seed. To gauge farmers’ willingness to buy seeds, other seed fairs were organized in two more states using vouchers with different subsidy levels. The next story tells about Coker-Omu, a village with seed vouchers in Osun State.

The joy and pain of the seed voucher

By Awotide Bola

PhD Student, AfricaRice, Nigeria

The supplementary seed vouchers had been distributed to the rice farmers and it was time to collect some feedback from the beneficiaries. The journey to one of the villages, Coker-Omu in Osun state, started around 8 AM, August 20, 2009. Getting a vehicle to the area was not an easy task due to the remoteness of the village coupled with the early morning downpour. All the farmers were on the field early today due to the rain, since there had been no rain for a couple of weeks. Even though we had told them of our visit beforehand they were not patient enough to wait for us. However, we went to the house of the village farmers’ coordinator and the wife gave him a call, and he was able to gather some of the other farmers.

While talking with the farmers’ coordinator, I learned that they had been having problems getting enough good quality seed. But the seed voucher had solved that and the seed supplied to the farmers was cheaper than seed from the markets and they were able to plant on time. The coordinator told me how he bought bad seeds in the past which put him in debt, because he was not able to harvest enough to pay for the loan he collected. But with the help of the seed voucher, he hoped to be able to harvest enough good seeds to plant his rice farm and he was sure he would make a profit this year. I went on to ask him what he would do with the money. He said he would roof his house and buy a motorcycle to travel to the farm.

A woman respondent, who had just given birth, left her child at home and came to be interviewed by the M&E team. While she was away, the baby started crying and there was no one to carry her, so she wept for so long until the father came back from the farm and found the poor little child crying. The man was so furious that we (the interviewers) had to plead on behalf of the woman. It took the timely intervention of the community head for the man not to have sent the wife packing right there and then for having neglected the baby to have cried for so long and granting an interview in his absence. We later realized that this was not the proper thing for her to do.

Although farmers were happy to receive seeds of improved varieties for planting, they were at least as eager to get fertilizer.

Battle for fertilizer

By AbdulRahaman Musa,
KNARDA (Kano State Agricultural and Rural Development Authority), Nigeria

Fertilizer is to the farmer what gold is to a goldsmith. It is so valuable that farmers and businessmen look for every opportunity to get it. Because of this, one of the extension agents could not help using the opportunity provided by the project in Kano, Nigeria to help himself.

During the fertilizer distribution in Watari in the Bagwai Local Government Area of Kano State, the project staff suspected that some planned to create confusion in order to collect other farmers' allocations. Realizing their evil intention, the team took extra precaution and was more meticulous in screening farmers collecting fertilizer. The dishonest extension officer, sensing he could not achieve his aim, mobilized the unsuspecting farmers to force the officials to abandon the idea of screening. Unaware of the intentions of the extension officer, the farmers heeded his call and rioted. This created confusion and policemen were drafted in to control the situation.

Alas, it was too late; the deed had been done. It was later discovered that the extension officer had actually succeeded and made away with 25 bags of farmers' fertilizer and sold them to other farmers. When farmers were told of the incident they went after him but to no avail. However, the extension officer was arrested and disciplined by the Management of the Kano State Agricultural and Rural Development Authority (KNARDA).

The first three stories show how farmers appreciate seed and fertilizer, but farmers also have their own preferences for certain kinds of rice seed varieties.

He knows what he wants

By A. T. Maji

National Cereals Research Institute, Badeggi, Nigeria

In Nigeria the project promoted three popular rice varieties; Faro 52 (popularly known as Wita), Faro 44 (also known as Sipi) and Faro 57 (known as Tox). Farmers were free to use their seed vouchers to purchase any of the three varieties at the seed fair.

I observed that most of the farmers at Kura went for Sipi, an early maturing variety, even though they were familiar with all three varieties. But while moving around the seed fair I spotted a middle-aged farmer sitting patiently close to an agro-dealer, not doing anything in particular. He caught my attention and I decided to talk to him.

I first asked if anything was wrong with him, and he said that he was waiting for the agro-dealer to give him his variety of choice. Then, I asked, "Which variety do you want?"

"I want Wita", he said.

"But everybody is taking Sipi, why are you so interested in Wita", I asked.

He then explained that people chose Sipi because of their experience the previous year when the rains failed near the end of the growing season and many farmers lost yields with Wita. "I am not scared by this," he said "because such an incident is not likely to occur every year, and I know that Wita yields better than Sipi and attracts a higher price in the market, so I am ready to take the risk."

Since the agro-dealer offloaded Wita first and placed Sipi on top, this farmer waited patiently until one bag of Wita could be given to him. He really knew what he wanted.

A project like this cannot be successful without building bridges between the partners. The next story below shows some of the hiccups that can happen between partners and how they can be resolved.

What's in a logo?

By Olupomi AJAYI

AfricaRice, Ibadan

The Project was off to a flying start with a stakeholders' meeting held sometime in September, 2008. We invited representatives from four States of Nigeria to explain the objectives of the project and how these four States might benefit from it. However, for various reasons, we decided to conduct the project in only one State. The three others were naturally disappointed to be left out. Indeed, the National Coordinator was summoned by the House of Assembly of his home State to explain why that State was not included!

Full of confidence that the beneficiary State would receive us with open arms, we launched the project on 29 January, 2009. As expected, the State received us well and actually promised to provide fertilizer for our beneficiary farmers. All the planning meetings were held in the office of the Managing Director of the State's agricultural extension agency, with all the major partners participating actively. One decision taken at one of the stakeholders' meetings was that, since there were many partners involved in the Project, only the logos of four main partners – CRS, IFDC, USAID and AfricaRice – should be used on the seed packets, posters, cropping calendars and vouchers. In retrospect, perhaps we should have included logos of our other partners.

One of the first activities was to train extension agents and representatives from farmers' associations, NGOs and local governments in our area of operation on the seed voucher system. The training was conducted successfully and a report was made at one of the next stakeholders meetings. However, one of the partners complained of not being fully involved in the decisions taken at the meetings. The real problem was that their logo was not used on the seed packet labels, posters, calendars and vouchers. Their grouse was that they were to supply 20,000 bags of fertilizer to the Project and deserved to have their logo included on the materials used. They had a point. The slighted partner threatened that unless a letter of apology was written, they would stop the supply of fertilizer and contact the donor to demand that the project be removed from the area.

The project was trying to keep from blanketing their seed packets and literature with logos. After all, logos take up space that can be devoted to other information. But we are all only human and like to be recognized for our good deeds. Every agency likes to see their logo on the project materials, and perhaps there is room for more than four logos.

In order to save the Project and mend fences of partnership, we wrote the letter of apology, which was accepted and a normal working relationship was restored.

It's good to be honest about our troubles, but sometimes things turned out well from the start, as the next story shows.

Our ancestors did it differently

By A. T. Maji

NCRI, Badeggi, Nigeria

Ancestral practices and beliefs are often difficult to change. Hence researchers think that most farmers do not want to change their traditional ways of farming. Those farmers are then accused of resisting innovation, especially in adopting new varieties and farming practices. But our experience in the project has proved us wrong. Here are two examples from the Kano River project site in Nigeria.

Transplanting is one of the integrated rice management practices promoted by the project. Unfortunately, most lowland rice farmers find transplanting labor-intensive and so they shy away from it, despite the evidence that transplanted rice performs better than either dibbled or broadcast rice.

During one of my visits to Agolas project site, I noticed a teenage Hausa girl transplanting single plants per hill and in rows as recommended. I was deeply moved by the girl's effort in painstakingly transplanting rice in such a manner. I asked why and the father of the girl said that since he started this practice as taught earlier by KNARDA, he will never again do otherwise. It saved him seeds and gives him better yield.

The second example was from a male farmer, who demonstrated urea pellet use. At crop maturity the farmer was so enthusiastic about the technology that he code named it "daka-daya ba'akari" meaning "apply once and no more".

Proven technologies have a fair chance of being adopted by farmers.

But sometimes farmers need to try a technique on their own to be convinced that it works.

The wonder fertilizer

By Yahaya Bello Kura

IFDC, Nigeria

Fertilizer is the live wire of rice production, but getting enough of it remains the biggest headache to rice farmers in Nigeria, who are poor. And while they can use family labor to grow rice, they cannot buy seed and fertilizer. In spite of their hard work, farmers often earn next to nothing from their rice farms due to a lack of fertilizer.

In order to reduce the burden of fertilizer purchase on the farmers, the IFDC introduced UDP (urea deep placement) to the project. This involves placing granulated urea, urea super granules, in the root zones of growing rice crop.

The granules are applied only once to the rice fields, where they release nitrogen slowly. Compare this to the conventional method, where fertilizer is broadcasted over the field, with most of it getting lost through runoff and volatilization.

100 farmers were selected for a demonstration of the urea granules. Every one of them was given 10 kg of granules to apply on 500 m² of land and required to dedicate a similar size of land to apply conventional fertilizer.

About 10% of these farmers refused to apply the fertilizer believing that the idea was trash, that it was impossible for a single application of any kind of fertilizer to be adequate for rice. Five weeks after applying the granules, the effect of the fertilizer was still visible on the rice and those who declined to apply began to regret their pessimism.

The UDP rice tillered better and remained healthy and dark green throughout its growth phase. A farmers' field day was organized at Kura and Bagwai in the Kano River Project and Watari sectors of the project. The field day was a big affair and farmers were happy with the performance of this wonderful fertilizer.

These last stories showed that farmers learn by doing. But sometimes they also learn by seeing.

Seeing is believing

By A. T. Maji

NCRI, Badeggi, Nigeria

We saw that “seeing is believing” when the project translated two series of rice videos for distribution to farmers in Kano State. The first series deals with seed health and rice parboiling, while the second one covers improved production technologies from land preparation to harvesting.

KNARDA extension officers and CRS partners distributed 330 copies of these videos, translated into the Hausa language, within the project locations in Kano State. Copies were given to farmer group leaders who promised to show them during their meetings. KNARDA also linked up with the local radio and television stations to broadcast some scripts and clips of the rice videos so that more farmers could hear about the new practices.

The National Agricultural Extension, Research and Liaison Services (NAERLS) of the Federal Government also translated the videos into two other major Nigerian languages, Yoruba and Igbo. Over 500 copies of the three translations have been produced and disseminated to all rice farmers across Nigeria.

Conclusion

Despite the initial challenges, the project has been well established and beneficial to farmers and partners. The first year provided chances for sharing ideas and experiences that will improve the project next year.

2 Ghana

Rice means life for millions of people in Africa, but there is still a huge deficit between supply and demand. In Ghana, rice consumption per capita has increased by over 140% during the last decade and more than 60% of the national rice production comes from the three northern regions. Global warming has resulted in frequent floods and droughts across the continent. In Ghana, the project targets 10,000 poor rice farming families. The following stories highlight a few of our experiences on the project.

The hustle and bustle of rice seed

By IDK Atokple
CSIR-SARI

On 30 January, 2009, the Project was launched in Accra. This was the first time I had ever heard of the project, barely two weeks after I had taken the charge of the Rice Improvement Program at the Savanna Agricultural Research Institute (SARI). It was clear at the end of the one day meeting that 48 tons of rice seed was required to start the project in June, in just five months. SARI was charged with supplying the seed since we have the mandate for rice research and the project sites fall within our mandate area in the North.

The hustle and bustle to supply the seed began. According to the project, rice seed was to be produced during the dry season. However, because of the late start of the project, that was not possible and SARI had to look for certified seed from the private sector. An emergency meeting was organized, inviting all stakeholders of the seed industry across the three northern regions. While the Seed Producers' Association of Ghana (SEEDPAG), Northern Region Chapter could provide some seeds for two of the three selected varieties, the others could not provide any seed. At the end of the day, SARI had to fall back on its Farm Management Unit that normally produces foundation seeds to make up for the difference.



Repackaging seeds into 12 kg bags took a lot of time. Even management helped

Normally rice seed is packaged in 40 kg bags. Repackaging it into 12 kg bags, as proposed by the project, and distributing it to over 4,000 farmers was excruciating. To make the smaller packages we needed every hand we had, including management. The country coordinator was chasing packaging materials right from the factory in Accra while the seeds were being collected and cleaned. The cleaning and repackaging took almost two months.

Then we distributed seed across the three northern regions, since SEEDPAG could not do it. The institute's 22-year old truck had to be refurbished and commandeered to haul the seeds to the districts. The drudgery of loading and off-loading the seeds became unbearable for the crew and so we hired labor. From the districts, the selected agro-input dealers took over the baton to distribute the seeds to the communities. Distribution took more than two months which contributed to the delay of seed supply to some of the communities. The joy of it all was that at the end of the day, all targeted farmers got seeds for the smooth take-off of the project. Certainly, most of these challenges will be alleviated in the second year of the project by taking a cue from the first year.



Our crews finally got tired of loading and unloading trucks, so we had to hire labor

Fortunately, the extension service helped out with seed distribution. The next story tells about a different kind of challenge that extensionists face.

The day Ekon cried

By A. Amankwah
CRS

To help the poorest rice farmers grow more food, the project targeted vulnerable farmers (especially women) with training on rice management, fertilizer and certified seed of improved varieties.

To ensure that farmers still use the innovations after the project ends, it was important to achieve good yields in the first year. During planning, management had not minced words in pointing out the importance of applying the appropriate technology of row dibbling of rice seed and applying fertilizer. Extension agents dutifully relayed the message as they held village training of farmers and even where farmers complained that the technology was time-consuming, extension personnel were quick to counter by pointing out its benefits of better plant spacing, higher plant population, etc. Untimely weed control was identified as one of the big challenges in rice cultivation. However, no special support such as herbicides had been included for farmers, who received no training on herbicides. We thought that all farmers would continue to do manual weed control as they have always done.

Among the women farmers of Daffiama, Ekon stood out as the most hardworking. She not only applied all she learned from the training sessions to near perfection, but also did her farm work on time. Ekon and her extension agent were highly commended by the regional project coordination team on their first round of monitoring visits. She became an automatic choice to be included on the itinerary of future monitoring visits.

Word came from the Country Coordination Unit about an impending monitoring tour of farms in all regions. Ekon's extension agent was duly notified by his supervisor, but it had been just under a week since his last fortnightly visit to Ekon's farm. The big monitoring visit was a week away so he decided to send Ekon a message to prepare for the visit. After all, on his last visit, the farm was in good shape except that the first weeding was due, but Ekon had promised to hire enough laborers to complete it within three days. Also, the visit would coincide with his own next visit to Ekon's community, so it tied in perfectly.

Ekon received the message and was alarmed because she had not been able to get the farm weeded as promised. She mentioned her dilemma to a friend who loaned her a liter of herbicide. It turned out that the herbicide was non-selective; it would kill every plant it touched. But an unsuspecting Ekon went ahead to get it applied on her farm the next day.

The visiting team arrived four days later, proudly led by the extension agent to find Ekon in tears. All her rice plants were dead, and she would have to spend money she did not have to replant her field.

People who monitor and evaluate projects do not always think how their visits affect the routines of farmers and extensionists. But the next story is even more surprising.

The woes of an agro-input dealer

By Wilson Dogbe

IFDC

Fertilizer is the key to feeding more people. The project team in Ghana therefore did everything possible to ensure that all registered farmers got fertilizer. Agro-input dealers were linked to registered farmers and supported to get fertilizer. The support was based on training in business management and creating input vouchers.

Among the agro-input dealers was Thomas Awiabe, who has been in the business for more than four years. Mr. Awiabe had 178 farmers linked to him. Although he was illiterate, he was so enthusiastic he did all he could to achieve his target within the project. He was among the first to finish distributing seed to farmers and was always full of questions.

The time to apply fertilizer had come and farmers called on Mr. Awiabe to redeem their fertilizer vouchers. The period unfortunately coincided with the time when there was a general shortage of fertilizer at the Regional fertilizer depots where dealers buy fertilizers at the government's 50% subsidized price. Mr. Awiabe, in trying to satisfy his farmers and not to fail the project, traveled 200 km to Tamale to buy almost 100 bags of fertilizer for his farmers on the open market, without subsidy.

After exchanging his fertilizer for the farmers' vouchers, Mr. Awiabe submitted them to the Government's regional fertilizer depot to claim his own 50% government subsidy. Unfortunately the depot keeper rejected the vouchers, saying that the fertilizer had not been supplied by the depot.

In one blow, Mr. Awiabe had lost all his working capital. You can guess how he took the news. What surprised the project leaders is that he did not consult any of the partners before taking such an important decision.

Now the project partners are wondering how to help Mr. Awiabe out of his predicament, since his eagerness to help the farmers led him to lose so much money. It is good to remember that many business people are honest, sincerely interested in farmers, and that they may also need training to do a better job.

The rush to get seed and fertilizer to the farmers caused troubles for everyone, not just the project staff and the fertilizer dealers. Even the monitoring and evaluation staff felt the pinch.

Monitoring and evaluation of the project

By Wiredu Nimo
CSIR-SARI

Monitoring and evaluation (M&E) is intended to track achievements and challenges of the project and is expected to guide the project's progress. The M&E specialists of the four countries were asked to present work plans for doing surveys. So I presented mine to the M&E coordinator.

Monitoring was difficult because the rest of the team was in such a rush to meet their five month deadline that they quickly printed two sets of rice vouchers. One was for viable farmers at a 50% subsidy and another was for vulnerable farmers at a 100% subsidy (the rice seed was free for them). Then the AfricaRice monitoring coordinators asked me to include more types of seed vouchers, of 75% and 25% subsidies, as part of an experiment to better understand how different levels of subsidies would influence farmers' interest in buying seed.

Unfortunately it was too late to do this since the vouchers had already been printed and distributed. There was some misunderstanding and some heated discussions. But I was still able to help lead some training sessions for the extension agents. I developed simple presentations for the extensionists on basic management including record keeping, planning and budgeting. I also wrote a guide for M&E data collection.

Despite these and other challenges, the project has been successful. Apart from the seed and fertilizer distributed to the farmers, much knowledge has been transferred to the rice farmers. The objectives of the project are achievable since the project team is so committed.

Conclusion

The first harvest is under way and yield data are being collected. Meanwhile, monitoring visits and field days have revealed general good performance of the crops and the farmers' excitement and appreciation. It is hoped that more farmers will be drawn into the project to meet the targets by the close of the second year.

3 Mali

In Mali, CRS and IFDC are working with Faranfasiso (a farmers' association in the Office du Niger) on this project.

No need to sell a goat every year to buy seed

By Mamadou Diallo
CRS

During a monitoring tour of the Mali project, the team visited farmers in the irrigated lands around Mopti. We asked questions about the quality of seed, training, management of fertilizers, and strengths and weaknesses of the project.

The visit that I recall most vividly was the one to Mme Aminata Guindo, a widow farmer in Mopti. Aminata lives with her small children in a village near the irrigated lands. For her, each season is a new challenge because each time she has to renew her seeds.

"Every year, I am forced to sell a sheep or a goat to buy seeds that produce well just for one season," said Aminata.

Identified as a vulnerable farmer, she received 15 kg of improved certified seeds from the project. During the monitoring visit, Aminata said that she felt immensely relieved:

"The quality of the seeds I have received is very good. These will help me to produce more rice in my plot and prevent me from being dependent upon other farmers. I will be able to use these seeds for at least three seasons."

I was happy that the seeds we had distributed to vulnerable farmers were so appreciated. They will no longer have to sell animals every year. They will use these seeds at least for three seasons if they are well managed and stored.

The importance of good seed is also narrated below.

Good seeds improve yield

By Barima També

IER

As part of the project, a research team visited a village in Diabaly in Segou region with a research team. In this village yields had fallen. Villagers mentioned problems with fertilizers, seeds and cropping techniques. All the participants gave their points of view. The first advisor to the village chief had the last word. He told us bluntly to only provide fertilizers, because nothing else mattered.

The first advisor hoped to receive fertilizer, and rejected our offer of rice seed, while his two neighbors received enough seed for a hectare. The research team monitored these plots. As the rice plants grew, there was a lot of talk about them in the village.

The neighbors' farms planted with the certified seeds matured between August and September while the field of the first advisor was full of mixed varieties and weeds. As his varieties took longer to mature, he could start harvesting only in December.

Those who had planted certified seed harvested about six tons/hectare while the first advisor got only two tons. From then on, the first advisor was the first to order seeds from a seed company and now he volunteers to disseminate innovations.

Besides seeds, fertilizer and herbicides are also important to improve yields. The following story emphasizes knowledge and good use of herbicide.

The miracle of Roundup

By Amadou Gakou

IFDC

This story was narrated during a training session of rice farmers in the Sikasso region. I was facilitating the training on agricultural inputs, including fertilizer and herbicides. After my presentation, before discussion, I showed videos from AfricaRice on soil fertility management and weed control.

The videos were shown in French and explained in Bambara; they attracted a lot of interest. The video on weed management raised comments from Minata Sanogo, a rice farmer, who much appreciated the video and the mechanical control methods that were shown.

She said that an extension agent had told her about the advantages of herbicides to control weeds on her rainfed rice farm. So during a trip to Sikasso, a market day, she had asked one of her nephews to buy her a good herbicide for her rice farm, which is in an area with weed problems. The nephew bought her Roundup, a non-selective herbicide, to be generally used before seeding.

While receiving the product, she did not pay attention to the explanations given to her on how to use it. She took it to her village and gave it to the man who sprayed her fields, telling him that she had bought a very good product that works miracles on weeds. The man was used to the selective herbicides used in cotton and maize, so he sprayed the Roundup the next morning, even though the rice field had been planted only two days previously.

One week after the application, the plot was very clean, no weeds anywhere. Unfortunately, no rice plants emerged either. Minata had to wait for about 10 days before planting her rice again. After that she decided not to use herbicides anymore. She was glad to watch the video which stressed mechanical ways to control weeds.

Participants found the story funny, and some of them accused Minata of using the product imprudently. Some people compared her to a person who buys medicines in the street; which is a risk to their health. For me, I took the opportunity to insist on the precautions of using pesticides in general, insecticides as well as herbicides.

But inputs alone are not enough to improve yields; knowledge and good practices need to be conveyed to producers through different media, just like in the following story.

Magazine on the air

By Aly B. Koumaré
Faranfasiso

One evening in February 2008, during a meeting of delegates from six farmers' centers at their head office in Niono, the radio broadcast a "magazine" or feature story, in the local language, Bambara, on improved techniques for growing rice, by the national agricultural research station of Cinzana (CRRRA) in Niono.

The magazine was narrated by Mr. Amadou Traoré, a scientist who is well-known in the Office du Niger. The day after the program was aired, I reached my office to find all six delegates of the farmers' centers of Kolongo, Kouroumari and M'Bewani (near Niono). The radio signal does not reach their villages. If they had not been at the meeting in Niono they would not have heard the program. So they rushed to my office to confirm the information they had heard on good rice practices, about the quality of improved seeds, the age of the seedlings for transplanting and the date to establish rice nurseries.

After listening to their questions, I told them that all the information they had heard was correct and that all the techniques mentioned were developed by research after many years of trials and that Mr. Traoré is well-known personality at CRRRA, Niono.

"It is not only radio Cesiri; the magazine was broadcast by at least one local radio in each agricultural zone; maybe you did not notice. I invite you to apply the advice given in the program for the next agricultural season and we will see."

Later on, Mr. Dembélé, a farmer from Kouroumari, called me. "Aly, I am going to take the risk to establish a nursery of 50 kg for one hectare according to your recommendations."

I replied, "Dembélé, if it is good quality seed, you are not taking any risk".

So, after transplanting, Mr. Dembélé told me that with the nursery, he was able to transplant 1.40 hectares, 21 days after making the nursery. Together, we estimated the yield. After threshing, Mr. Dembélé's harvest was more than all our projections. During the last meeting of the farmers' centers in Niono, most of the six delegates who had asked me about the radio magazine told me that they were applying the information in their fields.

All the farmers said they were happy with the information on the radio about rice farming. They did not know that local radios, besides politics, press releases and music, could also teach useful knowledge about farming. So, the delegates told me that they were going to ask the federation to create a partnership with local radios to train more members in new agricultural technologies.

Conclusion

The above stories show that to grow more rice, farmers need good agricultural inputs (like seeds, fertilizers and herbicides) and also good information on technical innovations.

4 Senegal

The project uses seed fairs to get seed to the farmer and also emphasizes the extension of new rice varieties which are adapted to rainfed conditions. The following stories represent some successful cases.

Seed marketing through fairs

By Sadibou Gueye
IFDC

Seed marketing through fairs was not really evident at the beginning, as private seed dealers in northern Senegal were far from the villages where the fairs were taking place.

On my arrival, I was really impressed with the approach, even though I had rejected it earlier, during the project coordination meeting in April, 2009 in St. Louis, Senegal. I thought that the agro-dealers would not agree to go to the south to sell their seed near the local seed dealers.

In the end, I realized that I had made a mistake and during the fairs and meetings, I tried to explain to participants the difference between certified seed and “any other seed”. Also, I facilitated the relationship between the seed dealers from the St. Louis region and the ones from the south through Catholic Relief Services, Senegal (CRS). At the same time, the private seed dealers from the north were already trying to sell the rest of their seed in the Fatick and Kaolack regions.

During the fairs, I shared my knowledge of seed with participants to gain more experience which would enable me to make recommendations to the private seed dealers of the north to help them market good quality seed to smallholder farmers.

The seed fairs organized by the project and described above give the beneficiaries easy access to certified seed. The following story shows how much that seed means to individual farmers.

Rice seed saves the family

By Amadou Gueye
CRS

In Casamance, no family has access to inland valley lands. In the village of Dando Sadio, Kolda, Maria Seydi is a rice farmer. She is almost 60 years old and has to walk far from her village to borrow inland valley land. During the 2009 rainy season, she was targeted by the project to receive rice seed.

The seed fairs gave her a chance to obtain the rice seed that fitted her land: the uplands. Of all the varieties available, she chose Sahel 108. She received 20 kg of seed which would allow her to grow ¼ hectare.

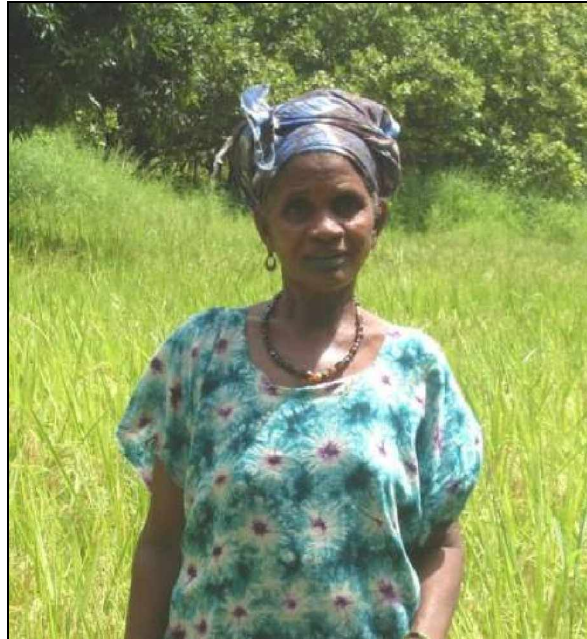
In July, when the rain came, she sowed the seed on her own upland field. It had been properly leveled. She visited her field every day as it was near her house. Her field was clean and the weeds were well managed.

She respected the practices recommended by the project. Three months later, she got a good yield.

After harvesting, she divided her rice into two parts: one for her family to eat and another for the next season's seed.

On September 30, 2009, CRS met her. During the meeting she said: "This season, the Sahel 108 seed saved me. I was not sure that anyone would loan me a lowland plot this year. From now, I will always keep some upland seeds for my personal land. I won't borrow any lowlands.

Apart from the local Sahel varieties, the project disseminates new rice varieties which are well adapted to rainfed conditions: the NERICA varieties.



Maria Seydi in her mature rice field, Kolda

Photo by A. Gueye

The NERICA rush

By Madiama Cissé

ISRA

In February 2009, Senegal released three varieties of upland NERICA rice and four varieties of irrigated NERICA rice, in response to the demands of farmers who sent their requests to the Ministry of Agriculture. Farmers were complaining because NERICA was not found in Senegal, meanwhile it was widely grown in some neighboring countries. The emergency rice initiative was launched at the same time.

After releasing the varieties, the next problem was getting the NERICA seed to farmers' fields. The Senegalese government sent a request to AfricaRice for two tons NERICA of seed, which was in great demand. The seed would then be multiplied for distribution to farmers.

Information about the availability of NERICA seed was disseminated throughout the country. Phone calls, office visits and meetings were held to request even small quantities of seed.

The seed was multiplied during the off-season by the seed producers of the Senegal River Valley. An official ceremony was organized to hand over the NERICA to the Ministry of Agriculture, which in turn created new demands. Some farmer groups even approached important officials to access the seed.

At the end, the seed producers grew 17 tons of NERICA during the off season. Some additional seed was still coming in during the cropping season. One of the seed producers to whom it was explained that the varieties are for rainfed rice said:

"I have seen many advantages from these varieties so I am going to grow them even after the end of our contract."

The NERICA varieties have spread rapidly throughout Senegal. As the next story show, NERICAS have made a difference in farmers' lives.

Rice beside maize

By Mansor Diop
AfricaRice

During 2009 season, the Africa Rice Center hoped to support rice production in the south of Senegal where yields are still low. It was important to find some rice varieties which were well adapted to the ecology. The idea was to establish some demonstration plots for NERICA rice varieties which had just been released in Senegal.

Once on the proposed sites, the team explained the idea to farmers. "We would like to install rice varieties in your field where you usually grow maize, millet or groundnuts".

"Really? How is this possible? We thought that rice must be grown only in the area where there is water, I mean in inland valleys."

"As it is the first time this variety is going to be introduced to your region, we will try the experiment with only a few farmers."

A few farmers agreed to join in the experiment, by growing the new rice in their fields. In the rural community of Kandia (Velingara) one farmer, Mamadou Coulibaly, agreed to sow NERICA1 in his field. The rice grew quickly and matured in just three months, the same time as the maize which Mamadou was used to growing there.



Mamadou Coulibaly, rice farmer in Kandia

Photo by M. Diop

During the field visit, Mamoudou said:

"I see it is possible to plant rice and maize on the same soil and during the same season. From now, I will integrate rice into my farming and I won't have to sell maize or millet to buy rice to feed my family".

Now all the farmers of the region request NERICA seeds for growing on their plots. Unfortunately, all these requests cannot be satisfied as there is still not enough seed to go around.

In addition to the certified seed distributed to vulnerable beneficiaries, the project teaches the farmers how to grow more rice.

Learning through video

By Amadou Gueye
CRS

AfricaRice has developed several videos to improve rice farming and seed storage. Some training was given to the agricultural advisors in two steps: classroom training and a video session.

During the session held at Kolda, the farmers' trainers watched the videos carefully. They showed new practices in Mali and saving rice seed in Bangladesh, which caught the attention of one farmer. Mamadou Aliou Baldé is a 40 year-old farmer trainer in Saré Yoba Diéga village.

During the discussion after the video Mamadou emphasized two main points.

1. On the rice growing practices in inland valleys shown in the video, he said

"I am really impressed with the way farmers from Mali transplant rice in lines and the material they use to remove the weeds. I see now that it is important to transplant in a line, since this makes it easier to weed. The farmers use local ways and means to keep the proper distance between lines in Kolda. Everybody can make and have a measuring stick. I also heard that good weed management can increase the yield by 50%. From today, I will ask all the farmers in my village to use this system. We will also ask the project team to show us how to acquire the rotary cultivator that is used to remove weeds with less pain."

2. The second point which also interested Mamadou is the seed preservation method. He added:

"I am really interested in the saving seeds in air tight containers. This will enable us to keep our seeds until the next season. The method is not expensive at all. It is easy to take a container, fill and close it hermetically. It is also easy to light a candle to reduce air in the container."

We have seen through this experience how videos help farmers to visualize new ideas and that it is possible to improve the farmers' practices. Video is a powerful tool which allows people to see and to listen by viewing the experience of farmers in another country.

Conclusion

The seed selection strategy developed by the project was a great success. The seed fairs have enabled the seed dealers to partner with the farmers. The fairs have also allowed beneficiaries to freely choose the seed variety they prefer according to their ecology. The new varieties of rice have also increased farmers' interest in growing rice.

5 Elsewhere in West Africa

Rice in West Africa is interesting because it is complex. This chapter includes two stories on rice. The first one by Kamal Bhattacharyya tells of his introduction to lowland rice in Liberia and the contrast between what the experts believe and local people think. In the second story, Florent Okry discovers that even a village seed system has its intrigues.

In Liberia, farmers welcomed the project's help, but they had some complex reasons for going against the advice of rice development experts.

Why not farm the lowlands in Liberia?

By Kamal Bhattacharyya
CRS Liberia

In Liberia, 60% of the population lives in the capital Monrovia; leaving the rural areas short of farm labor. Liberia has about 900,000 ha of lowlands of which only 10% are cultivated, even though lowland paddy yield is 3 - 4 times higher than upland (0.75 tons/ha in upland vs. 2 - 3 tons/ha in lowland). Also, in most lowlands, paddy can be grown twice compared to once in the uplands. It is therefore not surprising that donors and the Government of Liberia in its Poverty Reduction Strategy emphasize lowland rice farming. Development organizations such as FAO, CRS, Africare, Samaritan's Purse, Concern Worldwide and many others promote rice growing in the lowlands.

The Liberia Environmental Conservation Organization (LECO), a partner of CRS, organized a seed fair and distributed seed vouchers to farmers on June 11, 2009, in Bong County in Liberia, near the border with Guinea. Farmers were allowed to choose seed of their preferred varieties – for either lowland or upland sites. This was the first time that I had participated in a seed fair in Liberia and I was surprised that 95% of farmers selected seed of upland varieties.

I was confused, asking myself - why don't farmers' priorities match those of the donors, NGOs and government. Don't farmers understand the potential of lowland in rice production? I asked some farmers (mainly men) why they selected seed of upland varieties. They gave different reasons, saying that the uplands provide an opportunity for more diverse crops than in the lowlands; rice growing in the lowlands is traditionally managed by women and upland rice by men; there are leeches in the lowlands; iron toxicity reduces yield and last but not least, it is expensive to hire machinery for the lowlands.

At the end of a long and interesting day, I was left wondering what women will say about their motives and their constraints regarding the challenge of lowland cultivation. What will their suggestions be for rice in the lowlands? Will they agree with the Monrovia-based development experts and with the men of the village or will they have a completely different opinion?

Although the project emphasized vulnerable women, in the next story we see that not all women are vulnerable.

When the obvious is false

By Florent Okry

University of Wageningen, Department of Social Sciences, Technologies and Agrarian Development

For several years I had been fascinated by agricultural research, especially by Paul Richards and his team. Professor Paul Richards, devoted most of his life to learning from smallholder farmers, appreciating their knowledge and the dynamics of their rural development. *Coping with Hunger*, published by A Allen & Unwin in 1986 is a masterpiece.

Twenty years after the publication of this book, I finally got the chance to collaborate with Paul Richards to study a topic I loved: farmer seed systems. I developed a research proposal and framed my questions. Obviously I hoped to meet in my study area (Guinea) the seed producers and traditional/local seed dealers.

As soon as arrived, I had many discussions with researchers, NGO staff and extension agents. My enthusiasm for the seed system began to wane when my key advisors (at this stage) convinced me seed dealers did not exist in Guinea. I was disappointed, but little by little, I began to give up my research idea and to continue with the rest of my proposal.

After three weeks in Guinea I selected my study sites and went to the first one: Bokariya Tassen, a small village about 10 km from the border with Sierra Leone. My disappointment deepened during my meeting of introduction with the assembled village, when one participant said that the sale of seed in the village was forbidden and thus there were no seed dealers there. The local spiritual leader had banned seed sales in the name of religion. I got on with collecting my other data.

At the end of the first month of interviews on local strategies of seed management, I noticed that besides from household seed stock, the farmers bought seed to enlarge or install a rice field or to fill a shortage of seed. Only then did I realize that there was a woman who produced and sold seed: Mama Adama Yansane, about 60 years old, who had a special seed field. She had developed a seed distribution network extending into Sierra Leone which had operated for over 40 years. I will let you imagine how great was my surprise when I discovered that this successful seed dealer was one of the wives of the spiritual leader.

Conclusion to the West Africa chapter

Mark Twain said that to be successful in life required equal parts of confidence and ignorance. The more we learn about rice in West Africa and the more we listen to farmers, the more we realize how much there is to learn, and how complex the task ahead is. Rather than confidence we need caution and humility. One size actually does not fit all; we need to

nurture an evolving understanding based on the opportunities and constraints of all rice farmers – both men in the uplands and women in the lowlands.

This partnership brings researchers and practitioners together to address the challenges and opportunities and ensure that there is a sustainable, positive impact on poor rice farm families.

6 Discussion and conclusion

Success. An emergency project is by definition a rushed affair. After planning in January there were less than five months to get rice seed and fertilizer to vulnerable farmers in four countries. The rice seed had to be found, bought, packaged and delivered. Lacking a clear targeting method, partners came up with their own ways to define, find and reach poor, vulnerable farmers, especially women, while trying not to alienate village elites (who are usually among the wealthiest of the poor). Some of the seed may have gone to the middle poor, not to the poorest poor.

The project also had to link together people in different institutions, who were an ad hoc group, not part of any existing structure. They had to quickly find ways of working together, avoiding frictions and being fair about using their limited resources.

In a few cases the seed arrived late, but most of the time it arrived in time to plant, along with the fertilizer. Given the huge task they had, the project staff did an excellent job. The 19,063 families who benefited with rice seed and fertilizer are about 48% of the target, for the whole project. To have served so many in the first year is an accomplishment.

While writing and discussing these stories several dilemmas or conflicts of interest emerged:

Monitoring and evaluation (M&E) is now part of every project, which is fair enough. The donors want to know if the project accomplished what it promised to do. But M&E has a cost. The monitoring visits intrude on the lives of villagers and may take extensionists away from more pressing tasks. Imposing different “treatments” on people (e.g. looking at farmers’ willingness to pay for seed at 50%, 75%, and 100 % subsidy by using different seed vouchers) amounts to kind of human experiment, and while the results may be revealing, it adds another complication into a project that is already trying to cope with the ambitious targets.

Identifying the poor has a cost. Every organization has its own way of working. And doing things in new ways requires people to open up to new ideas and find a middle ground, especially when different organizations are involved that have no tradition of working together. The project had assigned the targeting of the poor to the Catholic Relief Services (CRS), but in some cases (such as Nigeria) CRS did not operate in the project intervention area. Moreover, when the project was written, no specific budget had been included for targeting the poor, so partners had to come up with ways to do it quickly and at a low cost, without undermining the new and fragile partnerships. Local extension agents often work with their favorite farmers in each community (often not the poorest), and asking them to work with other farmers was not always easy. A project should avoid exacerbating tensions between village factions and we hope that the well-being analysis, proposed for the second year, will help to improve the targeting.

The quantity of seed seems too high. Twelve kilos of rice seed is enough to grow about 2500 square meters of paddy. This project distributed certified seed, which added to the cost. A poor farmer may only have 2500 square meters of land. If she gets 12 kilos of seed she may be forced to choose between planting it all (and losing her local varieties) or selling or eating some of the seed. All farmers are willing to try new crop varieties, but hardly any are willing to give up all their favorite varieties just to test a new one. If a project aims to introduce a new

variety to many farmers, a solution would be to give the farmers one kilo of seed each, to all of the farmers in the village, not just the poorest. If they like the new variety, their harvest from that one kilo will be enough to plant a whole hectare. Some will try this out in the second year and, as the Ghana story showed, may require creativity and resolve to link seed sources with the packaging industry.

If the poor sell their seed, as Tom Remington says, it is not as big a problem as it seems. The seed won't get back on the truck and return to where it came from. The poor person will get cash, which she may need more than seed, and the person who buys the seed will plant it locally. So at least two households will benefit.

Research vs. farmers. In this project and others, we see over and over again that African rice research tends to stress higher yields, while farmers and processors want to save labor. Farmers are not opposed to higher yields, but they are at their wits end with labor demands. They want to weed less, they want to stop spending one month a year just scaring birds out of their rice, and they want to avoid the drudgery of threshing and winnowing. They want to sell rice as paddy, to processors who can mill it with machines, and sell it to retailers or consumers.

I heard it on the radio. Physical assets like seed and fertilizer are central to emergency interventions, but we realized that enhancing people's skills and knowledge are just as important, if not more so. Farmers, especially women, truly appreciated the opportunities to learn from the videos, while local radio broadcasters are starting to realize that they should give agriculture the attention it deserves. We learned that if we sent videos to radio stations, some of the broadcasters watched them and then promoted the techniques on the air.

In closing, we reflect again on the spirit of the authors of the stories: in spite of problems, this was a good year for the project, and because of what we learned, and how we learned to work together, next year will be even better.

Cover photo: Jaiteh Nding Badjie watches to keep birds out of her ripening rice field in The Gambia, West Africa, 2008. Photo by Jeff Bentley